



A Fiduciary's Guide to Passive Fund Selection

Part II – Manager Selection

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INTRODUCTION

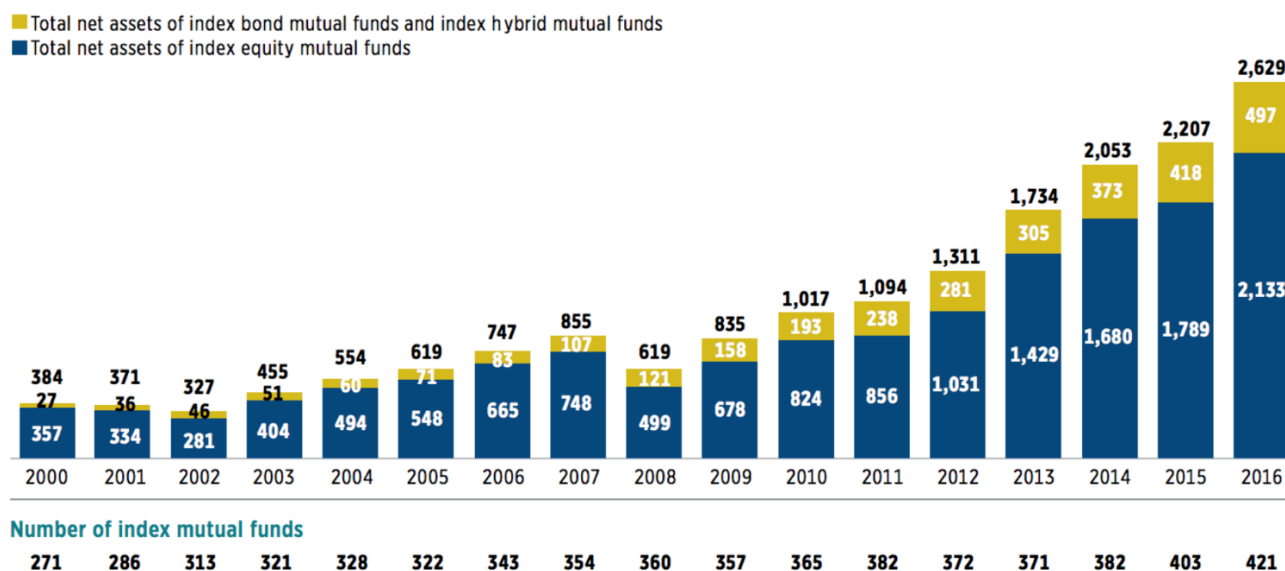
Selecting passive (index) funds for a retirement plan investment menu is no simple task. Despite the perception that products with the lowest fees are always the best choice for a particular asset class, there are numerous other criteria that prudent fiduciaries should consider when selecting funds. As discussed in our previous paper on passive fund considerations (“A Fiduciary’s Guide to Passive Fund Benchmark Selection,” August 2017), retirement plan sponsors who are selecting passive funds for inclusion in their plan’s investment menu must thoughtfully consider what combination of indices best meet the needs of their plan. For passive funds in particular, benchmark selection decisions generally have a greater impact on the ultimate investment returns investors experience than manager selection decisions. Ideally, plan sponsors would first determine the benchmarks they wish for their passive funds to follow, and subsequently select managers or products to replicate the selected benchmarks.



In reality, complicating factors often conflate benchmark selection and strategy implementation. Some indices are tracked by more passive funds than others, which can make it difficult to find suitable funds that passively track certain indices, even before recordkeeping platform limitations are considered. Some indices are inherently more difficult to replicate, and the higher fund expenses that result could make a theoretically ideal benchmark less palatable from a fiduciary perspective.

