

# Beyond expense ratio:

A contemporary guide to selecting an index fund manager



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Acknowledgments: This paper is a revision of a Vanguard research paper first published in 2019 as *Beyond Expense Ratio: A Contemporary Guide to Index Fund Manager Selection* by Martin Kleppe, CFA; Anthony Tedesco; Andrey Kotlyarenko, CFA; William Gibbs; and Scott Milne.

# Should plan fiduciaries consider factors beyond price when evaluating an index fund manager? Or is the appeal of an ultra-low expense ratio the end of the story?

Some asset managers would have plan sponsors believe that index funds are a commodity, solely differentiated by price, and that they are obligated to choose the lowest-cost option in all cases. Fiduciary law, however, requires only that plan fiduciaries act prudently and pay no more than reasonable fees when making investment decisions. Courts and regulators have been clear that this obligation does not require a fiduciary to automatically select the lowest-cost investment option but rather to evaluate the reasonableness of fees in the context of the services provided.

In today's low-cost index fund environment, where index fund expense ratios are drifting toward 0%, the material impact of 1 to 2 basis points on a fund's relative performance is negligible. At these levels, performance—and due diligence—depend less on price and more on complex elements of index fund management. It's important that fiduciaries evaluate those elements that suggest a fund will fulfill its primary objective: to closely mirror the risk and returns of a benchmark index.

This paper explores the key criteria fiduciaries should consider when selecting an index fund manager, such as organizational incentives, portfolio management capabilities, and securities-lending practices (Figure 1). It offers an updated decision-making framework applicable to most popular, broad-based U.S. equity market funds offered by major asset managers, including Vanguard.

## Aligned incentives

Index fund managers come in all shapes and sizes. The differences matter because an asset manager's ownership structure and philosophy determine the incentives that drive the firm's business strategy. Investors can benefit from partnering with a mutually owned asset manager such as Vanguard or a similarly structured firm that prioritizes investor interests over those of the firm itself.\*

The examples below illustrate why asset manager incentives should be considered during due diligence exercises.

**FIGURE 1. Framework for choosing an index fund manager**

Application: U.S. total stock market funds  
Vanguard's view

Framework	Attributes	More preferable	Less preferable
Aligned incentives	Ownership structure	Mutual ownership	For-profit company
	Expense ratio	1 bps	30 bps
	Excess return	1 bps	-39 bps
Portfolio management	Tracking error	2 bps	41 bps
	Revenue to shareholders	2.5 bps	1.02 bps
	Revenue to fund company	0 bps	1 bps
Securities lending	Percent of fund assets on loan	0.21%	33.33%**
Additional considerations	Fair-value pricing philosophy	Daily, every security	Never
	Economies of scale	\$1T	\$767M

\*Vanguard is owned by its funds, which are owned by Vanguard's fund shareholder clients.

\*\*Legal limit set by the SEC.

