

U.S. Large-Cap Equity: Can Simple Filters Help Investors Find Better-Performing Actively Managed Funds?

Our research has shown that using two objective, straightforward selection criteria found actively managed U.S. large-cap equity funds with better average historical returns

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KEY TAKEAWAYS

- Many equity investors are unsure about how to find superior actively managed funds; as a consequence, some investors choose passive index funds instead.
- In data from 1992 to 2014 on international large-cap and U.S. small-cap equity funds, the average actively managed fund has outperformed its benchmark, while passive has underperformed.
- In U.S. large-cap equity from 1992 to 2014, the average active fund has not outperformed its benchmark; however, after using straightforward criteria to select funds with lower fees and greater potential resources, the average of this subset of funds has outperformed.
- Given this long-term performance record, we believe many investors should seriously consider using active equity funds to help pursue their investment goals.

With their long-term history of attractive returns, equities form the core of many investors' portfolios. But investors who want exposure to equity markets have a choice to make. Should they invest in actively managed funds, for which a professional portfolio manager typically selects investments with the objective of generating higher returns than a benchmark index? Or should they invest in passive index funds, whose objective is to approximate the returns of the benchmark index, consistently and with low costs?

Unlike passive index funds, actively managed equity funds can have many different approaches to investing. But for all actively managed equity funds, the success of the fund will depend primarily on the fund manager's skill in managing a portfolio of stocks. Faced with the need to select among many actively managed funds, the task of trying to assess manager skill, and the potential for beating the market counterbalanced by the risks of underperforming, many investors simply use passive index funds instead.

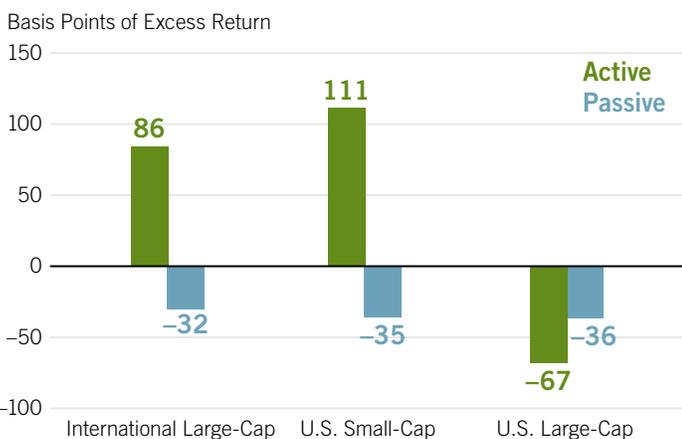
The debate on whether to choose active or passive equity funds tends to focus on the U.S. large-cap market, partly due to high investor interest in that category, and partly due to a commonly held belief that a high degree of "market efficiency" for the category (as reflected by the tendency of existing stock prices to accurately represent fair value) makes it more challenging for active stock-pickers to outperform a broad market benchmark. Indeed, as Exhibit 1 shows, active managers have had a better record of outperformance in other popular equity categories, even after accounting for

the fees charged to manage each portfolio. (Passive index funds as a group have underperformed their benchmarks after fees, which should not be surprising given that the goal of a passive fund is to match its benchmark’s performance *before* fees.) In international large-cap equity, the average actively managed fund has outperformed its benchmark index by 86 basis points¹ per year, while passive index funds in the same category averaged –32 basis points, net of fees. Likewise, the average actively managed U.S. small-cap fund has outperformed by 111 basis points per year, while passive index funds in the category averaged –35 basis points. Although averages are no guarantee of the performance of any individual fund, we believe investors who know this historical performance record have good reasons to consider actively managed funds in those categories.

¹ A basis point is 1/100th of a percentage point. So, 86 basis points is 0.86%.

Exhibit 1 Average One-Year Excess Returns: Equity Mutual Funds, 1992–2014

In both international large-cap and U.S. small-cap equity categories, actively managed funds on average have more definitively added value than in U.S. large-cap



Fund data from Morningstar, including closed and merged funds. International funds labeled as “foreign large growth/value/blend” by Morningstar. Average excess returns: the average of all monthly one-year rolling excess returns for all funds in the set under analysis, using overlapping one-year periods and data from Jan. 1, 1992 to Dec. 31, 2014. Excess returns are returns relative to the primary prospectus benchmark of each fund, net of fees. Basis point: 1/100th of a percentage point. Past performance is no guarantee of future results. This chart does not represent actual or future performance of any individual investment option. See endnotes for important information. Source: Morningstar, Fidelity Investments, as of Apr. 9, 2015.