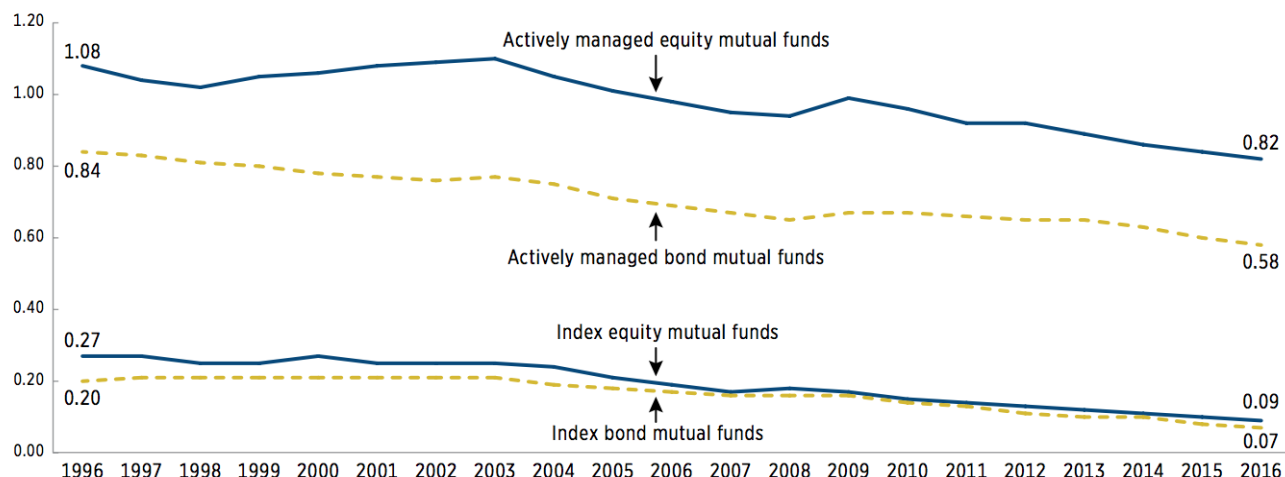
Nevertheless, there are reasons to believe the operational hurdles that presently face passive funds may be decreasing. Large and steady asset flows into passive strategies have led to increased competition. As a result, the number of passive products catering to various benchmarking preferences is rising, and product expenses are falling. Figures 1 and 2 below detail these trends as they relate to the mutual fund industry. Rising demand for collective investment trusts (CITs) is another trend that is broadening the scope of passive products available in the marketplace. According to Callan's 2017 Defined Contribution Trends survey, 65% of plans offered at least one CIT in 2016, an increase from 60% in 2015 and 48% in 2014. Passive CITs are now serving a broader range of benchmarking preferences, thanks to their increased acceptance among sponsors and their relatively low product launch and maintenance costs.

Figure 1: Total Net Assets (in Billions) and Number of Index Mutual Funds from 2000 to 2016



Sources: Investment Company Institute, Lipper, and Morningstar

Figure 2: Expense Ratios of Actively Managed and Index Mutual Funds



Note: Expense ratios are measured as asset-weighted averages. Data exclude mutual funds available as investment choices in variable annuities and mutual funds that invest primarily in other mutual funds.

Sources: Investment Company Institute, Lipper, and Morningstar



This paper will help fiduciaries understand the key distinctions among passive products. Although benchmark selection and manager selection issues may still sometimes be conflated, the rising number of product options is making it easier for plan sponsors to distinguish between the two decision points.

Passive Fund Objectives and Challenges

A passive fund manager's primary objective is to deliver investment returns that replicate those of the benchmark index as closely as possible and at minimal cost. Many assume meeting this goal is easy. After all, what is so difficult about holding the underlying benchmark securities in the same proportions that they appear in the benchmark? In reality, managers face numerous challenges and costs that complicate their efforts at delivering benchmark returns. These headwinds include, but are not limited to, the following:¹

- Ticket charges: This is the explicit cost of placing trades to maintain benchmark exposures.
- Market impact: Implicit costs associated with trading include bid-ask spreads and the impact that large portfolio trades have on market prices. The price impact of trading becomes more significant as trade size increases.
- Dividends: Indices assume that dividends paid on constituent securities are reinvested automatically and at no cost. In practice, passive fund managers must wait to receive the cash dividends and then place trades in order to reinvest the cash, incurring ticket charges along the way.
- Index reconstitution: Changes to an index's constituent list can occur when the index publisher updates its list of securities that comprise the index, or when companies in a given index are acquired by companies that are not in the index. Both types of changes present challenges for passive fund managers, who must attempt to forecast which securities will be impacted. Frequent index reconstitution can also drive up trading costs and tracking error. In situations where many large passive funds track a common index, index reconstitutions can cause trading volumes for certain securities to skyrocket and can make it extremely difficult to find a counterparty with which to trade.

