

Beyond expense ratios: A guide to selecting an index fund manager

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Acknowledgments: This paper has been adapted from a Vanguard research paper published in 2023 titled "Beyond Expense Ratio: A Contemporary Guide to Selecting an Index Fund Manager"¹. The 2023 paper was a revised version of a Vanguard research paper first published in 2019 titled "Beyond Expense Ratio: A Guide to Index Fund Manager Selection"².

While markets and financial returns are hard to predict, investors can control costs. These costs, including expense ratios, transaction costs and sales charges, can significantly erode returns.

Is an ultra-low expense ratio the end of the story? Or should investors consider factors beyond price when evaluating an index fund manager?

Some investors believe that index funds and ETFs (exchange traded funds) are differentiated only by their fees. However, over the last few years, the industry has seen a meaningful fall in index fund expense ratios. As a result, fee differences that once heavily influenced a fund's relative performance are now nearly immaterial. In today's low-cost environment, where some ETF and index fund expense ratios are approaching 0%, a one to two basis points (bps) charge has a negligible impact on performance.

Investors must therefore look beyond expense ratios to evaluate investment options. They need to consider a broader set of complex

factors, such as organisational incentives, portfolio management capabilities, securities lending practices, pricing policies and scale.

At these low fee levels, performance differences depend more on less visible and complex elements of index fund management. Investors must carefully evaluate these elements to ensure a fund closely mirrors the risk and return characteristics of its benchmark index.

This paper explains three key criteria investors should consider when selecting an index fund manager:

- **Incentive alignment**
- **Portfolio management**
- **Securities lending**

We present a decision-making framework that is applicable to the most popular, broad-based equity and fixed income index funds and ETFs offered by major asset managers, including Vanguard (**Figure 1**).

¹ Scott BJ, Lostaunau J, Kotlyarenko A, and Wilson A: Beyond Expense Ratio: A Contemporary Guide to Selecting an Index Fund Manager: 2023.

² Kleppe M, Tedesco A, Kotlyarenko A, Gibbs W and Milne S: Beyond Expense Ratio: A Guide to Index Fund Manager Selection: 2019.

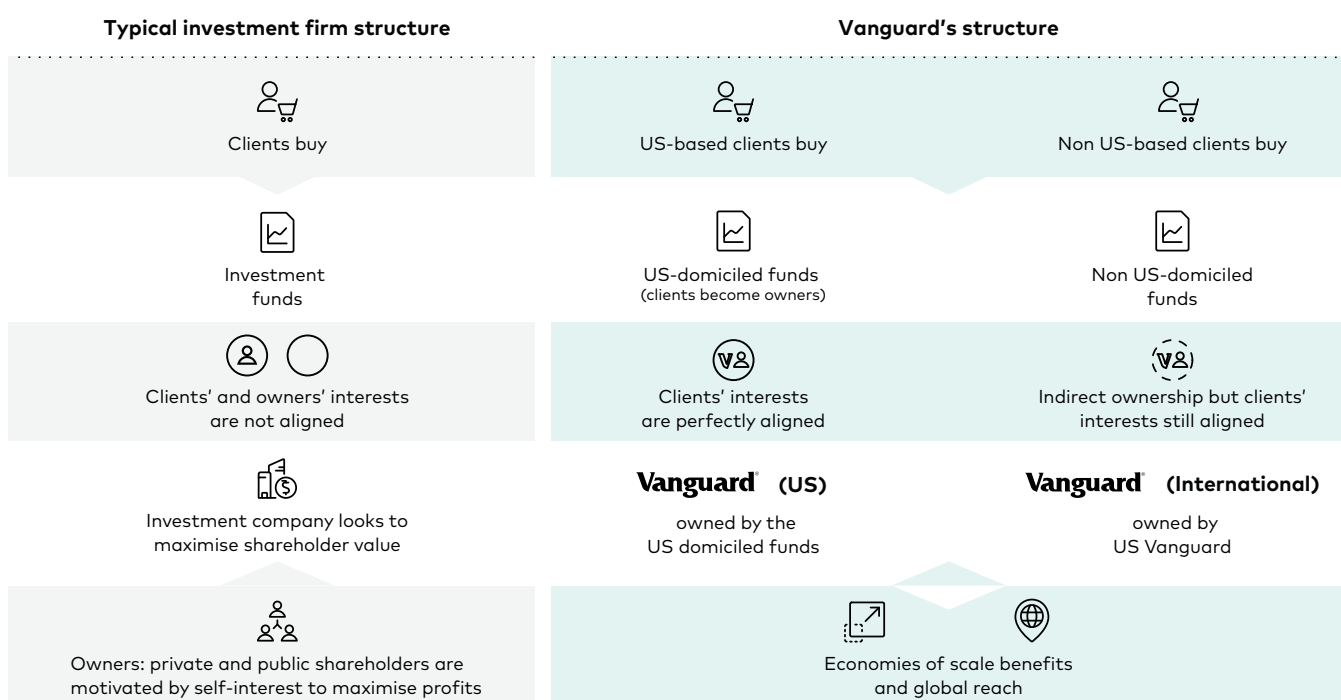
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Incentive alignment

Index fund managers come in all shapes and sizes. The differences matter, particularly an asset manager's ownership structure and philosophy, as this determines the incentives that drive the firm's business strategy.

We believe that a mutually owned asset manager, such as Vanguard or a similarly structured firm, is well positioned to prioritise a client's interests over those of the firm itself. This benefits fund investors. The framework below illustrates this point.