The record for active U.S. large-cap equity funds, however, is less favorable. There, the average actively managed fund has underperformed its benchmark by 67 basis points per year net of fees, while the average passive index fund has underperformed by 36 basis points (see Exhibit 1). Given this history of underperformance—and the tendency of general discussions of active and passive management to focus on this single category—we have concentrated our analysis on U.S. large-cap funds.

In looking at the historical performance data on equity funds (including all funds that have been closed or merged), we noted that there have been many more U.S. large-cap funds than funds in the other two categories.² For U.S. large-cap funds, this larger set of recorded fund data raises an important question: Is the “average” active fund noted in general studies of active and passive investing truly relevant to the typical investor? Or would investors be able to narrow down the selection using some basic filters?

In our research, we identified two criteria for selecting U.S. large-cap equity funds that, when used as selection filters, have identified subsets of funds for which the historical average excess return³ was higher (for both actively managed and passive index funds). We believe these filters are quite intuitive and straightforward to implement. One filter picked only funds with lower fees. The other picked only funds from companies with higher potential available investment resources and scale (as measured by the amount of assets in these funds).

Exhibit 2 reveals the results, showing average excess returns, using data for more than two decades. As shown, using these selection criteria identified subsets of funds with higher historical average excess returns than the full set of recorded funds within each fund type (active or passive). In fact, just by using these two simple and objective criteria, we were able to identify a subset of actively managed funds that outperformed its market benchmarks overall, while a similarly selected subset of passive funds continued to trail its benchmarks.

² Over the full period of our study, there were records for a total of 1,940 actively managed U.S. large-cap funds, 663 actively managed U.S. small-cap funds, and 397 actively managed international large-cap funds.

³ Excess return is the amount by which a portfolio’s performance exceeds its benchmark, net (in the case of all analysis in this article) or gross of operating expenses, in percentage points.

Understanding the criteria

The fee filter: Funds with lower total expense ratios are able to deliver more of their gross returns to investors net of fees.¹ This fact is likely familiar to many investors already. To measure this effect, we developed a “fee filter” that examines the full universe of recorded U.S. large-cap equity funds, and selects only the subset of funds in the lowest 25% of reported expense ratio for their fund type (active or passive). The subset of funds meeting this fee filter is recalculated on a monthly basis. Active and passive funds were subjected to the same filter. Because fees are clearly disclosed, investors can use this information to help them select funds.

The fee filter worked for both actively managed funds and passive index funds (Panel 2B). The average actively

managed fund from the group with the lowest fees generated annual excess returns of –51 basis points net of fees, an improvement of 16 basis points over the general average. The average passive index fund selected by the filter generated annual excess returns of –13 basis points, an improvement of 23 basis points. These results show that historically, selecting funds with the lowest fees improved average excess returns, and was more effective when selecting passive index funds than when selecting actively managed funds. (We should note that the results are long-term group averages, and that lower fees do not necessarily lead to higher returns for any individual fund, nor do high fees necessarily lead to lower net returns, particularly over a short investment horizon.)

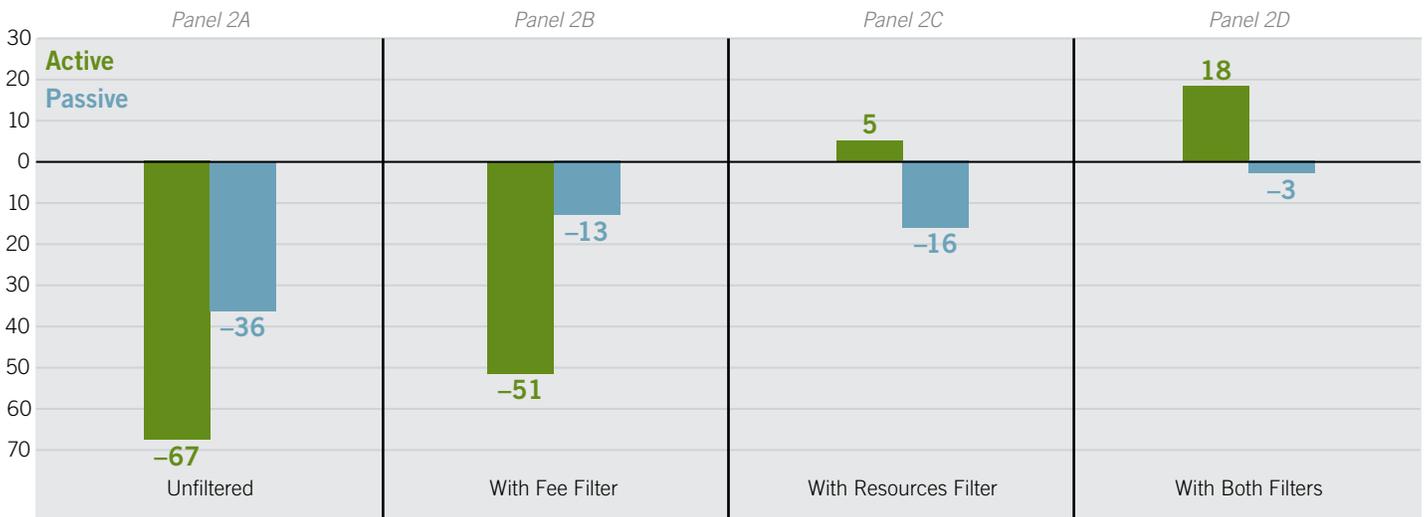
The resources filter: In investing, we believe there are advantages to having larger scale. In our analysis, we assumed that assets under management (AUM) is a reasonable proxy for this potential advantage because AUM