With these objectives and challenges in mind, we can explore the differences among passive funds. Areas of distinction for passive fund managers that can exacerbate or alleviate headwinds to replication accuracy include the following:

- Product expenses
- Securities lending
- Scale
- Portfolio seasoning
- Replication techniques
- Fair value pricing

We will expound on each of these areas of distinction below.

Product Expenses

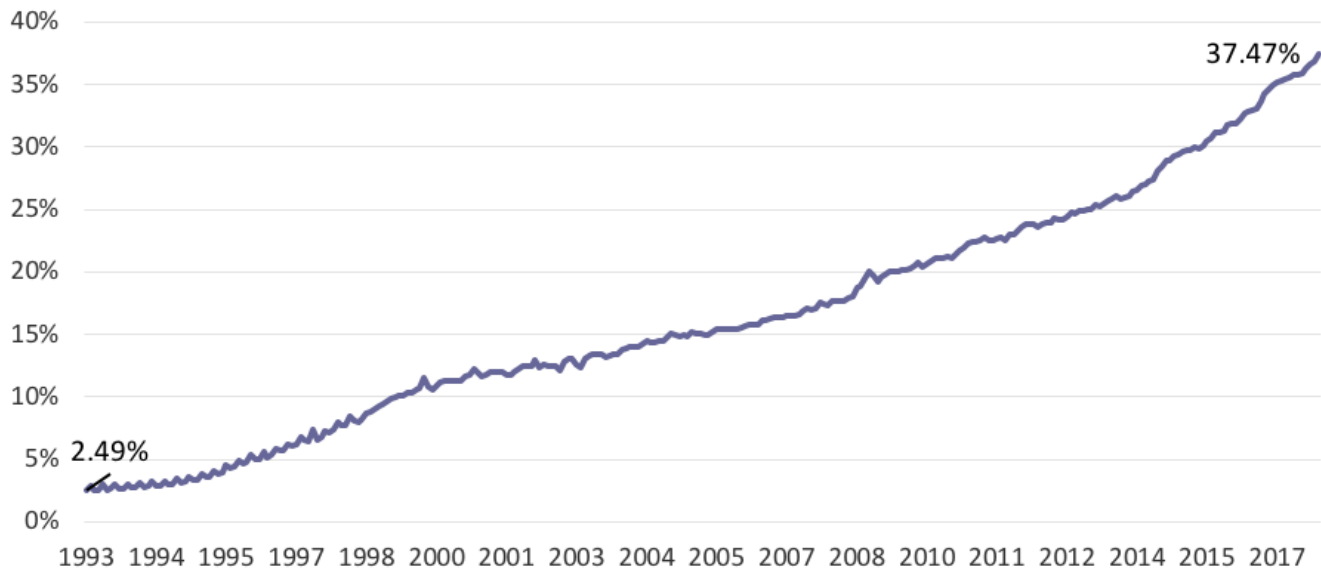
Most investors, many plan sponsors, and some consultants believe that price is the sole differentiator among passive products. While this is a logical fallacy, the misperception emerges because product expenses account for the lion's share of performance variance among passive investment strategies that track the same benchmark. As a result, emphasizing product fees as a key factor (but not the only factor) is completely appropriate when selecting passive funds.

According to the Investment Company Institute, the weighted average expense ratio for passive equity mutual funds reached 0.09% in 2016, while the weighted average passive bond mutual fund expense ratio reached 0.07%. As recently as 2008, both figures were above 0.20%. This steady fee decline illustrates two other multi-year trends: (1) the desire for increased fee transparency in the retirement plan industry, leading to broader use of zero-revenue sharing mutual funds and CITs, and (2) the staggering rise in popularity of passive investing over the past two decades that has resulted in increased competition among passive fund managers. As of January 31, 2018, passive investments comprised over 37% of the total US mutual fund and ETF markets (see Figure 3 below), and the trend shows no signs of slowing. As more assets flow toward passive investments, product managers gain economies of scale and can afford to reduce fees even further.