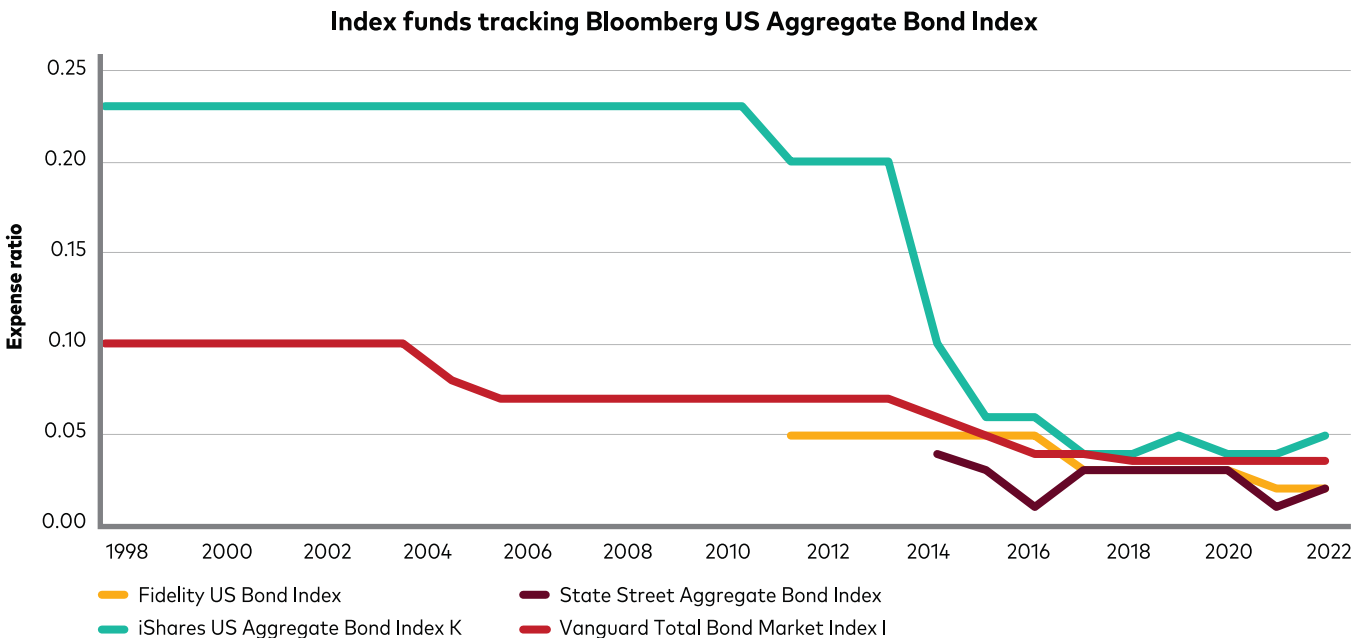
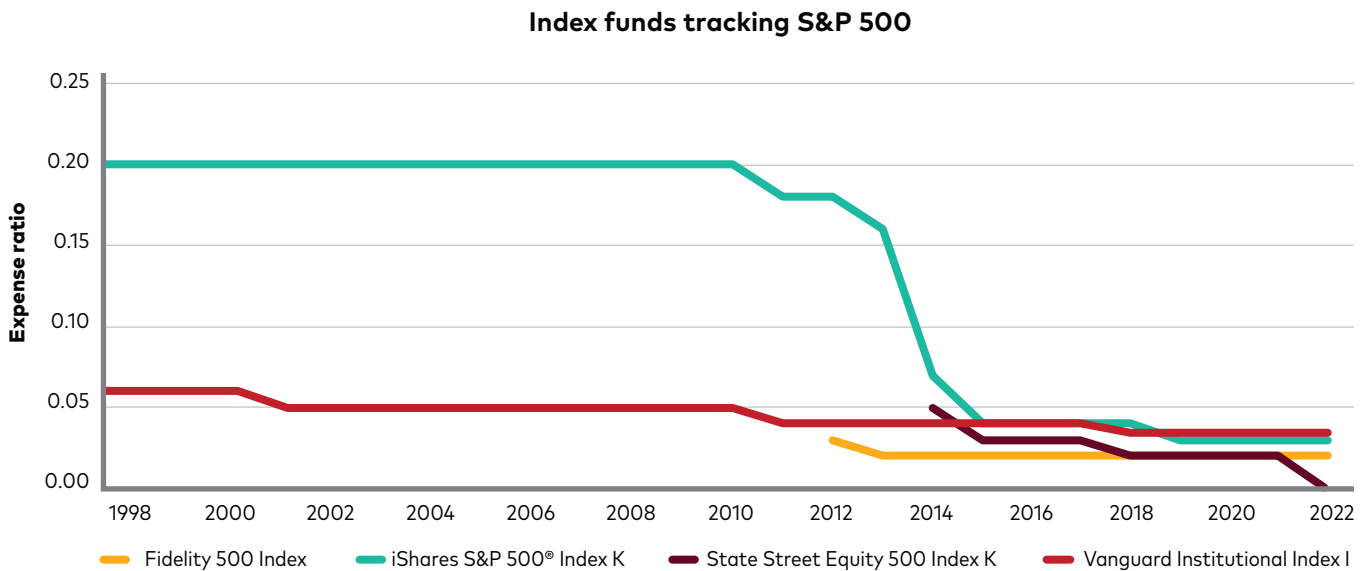
### Cost management approach

Asset managers deduct the cost—or expense ratio—of an index fund from the fund’s net asset value (NAV), decreasing its return. As industry average expenses have compressed meaningfully, the investor that selects an index fund solely to save, say, 2 basis points per year may do so at the expense of an amount that exceeds the savings. Still, fiduciaries should seek asset

managers that have produced proven histories of disciplined expense management. Understanding a manager’s track record aids a fiduciary in determining how that manager is likely to treat clients over time, such as the likelihood that costs will remain flat or decrease rather than potentially fluctuate over time when selective price competition is a business strategy.

**FIGURE 2. Disparate index fund expense ratios across the industry have converged**

Historical expense ratios for selected broad-based fixed income and equity index funds, 1998–2022



Source: Morningstar.

## Fund policies

Asset managers derive revenue from assets under management—the more assets, the more revenue. Firms incentivized to maximize revenue typically have fund policies that are less favorable to shareholders. For instance, fund managers that cater to market-timing investors who move rapidly in and out of funds can drive revenue for themselves. The activity often can create transaction costs, tracking errors, and capital gains that reduce long-term shareholder returns. Client-aligned asset managers, on the other hand, are averse to accepting such “fast money” despite the potential loss of revenue, opting instead to partner with philosophically aligned, long-term investors to help give those clients the best chance for investment success.