¹ Expense ratio is the total annual fund operating expense ratio as reported in the fund’s most recent prospectus.

Exhibit 2 Average One-Year Excess Returns: U.S. Large-Cap Equity Mutual Funds, 1992–2014

The performance history of U.S. large-cap equity funds shows that straightforward filters can produce subsets of actively managed funds that have generated higher average excess returns than passive index funds

Basis Points of Excess Return



Fund data from Morningstar, including closed and merged funds. Average excess returns: the average of all monthly one-year rolling excess returns for all funds in the set under analysis, using overlapping one-year periods and data from Jan. 1, 1992 to Dec. 31, 2014. Excess returns are returns relative to the primary prospectus benchmark of each fund, net of fees. Fee filter selects only funds in the lowest quartile of expense ratio. Resources filter selects by assets under management in U.S. large-cap equity funds; for active, the filter selects from the top five fund families by AUM; for passive, selects for top 10% of funds by AUM, for comparable selectivity. Filtered sets are rebalanced monthly, using reported AUM and expense ratio; forward one-year returns are used for each filtered set. Basis point: 1/100th of a percentage point. Past performance is no guarantee of future results. This chart does not represent actual or future performance of any individual investment option. See endnotes for important information. Source: Morningstar, Fidelity Investments, as of Jan. 20, 2015.

drives the amount of management fees collected, which can then be used to fund resources for research and trading. Active fund managers with higher AUM can potentially invest more heavily in these investment platforms, which can help in trying to find the best investments for their portfolios.

For our analysis of actively managed funds, we focused on U.S. large-cap equity AUM at the “fund family” level, as most asset managers share at least some of their investment resources across multiple funds. In other words, we think it is reasonable to assume that a relatively small-sized U.S. large-cap equity fund (e.g., \$500 million in AUM) at a very large fund family may have greater access to resources than a similarly sized fund at a fund family that manages only that single fund.¹

We set our filter to select for the top five fund families running actively managed U.S. large-cap equity funds, which together represent approximately 10% of the total number of funds. For passive index funds, we selected the top 10% of funds by size, in order to give the selection of passive funds a similar selectivity and potential advantage (see general methodology on page 7 for more information). As with the fee filter, we updated the subset selected by the filter each month. These large fund families are generally well-known mutual fund brands for most investors.

Using the resources filter alone was very powerful for the actively managed funds, driving the average fund’s performance ahead of its benchmark; however, the average passive index fund still trailed (Panel 2C). With the resources filter applied and net of fees, the average actively managed fund generated 5 basis points of annual excess return, an improvement of 72 basis points. The resources filter was not as effective for passive funds: the average passive index fund generated –16 basis points of annual excess return, an improvement of 20 basis points and a lower improvement than with the fee filter alone. (As with the fee filter, these results are long-term group averages, and higher or lower AUMs do not necessarily lead to higher or lower returns for any individual fund over a given time horizon.)