¹ Hazel Bateman, *Retirement Provision in Scary Markets*, 2007, p. 68-71.



Figure 3: Passive Share of the U.S. Mutual Fund and ETF Market



Note: Data excludes money market funds, funds of funds, and obsolete funds. Data as of 1/31/2018.

Source: Morningstar Direct

Passive funds are presently in a “race to the bottom” on fees. Current expense ratios indicate they may not be far off from reaching the finish line. But as passive fund expenses get increasingly closer to zero, it becomes even more important for plan fiduciaries to consider other factors. In the past, for example, a decision might have been made to choose a fund that offered a relative savings of 3 basis points (0.03%). Might a future decision hinge on 0.3 basis points (0.003%), even as savings in actual dollar terms become increasingly insignificant? Or, should plan fiduciaries place less weight on relative fee comparisons (assuming all mainstream products fall into a comparable range) and endeavor instead to determine which product’s fee is the most reasonable, considering the services and expertise provided? We advocate for the latter approach as aligning more closely with the fiduciary standard under ERISA. Let us explore some of the other passive fund practices and attributes we believe fiduciaries should consider as they select passive products.

Securities Lending

Securities lending is simply the transfer of a security to another party in exchange for cash collateral, which can be reinvested to generate additional income for the lender. Securities lending can be an effective way for managers to improve portfolio performance and earn additional compensation, but it can also materially change a fund’s risk and reward profile. Securities lending policies and practices typically have the second largest impact on investor returns, after fees.

Most securities lending programs exist to permit investors to express their opinion that a security’s price will decline, through a process known as “short selling.” An investor expecting a security’s price to drop can borrow the security from a fund manager and then sell it immediately at the current market price. If the investor is correct about the future price drop, he or she can buy it back later for a lower price before returning it to the lender. Because they own a broad range of securities, index funds are often the best option for short sellers looking to borrow securities.

To encourage index funds to lend securities, short sellers offer both collateral to protect the fund against the risk that the short seller might be unable to return the borrowed security, and a small premium (aka “lending fee”) for the loan. Lending fees are typically very low for liquid securities with high trading volumes, and higher for less liquid securities (such as small cap stocks) with low trading volumes.

Passive fund managers that participate in securities lending can generate additional income through the lending fee as well as through the reinvestment of the collateral they receive from the borrower. Securities lending income is typically split between the manager and the fund shareholders in some way. In some cases, managers retain a portion of the gross income

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to cover the cost of running the securities lending program, and pass the net profits through to shareholders. In other cases, fund managers will split gross revenue with shareholders according to pre-defined arrangements (50/50 splits are common).

While securities lending generally leads to higher returns, it can also change a fund's risk profile. If a fund loans out a significant portion of its securities, for instance, it may face difficulties in conducting its own trades necessary to replicate the benchmark. Further, if managers invest collateral too aggressively in an attempt to maximize income, they could experience liquidity constraints or actual losses on their investment. These issues aren't merely hypothetical. During the 2008-2009 financial crisis, several large and reputable passive fund providers had to impose trading restrictions on shareholders due to liquidity problems with collateral pools. Litigation followed, including claims against fiduciaries that selected the managers.

As index expense ratios fall, managers tend to derive a larger portion of their income from their share of securities lending revenue. This isn't inherently wrong, but fiduciaries should understand how a fund's securities lending program operates, both for purposes of evaluating the reasonableness of the manager's total compensation and to understand the potential risk exposures the program introduces. Securities lending practices vary significantly between funds, ranging from funds with complete prohibitions against securities lending to funds that can (and do) lend out more than half the fund's underlying securities and allow the fund manager to retain a majority of the fund's securities lending revenues.