## Portfolio management capabilities

Some people believe that managing an index fund is straightforward and simple, but, in fact, it’s a complex undertaking that requires experience and sophistication. In asset management, performance is the great equalizer, and consistent performance over time is driven by seasoned, talented portfolio management teams, not all of which are created equal. Some teams are differentiated by time-tested, risk-controlled processes carefully designed to track fund benchmarks, minimize both explicit and implicit (market impact) transaction costs, and offset multiple basis points of expense through the daily application of value-add strategies in a consistent and risk-controlled manner. When evaluating a manager’s portfolio management capabilities, it’s important to view their fund performance through a lens appropriate for a typical tax-deferred investor, which requires looking at multiple market cycles, each with its own challenges, over an extended time horizon.

## Excess return

Excess return and tracking error are two measures to consider when evaluating index funds. People often use the terms interchangeably, but they have different meanings. Excess return, which can be positive or negative, measures the extent to which an index fund has outperformed or underperformed its benchmark. It is calculated as the fund’s total return minus the benchmark’s

total return. Because a fund’s total return reflects a deduction of its expenses, excess return is typically negative for index funds. However, some index managers seek out trading alpha—otherwise known as positive excess return—and others don’t. Over the course of a given year, some managers’ portfolio management techniques can add modest amounts of value that can offset some, or even all, of a fund’s expense ratio. For example, a fund with a 4-basis-point expense ratio and an excess return of zero means that the manager has already added value by overcoming fund expenses. On the other hand, less skilled managers may even have negative excess return, which exceeds the expense ratio. The following example highlights one of several value-add strategies aimed at driving positive excess returns.

**Corporate action example:** Benchmark providers outline how returns will be calculated when corporate actions causing securities to be added to or deleted from a benchmark occur. For example, during mergers and acquisitions, indexes assume that shares of the acquired firm are sold at the close on the last day of trading. Managing a fund by following this methodology exactly will result in very tight tracking. A carefully calculated alternative trading approach, however, may track tightly while also adding value. To execute such strategies successfully requires skilled analyses of benchmark methodologies, execution mechanics, and risk.

## Tracking error

Tracking error is the annualized standard deviation of excess return data points (Figure 3). While excess return measures the extent to which an index product’s return differs from that of its benchmark, tracking error indicates how much variability exists among the individual data points that make up the fund’s average excess returns.

Tracking error signals the risk inherent in a manager’s performance. Said another way, tracking error measures the consistency of an index fund’s return relative to its benchmark’s

return. Since volatility includes both appreciation and depreciation, tracking error is measured as an absolute value. The farther from zero, the more volatile the fund's excess return. Portfolio management decisions—including sampling techniques, use of derivatives, trading at times other than market close, management of index reconstitution, and other factors—may drive tracking error higher.

Tracking error cannot be evaluated in a vacuum. First, investors should understand what can be considered reasonable tracking error (that is, tolerance level), which may vary by mandate based upon the characteristics of the underlying market. For instance, investors should expect tighter tracking error in an S&P 500® fund, full of ultra-liquid blue chip equities, relative to an emerging markets fund that includes large-, mid-, and small-cap names traded in less efficient, developing capital markets. Second, an asset manager can underperform their benchmark by a wide margin, and as long as the underperformance is consistent, tracking error will be zero. Accordingly, both excess return and tracking error should be viewed together to determine how skillfully an index fund is

being managed. Importantly, the two need not be mutually exclusive; given that the primary objective of an index fund is to closely mimic its benchmark's return year after year, fiduciaries should seek index fund managers that have demonstrated an ability to deliver both reasonable excess returns and minimal tracking error.