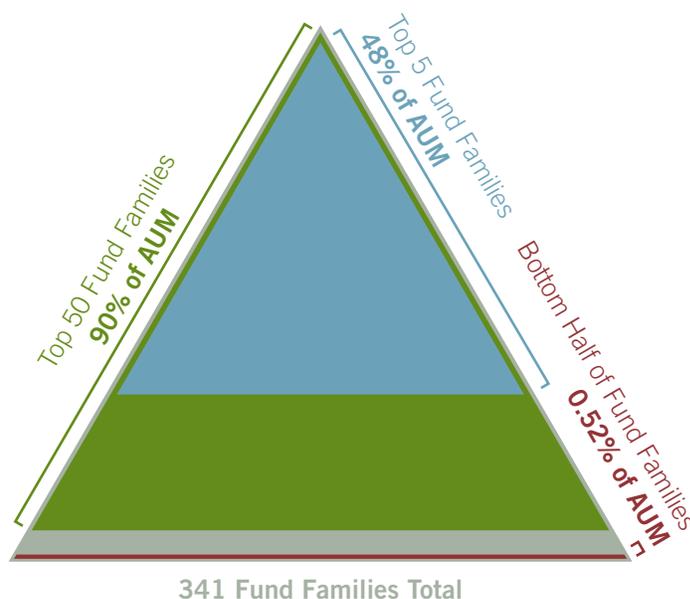
We believe these performance results are fairly intuitive. Actively managed funds seek to generate excess returns by searching for investments that outperform a broad

benchmark index. The largest fund families generally have hundreds of investment professionals spread out around the world, compared to smaller fund families that may have only a few people in one location. For passive funds, greater resources alone may not improve the results as dramatically as for active funds, likely because there are fewer resource advantages that can convey a large performance impact when the fund’s goal is to approximate the returns of a benchmark index. The larger driver of investor performance for passive funds is lower fees, as is evident from the results of our filters: –13 basis points of excess return per year for the lower fee funds versus –16 for the higher resourced ones (Panel 2B and 2C).

When we dig a little deeper into the resources filter, we see that the actively managed fund industry contains many more smaller fund families than large ones. As shown in Exhibit 3,

Exhibit 3 Asset Concentration in Fund Families, 2014

A small number of fund families managed the lion’s share of active U.S. large-cap equity assets, which may convey a competitive advantage in the form of scale and greater research resources



For illustrative purposes. Fund family AUM is the aggregate of AUM in funds categorized as U.S. large-cap equity. Data as of Dec. 31, 2014. Source: Morningstar, Fidelity Investments.

¹ However, we focused on AUM only within actively managed U.S. large-cap funds, reasoning that a fund family with high AUM in passive index funds or in other categories may not have as many relevant resources to share.

the largest five fund families (as captured by our filter) manage nearly half of the U.S. large-cap equity industry by AUM, while the smallest 50% of fund families (171 of 341 total) manage only approximately 0.52% of the assets.

We believe that our resources filter helps to select for funds that may have a competitive advantage in generating excess return, in that they have comparatively greater potential resources that can be applied toward finding better-performing investments. To put it in perspective: The median fund-family AUM in large-cap U.S. equity funds as of the end of 2014 was \$297 million, while the median for the top five fund families was more than \$184 billion—approximately 600 times the industry median.¹ As a result, any average analysis of the entire industry will include a high proportion of fund families that may lack comparable resources to compete.

Implications for investors

The results show that when both filters were combined, the average actively managed U.S. large-cap equity fund outperformed its benchmark by 18 basis points per year (Panel 2D). With both selection filters applied, the average passive index fund slightly trailed its benchmark with –3 basis points of excess return per year. Comparing the historical average excess returns for these selected subsets of active and passive funds (using each fund’s benchmark and net of fees), the difference was 21 basis points per year.

What could 21 basis points mean for an investor? Because of compounding effects, that small outperformance can add up, especially for long-term investors. As a hypothetical illustration, suppose a retirement investor saves \$5,000 per year in two different accounts, one with 18 basis points of annual excess return and one with –3 basis points of annual excess return

(assuming returns are net of fees and a constant “benchmark” return of 7%). At the end of 40 years, the balance for the account with 18 basis points of excess return would be more than \$61,000 higher than the other account, essentially earning an additional 5.8% of cumulative return.² That additional investment performance may translate to more money to spend, or a longer and more secure retirement.

Although our filters are not the only way to search for better-performing actively managed U.S. equity funds, many investors may find it useful to know that these simple objective criteria succeeded in identifying a subset of actively managed funds that has performed better than the general averages and has outperformed its benchmark on average (while a comparably selected subset of passive index funds still underperformed).