Factors that prudent plan fiduciaries should consider when evaluating an index fund's securities lending protocols include:

- **Collateral reinvestment practices:** The risk positioning of collateral held by the fund. One way to gain insight into a manager's collateral reinvestment practices is to ask if the collateral pool complies with the quality, maturity, liquidity, or diversification rules established for money market funds under SEC Rule 2a-7 ("2a-7") of the 1940 Investment Companies Act. Portfolios that are 2a-7 compliant can either be managed toward prime or government money market fund rules. CITs that are not 2a-7 compliant must still comply with OCC rules governing short-term investment funds (STIFs).
- **Scale of the lending program:** The portion of the underlying securities that are typically out on loan, as well as contractual maximums.
- **Revenue split:** The portion of the securities lending revenue that is retained by the manager.
- **Transparency:** How easy is it to obtain information about the fund's securities lending practices.
- **Indemnification:** The extent to which the manager agrees to protect the fund against borrower defaults on loaned securities.

Scale

Scale, at both the fund and family level, is generally beneficial for passive funds. For active funds, a growing asset base can reduce alpha over time as smaller cap names are crowded out of the portfolio and as trades begin to have a greater impact on the market prices of securities. This phenomenon, sometimes referred to as diseconomies of scale, is especially pronounced for high-turnover funds.² Passive funds typically don't experience diseconomies of scale, since turnover is low and larger cap names are more prevalent. Conversely, as passive funds grow larger, they can spread costs over a bigger asset base and reduce their expense ratios, which is a key variable in passive fund success. Large portfolios may also incur lower trading costs than smaller funds due to their ability to trade round lots (typically 100 shares of a security) versus odd lots, which tend to experience larger brokerage fees. Empirical studies suggest an inverse relationship between tracking error and fund size.³

There are also benefits from greater scale at the fund family level. Firms with sizeable assets and many distinct portfolios can frequently affect transactions in their passive funds by trading amongst portfolios and not going through a public market. Such transactions are known as cross trades, and they occur when a manager matches one portfolio's buy order with another portfolio's sell order for the same security. Cross trades avoid both brokerage costs paid on open-market transactions and market impact costs.

Portfolio Seasoning

Seasoning refers to the age of a portfolio, or else the time that has elapsed since a portfolio's inception date. Portfolio seasoning is oftentimes related to scale, because larger portfolios tend to be those with longer performance records that substantiate the ability of their managers to deliver on their stated objectives.

² Xuemin (Sterling) Yan, *Liquidity, Investment Style, and the Relation between Fund Size and Fund Performance*, (Journal of Financial and Quantitative Analysis, 2008), p. 743 & 764.

³ Hazel Bateman, *Retirement Provision in Scary Markets*, (2007), p. 72-73.



Seasoning is broadly beneficial for all types of passive funds. One tangible implication of portfolio seasoning on investor returns relates to securities litigation payments. Litigation payments arise when securities issuers that have been through some type of litigation are forced to make restitution to shareholders. In order to receive payment, shareholders must prove that they held a position in the security prior to a given date. The litigation process can be lengthy, frequently spanning over several years. This gives older portfolios an advantage over younger portfolios, which are less likely to receive litigation payments.

Passive fixed income portfolios can also benefit from portfolio seasoning in another way. Debt securities are inherently less liquid than equity securities, and older bond issues may be difficult to purchase at any price because existing bondholders are unwilling to sell their positions. As interest rates change over time, portfolio managers with existing bond positions may choose to hold older debt rather than sell in favor of newer, lower yielding debt issues. Over this, the additional flexibility afforded by holding legacy bond issues can incrementally add to a bond portfolio's performance.

Replication Techniques

Passive fund managers can choose between two general approaches to index replication:

- **Full replication:** Involves owning all of the underlying securities in the benchmark index in the same proportions as they are represented in the index.
- **Optimization:** Involves owning a representative subset of the securities in the benchmark. The portfolio is constructed in such a way that its overall performance characteristics resemble those of the index. Managers have several options for portfolio optimization, but they generally purchase the most liquid and highly represented securities in the index and combine them in such a way that the portfolio's overall industry, sector, and market capitalization weights align closely with those of the benchmark. More sophisticated optimization approaches go further, using software to build portfolios with underlying risk factor exposures that are nearly identical to the benchmark. (Risk factors are the underlying risks that drive performance, such as interest rate risk, credit risk, and currency risk.)