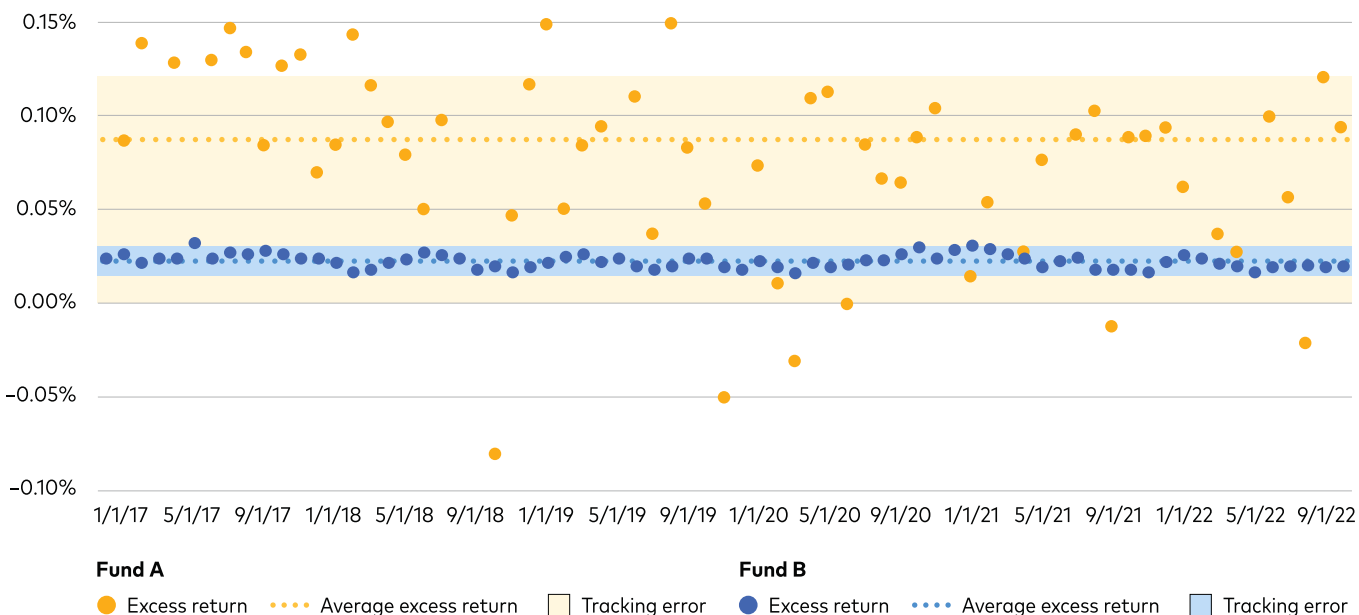
The chart below illustrates this point using two hypothetical funds from different asset managers. While Fund A shows a higher average excess return than Fund B, its tracking error is also significantly higher. As a result of this volatility, returns to some investors who purchased Fund A will be better than returns to those who purchased Fund B, while others will be worse.

### Market impact

Portfolio management can affect the return of both a fund and its index. This concept is referred to as "market impact," which is the effect an asset manager's purchase or sale of a security has on its price. Each security has an equilibrium price based on market supply and demand. Fund managers can temporarily push the price of a security up or down through their trading activity, affecting any index or fund that

**FIGURE 3. Tracking error and excess return should be viewed together to evaluate investor experiences**

Excess return and tracking error for hypothetical equity index portfolios, January 2017–September 2022



Note: This hypothetical example does not represent any particular investment. Source: Vanguard.

holds it, regardless of who the asset manager is. Market impact affects all asset managers—active and passive, large and small, equity and fixed income—and, if not effectively managed, can diminish investor wealth. Worse yet, market impact is not reflected in publicly disclosed performance numbers. It can slowly, steadily, and imperceptibly erode performance.

**Example:** Market impact is easy to understand in the context of rose prices. On Valentine’s Day, rose prices are higher because of increased demand; prices return to their equilibrium the next day when demand subsides. Similarly, if an asset manager places a single buy order because of a large daily cash flow, it can push up the price of that security, affecting everyone in the market for it. Without the asset manager participating in the next trading session, the security will typically regress to its previous equilibrium price, decreasing the value of all indexes and funds that own it and eroding the returns of its own investors in the process.

**Rebalance management**

Because indexes price securities at the close of each rebalance day, asset managers that place all their trades at the close that day can track

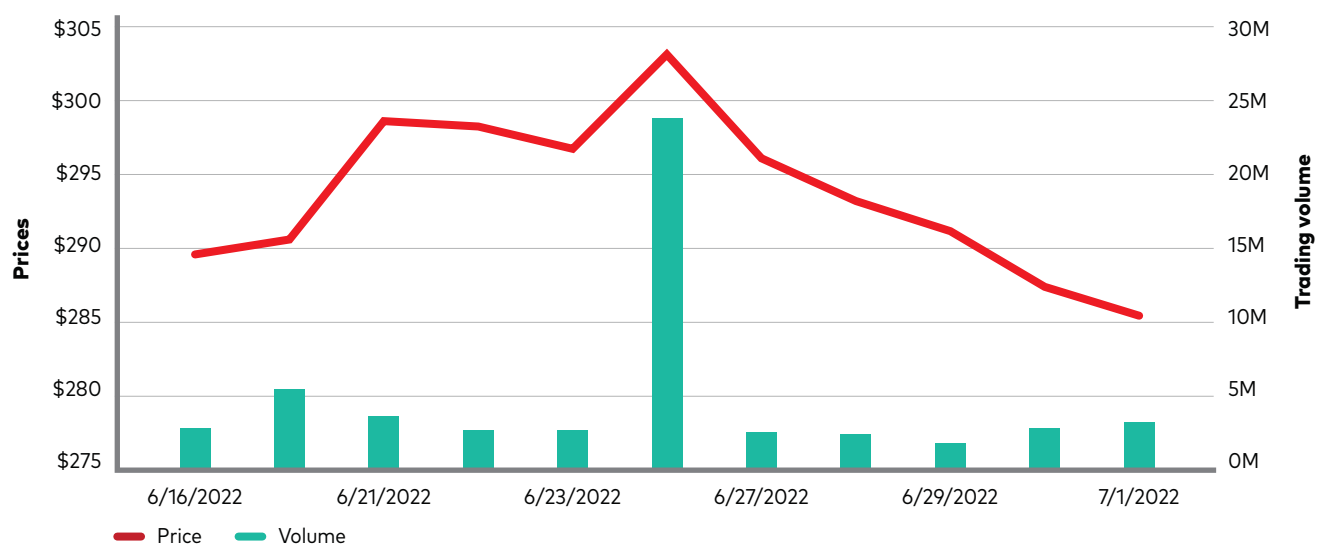
an index tightly but risk impacting the market. More sophisticated asset managers may employ an alternative strategy: trading before, during, and even after an index rebalance date. This is a risk-controlled decision given a trade-off with tracking error (because the index uses each security’s closing price); to execute it effectively requires deep knowledge of market mechanics and benchmark methodologies as well as robust risk management. How much higher would the Linde Group have closed on June 24, 2022, if all managers were unconcerned with market impact and placed all their trades at the close of June 24? This question underscores the importance of understanding a manager’s approach to market impact mitigation.