Of course, averages never tell the whole story, and any one particular fund may do better or worse than the average, particularly over short time horizons. Prudent, informed research is always an important part of identifying funds that fit an investor’s objectives. However, we believe the results of applying these criteria suggest they can be a helpful starting point for investors seeking to identify superior actively managed equity funds. Given this performance record, investors may want to consider the potential benefits of actively managed U.S. large-cap funds—as well as active international large-cap and active U.S. small-cap funds—in pursuing their investment goals.

² *IMPORTANT: Past performance is no guarantee of future results. This is a hypothetical example intended to illustrate the effect 21 basis points of outperformance over the course of 40 years could have on hypothetical account balances. It should not be used or relied upon to make decisions about your individual situation. This example does not represent actual or future performance of any individual or family of mutual fund(s) or investment option. Moreover, the example assumes a consistent rate of performance versus the “benchmark” return of 7% explained above and is not representative, nor likely to be duplicated by any specific investment. See “General methodology” for important information.*

¹ Data as of Dec. 31, 2014. Source: Morningstar, Fidelity Investments.

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Quantitative Analyst Richard Biagini also contributed to this article. Fidelity Thought Leadership Vice President Vic Tulli provided editorial direction.

General methodology

Fund selection: Our analysis focused on all U.S. large-cap, foreign (international) large-cap growth/value/blend, and U.S. small-cap equity mutual funds tracked by Morningstar between Jan. 1, 1992 and Dec. 31, 2014, including all core, value, and growth funds within each category and including actively managed funds and passive index funds. We included funds that did not exist for the entire period (closed or merged funds) to reduce survivorship bias. For passive index funds, we eliminated funds that were labeled as “enhanced index,” and funds with tracking error greater than 1% (which are unlikely to be actual passive index strategies despite their identification in the database). For international large-cap funds, we eliminated funds benchmarked to a price index, for greater comparability. See below for benchmark indices included and definitions. We selected the oldest share class for each fund as representative; where more than one share class was oldest, we chose the class labeled as “retail.”

For U.S. large-cap equity, average fund counts for each subset of selected funds are as follows: Unfiltered (full set of funds available): active 814, passive 50. Fee filter only: active 216, passive 13. Resources filter only: active 79, passive 5. Both filters applied: active 46, passive 3. Total fund counts in sample over full period: active 1,940, passive 115. Total fund counts for international large-cap equity funds: active 397, passive 25; average fund counts for performance calculation: active 213, passive 9. Total fund counts for U.S. small-cap equity funds: active 663, passive 40; average fund counts for performance calculation: active 292, passive 15.

Averaging excess returns: We used Morningstar data on returns from Jan. 1, 1992 through Dec. 31, 2014. We calculated each fund’s excess returns on a one-year rolling basis, relative to each fund’s primary prospectus benchmark and net of reported expense ratio, for each month, using monthly excess return data from Morningstar. We used an equal-weighted average to calculate overall industry one-year returns for each month. (We chose to equal weight the averages in order to represent the average performance of the range of individual funds available to investors, rather than asset weighting, which may introduce bias into the analysis.) For filtered subsets of funds, average excess returns ascribed were the one-year forward rolling returns, calculated monthly. All filtered subsets were rebalanced monthly. If a fund closed or was merged during a one-year rolling period, its returns were recorded for the months that it was in existence, and the

weighting of the remaining funds in the subset was increased proportionally for the remainder of the year.

Filters: The fee filter was rebalanced monthly using expense ratio as reported by Morningstar; over the full period, the average cutoff for lowest quartile of fees was 86 bps for active, 19 bps for passive. The resources filter was rebalanced monthly, using AUM data from Morningstar. The resources filter used a different methodology for active and passive in order to generate comparable selectivity; for passive funds, using the same filter as for active funds (top five fund families by AUM in U.S. large-cap funds) produced an average one-year excess return of –36 basis points for the filtered subset and selected approximately 60% of existing funds, while using a filter that selected for the top 10% of passive index funds by AUM (approximating the fund-level selectivity of the filter for actively managed funds) produced a better average one-year excess return of –16 basis points.

Indices: Funds in the study included active and passive funds tracked by Morningstar and benchmarked to the following indices: **U.S. large-cap equity (all in USD):** Russell 1000; Russell 1000 Growth; Russell 1000 Value; Russell 3000; Russell 3000 Growth; Russell 3000 Value; S&P 500. **Foreign (international) large-cap equity (all in USD):** MSCI ACWI Ex USA; MSCI ACWI Ex USA Growth; MSCI ACWI Ex USA Value; MSCI EAFE; MSCI EAFE Growth; MSCI EAFE Value; MSCI World Ex USA; MSCI World Ex USA Growth; MSCI World Ex USA Value. **U.S. small-cap equity (all in USD):** Russell 2000; Russell 2000 Growth; Russell 2000 Value; S&P SmallCap 600.