Generally, full replication results in tighter benchmark tracking, but costs more than optimization. Consequently, funds that track indices with high liquidity and relatively few securities, such as the S&P 500, tend to use full replication. By contrast, funds that track indices with a large number of securities or with exposure to illiquid markets are more likely to use optimization. Fixed income benchmarks (which generally comprise thousands of individual bond issues, many of which do not trade frequently) are typically tracked using portfolio optimization.

Fund scale can be an important determinant for replication strategies, as larger funds can frequently justify approaches that come closer to full replication than smaller funds can.

Fiduciaries who are selecting passive funds should consider the following replication questions:

- What replication technique does the provider use for the product?
- Is the portfolio and/or fund family large enough to support full replication, or do most of the family's strategies rely on optimization?
- If the fund is using optimization, does the investment manager have the necessary systems in place (such as Barra risk software) to adequately monitor portfolio risk factor exposures relative to the benchmark?

Fair Value Pricing

Passive funds that track international indices face one additional area of distinction. Most international securities trade on local market exchanges, not the New York Stock Exchange, and these exchanges may close long before or after U.S. markets. U.S.-based mutual funds and CITs are all priced at 4:00 p.m. East Coast Time each business day. Fair value pricing was introduced to adjust foreign security prices based on market movements or news that occur outside of local market hours, so that prices are as accurate as possible as of 4:00 p.m. East Coast Time.

Without fair value pricing, investors could capitalize on time zone differences to make risk-free profits (i.e. arbitrage). For instance, suppose a Russian energy stock was priced at \$50 at the local market closing time. Subsequent to the Russian market close, but prior to 4:00 East Coast Time, new information concerning energy prices entered the market that sent all energy stocks soaring, by an average of 10%. The fair value of the Russian company, therefore, might actually be \$55 at U.S. market close, as opposed to the \$50 it last traded for on the Russian market. Absent fair value pricing, an arbitrageur could purchase a mutual fund holding the Russian stock that same day, locking in a \$50 purchase price, even though the stock was set to rise significantly the following business day on the Russian exchange.



While fair value pricing is philosophically logical, it introduces complications for passive funds that track foreign market indices. Foreign benchmarks reflect local closing prices, without any fair value adjustments. Passive funds, on the other hand, make fair value adjustments. This leads to investment returns that inevitably vary from those of the benchmark, even in cases where the fund perfectly tracks the index otherwise. This creates a degree of arguably artificial tracking error.

Fortunately, the impact of fair value pricing on tracking error is generally short-term in nature and tends to disappear over time. Additionally, since almost all U.S.-based investment managers practice some form of fair value pricing, artificial tracking errors from fair value pricing impact all foreign index funds in a reasonably similar manner. With that being said, plan fiduciaries should be aware of the practice to set appropriate expectations for tracking error over the short term. Further, since fair value pricing practices can vary from manager to manager, it is wise to inquire about each manager's policies in this area prior to purchase.

Conclusion

Passive funds are increasingly common in retirement plans. Consequently, they represent a growing area of exposure and liability for retirement plan fiduciaries. While fees continue to be important, index fund selection decisions should not be made based on cost alone. In our first paper on passive fund selection, we explored why proactively selecting a benchmark for one's passive fund to track is crucial (it is the single biggest fund performance driver). In this paper, we note that passive funds tracking the same benchmarks can still exhibit material differences that are unrelated to fees (see Appendix for supporting documentation).

Of course, fees are extremely important in determining how successful a passive fund will be in tracking its benchmark. Plan fiduciaries must take steps to ensure that their passive fund fees are low and competitive. Fees charged by the major passive investment shops (Vanguard, BlackRock, State Street, Fidelity, BNY Mellon, Northern Trust, and Schwab) are tightly clustered, so it is increasingly easy to select inexpensive index funds. However, determining that a passive fund is inexpensive is not necessarily the same as determining that its fees are reasonable. A prudent determination about whether fees are reasonable requires a well-rounded due diligence process, including thoughtful benchmark selection and consideration of the fund's fees, scale, seasoning, and management practices, as described above. As always, fiduciaries should carefully document their fund selection decision-making processes and rationale.