**Sampling techniques**

Sampling refers to the approach an asset manager takes to selecting the securities for an index fund. Often, the most desirable approach is to purchase every security in an index—sometimes referred to as “replication.” However, benchmarks often contain securities with low or even no liquidity, rendering them prohibitively expensive or, sometimes, impossible to trade in the real world. This is especially true in the fixed income space. As a result, an asset

**FIGURE 4. Thoughtful management of index fund trading can protect investors from value-destroying market impacts**

Trading volume and price fluctuations resulting from the Linde Group joining the Russell 1000 Index on June 24, 2022



Source: Vanguard.

manager may apply an optimization approach, in which portfolio managers balance tracking error risk against transaction costs by purchasing a representative sample of the index securities aimed at matching the index's fundamental characteristics (for example, capitalization, style) while purchasing fewer securities within the fund than those that compose the benchmark.

An optimization approach may also be appropriate in the case of broad-market indexes where fully replicating the index may be impractical, as well as with international funds where there is an option to purchase either American depositary receipts (ADRs) or local securities, each with differing levels of liquidity relative to each other. Further, in less-liquid emerging markets, trading costs can be substantial, and full replication can result in underperformance relative to indexes, none of which adjust returns for trading costs. Overall, optimization introduces varying levels of risk and, when poorly executed, can depress investor returns over time. Accordingly, investors should favor full replication where feasible and otherwise use tracking error to evaluate a manager's skill at optimizing.

## Securities lending

In this widely used investment strategy, asset managers lend securities from their portfolios to

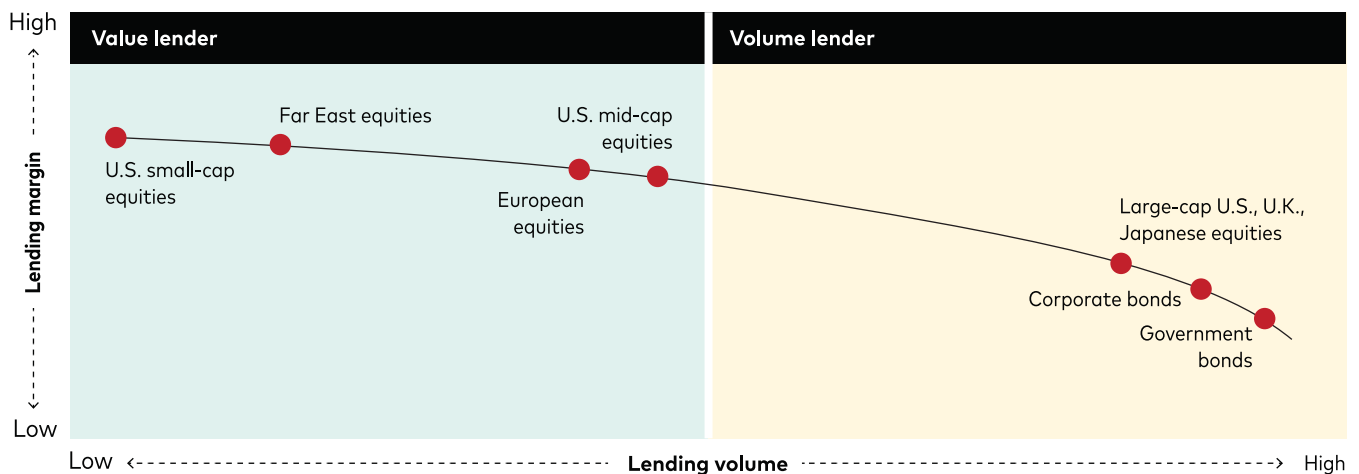
banks and broker-dealers, whose clients, in turn, use the borrowed securities for short selling and other strategies. The asset manager receives either cash or acceptable alternative securities as collateral to protect against the borrower failing to return the securities. When cash collateral is delivered, the lender invests it during the term of the loan and retains the return on the investment less any rebate paid to the borrower. Although this basic framework exists across the industry, lending philosophies can vary markedly from firm to firm.