Impact of 21 basis points: To illustrate the potential impact of 21 basis points, we assumed two hypothetical portfolios, one earning 18 basis points of annual excess return, one earning –3 basis points (assuming returns are net of fees), both in relation to a hypothetical benchmark earning 7% constant annual returns. Returns were credited annually at the end of each year, and investor contributions of \$5,000 were added at the beginning of each year. Taxes were not considered. After 40 years, the outperforming portfolio account balance would be \$1,120,752, while the underperforming portfolio account balance would be \$1,059,527, for a difference of \$61,224. This example is for illustrative purposes only; it does not represent actual or future performance of any investment, nor is it likely to be duplicated by any specific investment.



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Active and passively managed funds are subject to fees and expenses that do not apply to indexes. Indexes are unmanaged. It is not possible to invest directly in an index.

Definitions

Excess return: the amount by which a portfolio's performance exceeds its benchmark, net (in the case of the analysis in this article) or gross of operating expenses, in percentage points.

Index definitions

MSCI ACWI (All Country World Index) ex USA Index is a market capitalization-weighted index designed to measure the investable equity market performance for global investors of large and mid-cap stocks in developed and emerging markets, excluding the United States.

MSCI ACWI (All Country World Index) ex USA Growth (Value) Index is a market capitalization-weighted index designed to measure the investable equity market performance of growth (value) stocks for global investors of large- and mid-cap stocks in developed and emerging markets, excluding the United States.

MSCI EAFE Index is a market capitalization-weighted index that is designed to measure the investable equity market performance for global investors in developed markets, excluding the U.S. & Canada.

MSCI EAFE Growth (Value) Index is a market capitalization-weighted index that is designed to measure the investable equity market performance of growth (value) stocks for global investors in developed markets, excluding the U.S. & Canada.

MSCI World ex USA Index is a market capitalization weighted index that is designed to measure the investable equity market performance for global investors of developed markets, excluding the United States.

MSCI World ex USA Growth (Value) Index is a market capitalization weighted index that is designed to measure the investable equity market performance of growth (value) stocks for global investors of developed markets, excluding the United States.

Russell 1000 Index is a market capitalization-weighted index designed to measure the performance of the large-cap segment of the U.S. equity market.

Russell 1000 Growth Index is a market capitalization-weighted index designed to measure the performance of the large-cap growth segment of the U.S. equity market. It includes those Russell 1000 Index companies with higher price-to-book ratios and higher forecasted growth rates.

Russell 1000 Value Index is a market capitalization-weighted index designed to measure the performance of the large-cap value segment of the U.S. equity market. It includes those Russell 1000 Index companies with lower price-to-book ratios and lower expected growth rates.

Russell 2000 Index is a market capitalization-weighted index designed to measure the performance of the small-cap segment of the U.S. equity market. It includes approximately 2,000 of the smallest securities in the Russell 3000 Index.

Russell 2000 Growth Index is a market capitalization-weighted index designed to measure the performance of the small-cap growth segment of the U.S. equity market. It includes those Russell 2000 Index companies with higher price-to-book ratios and higher forecasted growth rates.

Russell 2000 Value Index is a market capitalization-weighted index designed to measure the performance of the small-cap value segment of the U.S. equity market. It includes those Russell 2000 Index companies with lower price-to-book ratios and lower forecasted growth rates.

Russell 3000 Index is a market capitalization-weighted index designed to measure the performance of the 3,000 largest companies in the U.S. equity market.

Russell 3000 Growth Index is a market capitalization-weighted index designed to measure the performance of the broad growth segment of the U.S. equity market. It includes those Russell 3000 Index companies with higher price-to-book ratios and higher forecasted growth rates.

Russell 3000 Value Index is a market capitalization-weighted index designed to measure the performance of the broad value segment of the U.S. equity market. It includes those Russell 3000 Index companies with lower price-to-book ratios and lower forecasted growth rates.

S&P 500 Index is a market capitalization-weighted index of 500 common stocks chosen for market size, liquidity, and industry group representation to represent U.S. equity performance.

S&P SmallCap 600 Index is a market capitalization-weighted index of 600 small-capitalization stocks.

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