Appendix: Performance comparisons of select index funds

Figure 4: Cumulative Performance Comparison of Select Barclays Aggregate Index Funds

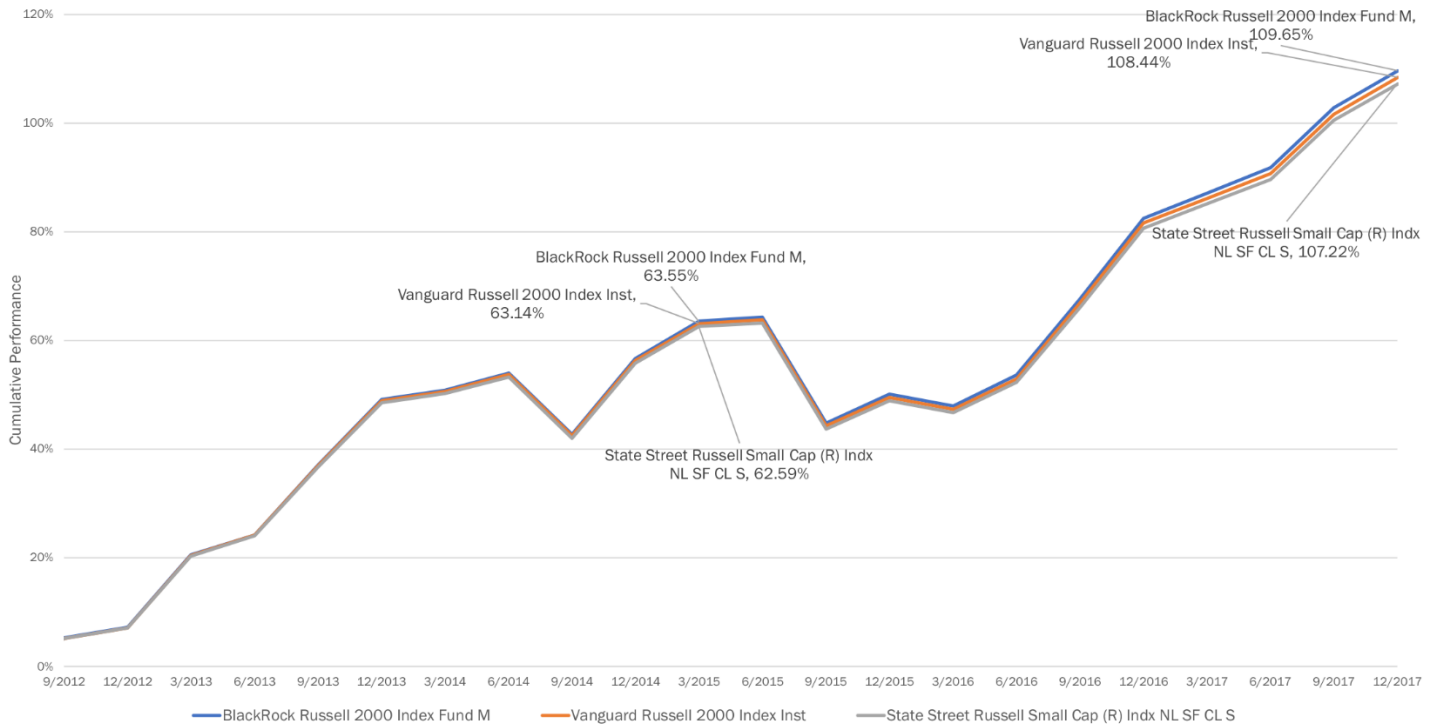


Note: The annual expense ratios for the BlackRock, State Street, and Fidelity products are 0.04%, 0.04%, and 0.045%, respectively.

Sources: BlackRock, Fidelity, and State Street



Figure 5: Cumulative Performance Comparison of Select Russell 2000 Index Funds



Note: The annual expense ratios for the BlackRock, Vanguard, and State Street products are 0.055%, 0.08%, and 0.052%, respectively.

Sources: BlackRock, Vanguard, and State Street

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