**Lending philosophy:** An investor should understand the program's fundamental approach to securities lending. On the conservative end of the spectrum is value lending, in which an asset manager lends out securities that are in short supply and therefore demand a premium, or higher loan fees. This approach allows asset managers to limit the portion of a portfolio on loan while maximizing returns. Value lending limits the number of securities eligible for loan, and, in the case of fixed income, dictates that during certain market cycles, the optimal approach is to lend nothing at all.

The more aggressive approach is volume lending, which lends low-margin securities that require higher volumes or riskier collateral investments to generate slightly more revenue. The key distinction between the two approaches is risk-adjusted return. If a value program and a

**FIGURE 5. Securities-lending philosophies drive the level of program risk and vary widely among asset managers**

Value vs. volume securities-lending philosophy illustration



Source: Vanguard.

volume program produce the same returns for two identical funds, the value program would do so with a smaller amount on loan, and so a smaller portion of the portfolio's holdings would be susceptible to loss. While the probability of investor losses may be small, such risks typically are greatest during times of market turmoil, when investors most want their portfolios to be insulated from such ancillary risks.

**Fee split and program costs:** An investor should be appropriately compensated for assuming the risk associated with securities lending. This is another area of difference among asset managers. First, program costs can vary, depending on whether an asset manager has its own lending program, contracts with a third-party agent lender, or both. All else being equal, lower costs mean higher returns for investors. Second, some firms may return all the remaining revenue to the funds, while others may retain a substantial portion as firm profit. The percentage of gross revenue returned to shareholders from a securities-lending program may range anywhere from more than 95% to as little as 50%, and so it is important to understand what, if any, portion of revenue is retained by the asset manager when considering the quality of, and incentives behind, a securities-lending program.

Both value lending and volume lending are susceptible to two key risks associated with securities lending: borrower default risk and collateral risk.

- 1. Borrower default risk:** There is a risk that the borrower fails to return the securities, usually because of financial hardship. It's important to understand how rigorously an asset manager screens potential borrowers to assess their credit quality.
- 2. Collateral reinvestment risk:** In mutual fund/ETF structures, securities borrowers must deliver enough collateral to cover 100% or more of the borrowed security's value, which the lender generally reinvests for the term of the loan. In the event of a borrower default or insolvency, the collateral will be used to cover the repurchase of the loaned securities. This process creates collateral

reinvestment risk. Mutual funds are required to reinvest collateral in conservative fixed income investments, which themselves carry various degrees of risk that should be understood. Extending duration and/or lower credit quality can increase risk but also yield, producing additional revenue not only for the client but also potentially for the asset manager. Collateral reinvestment risk was more apparent during the 2008 global financial crisis, when several firms experienced significant losses related to their securities-lending programs. The losses occurred because of significant declines in the value of the cash collateral resulting from aggressive reinvestment strategies—not from the practice of securities lending itself.

These risks drive the return of each program, which, depending on the strategy, can add 0 to 10+ bps of return to overall performance, and varying levels of risk, much of which is borne by shareholders. Accordingly, securities lending can represent hidden costs and risks that, unlike expense ratios and tracking error, are not immediately apparent to the investor. Transparency is critical, and investors should be leery of any manager unwilling to provide line of sight into their lending program. As a result, it is important to understand how one program differs from the other by discussing the above elements with your asset manager, particularly in the case of separately managed accounts (SMAs) and collective investment trusts (CITs), for which securities lending is not regulated by the Investment Company Act of 1940.

During their analysis, investors may also want to explore the program's performance over past market cycles. Did investors lose money? Did asset managers pitch in to cover losses? Full program transparency should be table stakes. In the end, securities lending is all about investor preference and appetite for risk. *In general, securities-lending programs that are conservatively operated in terms of lending volume and cash collateral reinvestment and that return the greatest portion of lending revenue to investors should be preferred.*



## Fair-value pricing

A fund's NAV is calculated daily using the closing price of each security on its principal exchange. Because exchanges worldwide close at different times, the usual method of computing the NAV can result in "stale" fund prices for, say, a U.S.-domiciled fund holding non-U.S. securities. The practice of adjusting the price of certain portfolio securities to reflect material information that becomes public after trading in these securities has otherwise closed is known as fair-value pricing (FVP). FVP can help protect long-term investors from short-term or speculative traders who attempt to arbitrage the valuation gaps that would otherwise result from standard fund-pricing practices.

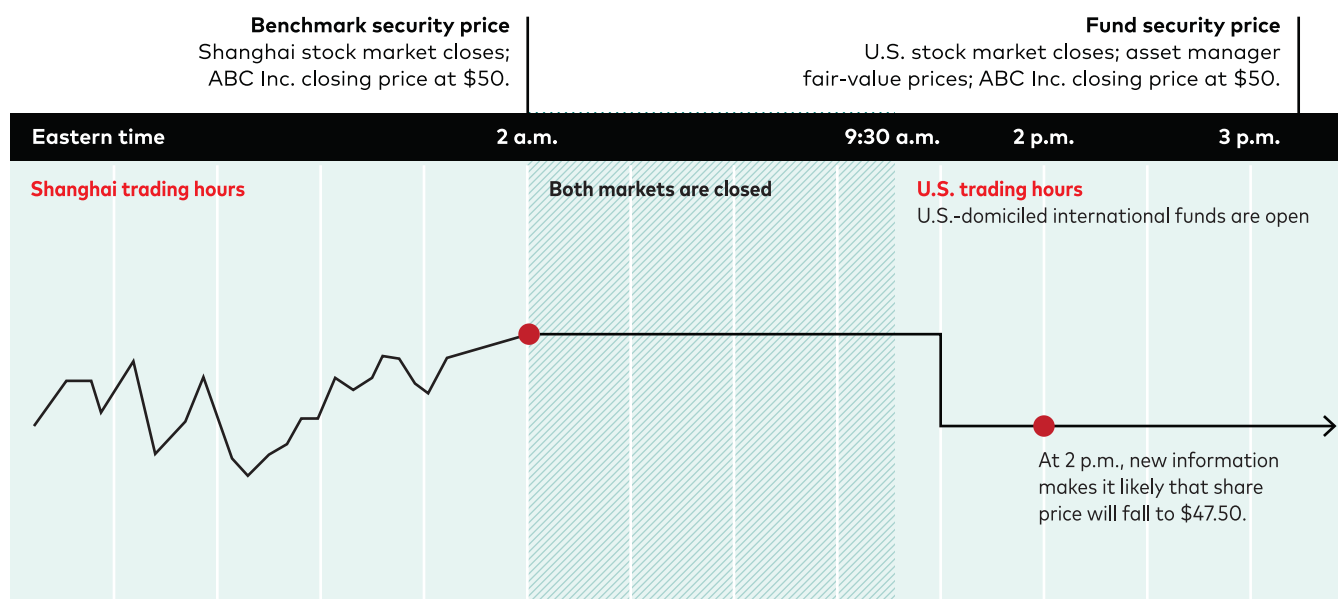
**Example:** Consider the scenario depicted in Figure 6. Immediately after the Shanghai stock market closes, ABC Inc. (ABC), a Mainland China-domiciled company (China A-Share), announces that its CEO has resigned. It's widely assumed that ABC's price will fall when markets reopen. A U.S.-domiciled fund that uses the Shanghai market closing price to value its ABC holdings

that afternoon does not reflect the impact of the ABC CEO's resignation. Seeing an opportunity, market-timers in the United States swoop in to take advantage of this stale price by selling their shares of the fund, which contains ABC at a price above its fair market value. For long-term fund investors, this means subsidizing the artificially high redemption price captured by short-term traders since the fund owns ABC and doesn't apply fair-value pricing to adjust the price. Over time, this costs long-term investors money in the form of lower fund returns.

The Securities and Exchange Commission (SEC) requires fund providers to engage in FVP but does not specify processes or standards, leading to meaningful variations in how FVP is applied by asset managers.<sup>1</sup> According to a fair-value pricing survey conducted by Deloitte (2022), most asset managers take one of two common approaches to FVP. Approximately 61% of asset managers apply fair-value pricing to every security every day, while the remainder use some other threshold for determining when FVP is applied. Long-term investors should understand how a firm's FVP is applied to protect them

**FIGURE 6. Daily fair-value pricing adjustments protect long-term shareholders from market-timing**

Hypothetical fair-value pricing example



Source: Vanguard.

<sup>1</sup>The SEC regulates fund structures. Index mandates invested through CIT and SMA structures are not required to fair-value price securities. Still, trust structures that employ fair-value pricing practices will, without exception, more consistently ensure that shareholders receive an appropriate daily NAV than those that do not fair-value price their securities.

from arbitrage. A zero-trigger daily review of all portfolio securities has the best potential to ensure all investors—both long-term and transacting—receive a NAV that fairly represents the value of their holdings.

## Additional considerations

**Cost of transition:** Institutional investors are accelerating the frequency of investment product lineup changes. These transitions, when complex, can introduce unnecessary cost, risk, and market exposure that diminish the desired outcome of cost savings portrayed in a target product's expense ratio. Transitions may include amending an investment manager or strategic asset allocation and are often in concert with recordkeeper/trustee changes. These changes may manifest undesirable risks and costs that affect the total cost of ownership. In recent years, institutional investors with fiduciary intent are enticed by ultra-low expense ratio products that obscure the burden of a costly, risk-rich journey of transition. For example, a change to a lower-cost investment product of 0.25–3.00 bps may cost 2–100 bps in expense and/or be stewarded with an out-of-market transition strategy, which is borne by the shareholder. Vanguard takes a comprehensive approach, evaluating costs and risks within a transition while driving toward a risk-conscious solution for clients.

**Scale:** Economies of scale refers to savings that accrue as a firm's production volume expands over time. In asset management, scale is a key differentiator—one that is increasingly difficult for new entrants to achieve. Economies of scale in index fund management exist at both the fund and firm levels, often manifesting in the form of increasing effectiveness of other value-add capabilities, including but not limited to the examples below:

- **Trading costs:** Scale at the firm level allows for lower trading costs by increasing the opportunities for cross-trading within a family of funds, as well as for obtaining new securities through syndicated offerings, both of which eliminate brokerage commissions. In addition, scale relationships can decrease the commission rates themselves, with the largest providers paying fractions of a penny per

trade. Scale at the fund level enables access to tighter bid-asked spreads by trading in round versus odd lots.

- **Securities lending:** Large managers are more consistently able to participate in the lending of the wide variety of securities they hold. Generally, the more assets a firm has under management, the more opportunity there is for that firm to optimize its securities-lending program (as previously noted, optimizing does not necessarily mean more but rather smarter lending). Further, large passive funds can command a premium in the securities-lending market because of their size and ability to fill large orders and because a passive management approach means they are less likely to call loans back early.
- **Global trading platform:** For funds that own international securities, a key capability to combat market impact is a strong global trading operation. Asset managers that have trading desks in regions around the world can execute their funds' trades in ways that best align with the strategies of the portfolios.

Those asset managers that have only a domestic trading desk typically rely on regional brokers, who are paid commissions based on trade volume, to execute trades on their behalf. As a result of their incentives, such partners may not value the idea of managing market impact, instead trading in a way that's indifferent to maximizing value for clients. Furthermore, the local market expertise afforded by a global platform empowers an asset manager to more effectively perform due diligence when considering how to approach trading strategies in various capital markets around the world.

With equity and fixed income trading desks in Malvern, Pennsylvania; Scottsdale, Arizona; London; and Melbourne, Vanguard can trade 24 hours a day and potentially save money for investors along the way.

- **Relationships:** Large managers can establish stronger relationships with investment banks and other services firms, providing increased access to syndicated IPOs, secondary offerings, and new issues of fixed income. When used appropriately, this access represents a meaningful source of value to investors.
- **Industry impact:** Asset managers often have an opportunity to engage with governments, regulators, and index providers on topics important to investors. The larger the manager, the louder their voice at the table, allowing firms with meaningful scale to influence policy. This is another advantage of working with a firm that uses its influence in ways that align with clients' interests.
- **Replication:** Scale increases a manager's ability to more accurately track benchmarks that contain less-liquid securities that may be prohibitively expensive for smaller asset managers to trade. Firms without scale typically try to optimize portfolios through a less-diversified representative sampling.
- **Fee transparency:** Some asset managers will only provide an "asset manager fee," which omits the cost of custody services, striking the NAV, and more. Given that mutual funds and most CITs in a 401(k) plan are valued daily, the all-in fee is required reporting to the plan sponsor. Thus, it's critical that clients and consultants validate that the expense ratios quoted by fund providers include the all-in fee participants will see in the plan. An asset manager that quotes only an asset manager fee is essentially quoting a partial fee. Such a firm should not be compared to providers like Vanguard that quote an expense ratio that includes the cost of custody services and striking the NAV.

### **Cost: No longer king**

Fiduciaries have long evaluated index funds primarily based on cost, which has historically been the most apparent driver of investor outcomes. The prevalence of ultra-low and even zero expense ratios today has minimized, or even eliminated, the savings that can be realized by changing from a low-cost index fund to the lowest-cost product. What, then, distinguishes one index fund manager from another?

The answer is an array of factors beyond price. When selecting an index fund provider today, fiduciaries would be wise to give greater weight to expenses and organizational incentives, portfolio management capabilities, securities-lending programs, fair-value pricing policies, and scale.

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