FIGURE 1.
Framework for choosing an index fund manager



Note: A typical fund management company is owned by either public or private shareholders, rather than by the funds they manage. This company structure prioritises maximising profit for the owners, often resulting in higher management fees to boost profits. By contrast, Vanguard in the US operates under a different and distinctive model where the funds themselves own the Vanguard management company. This unique arrangement eliminates conflicts of interest of the Vanguard management company with those of the funds' investors. This incentivises Vanguard to keep fees as low as possible, benefiting investors by allowing them to retain more of the funds' return. While Vanguard in Europe is not directly owned by Vanguard funds, it is wholly owned by Vanguard Group. This ensures that the client-first philosophy is maintained, prioritising clients' interests by delivering value to investors.

Source: Vanguard.

The Vanguard difference

Vanguard is owned by the people who invest in our funds³. The value and strength of this ownership structure is that it aligns with our clients' interests of long-term perspective and low costs.

This is a philosophy that has helped millions of people around the world to achieve their goals with low-cost, uncomplicated investments. It's what we stand for: value to investors.

³ The Vanguard Group, Inc. is owned by Vanguard's US-domiciled funds and ETFs. These funds in turn are owned by their investors. Our unique mutual ownership structure in the US, where we are owned by our clients, aligns our interests with those of our investors globally. This structure underpins our core purpose: to take a stand for all investors, treat them fairly and give them the best chance for investment success. Vanguard believes that a company should manage funds solely in the interest of its clients, which is at the heart of our client-alignment philosophy.

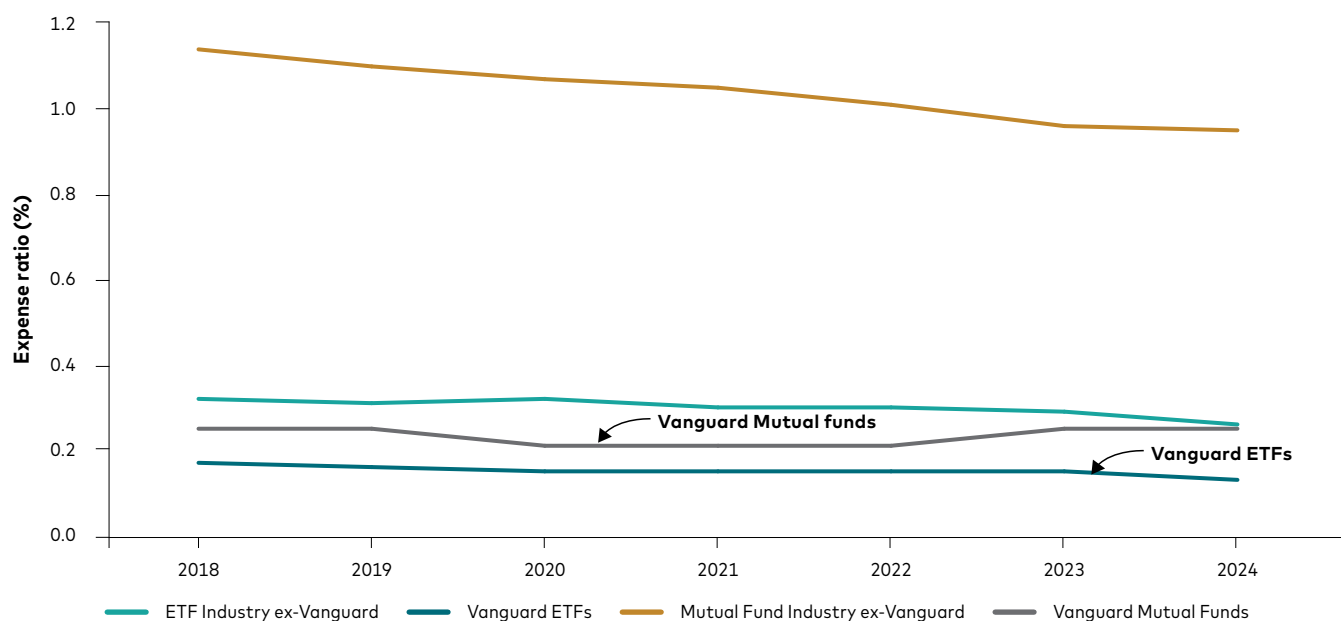
Cost management incentives

Asset managers deduct the costs, typically expressed as an expense ratio, of an index fund from the fund's total assets under management. This reduces the fund's return. While charges across the industry have fallen meaningfully over the last decade, an investor that selects an index fund solely to save two bps a year, for example, may be pursuing a false economy. Other fund costs that affect a fund's performance may exceed the perceived headline saving.

Investors should look for asset managers with a proven track record of disciplined expense management. Gaining insight into how an asset manager achieved a fund's performance can help investors understand how well the asset manager's interests align with those of their clients. For example, consistency with fees over time builds confidence that fees will at least remain stable or even decrease. By contrast, if fees fluctuate frequently, it could indicate that the asset manager's primary business strategy is to gain market share through selective price competition. **Figure 2** shows how fees have fallen over the last few years in Europe.

FIGURE 2.
Index fund expense ratios (OCF⁴ charge) across the industry have converged

Historical expense ratios: Europe-domiciled mutual funds and ETFs, 2018-2024



Source: Morningstar, 31 January 2018 to 31 December 2024.

⁴ OCF is the ongoing charges figure. The OCF is the annual cost of holding a fund, expressed as a percentage of a fund's total assets. It covers the cost of managing and operating a fund. It includes fees and expenses, such as management fees, administration fees (such as custodian, legal and audit fees) and other operational expenses.

Portfolio management

When assessing the attributes of an index fund management firm, there are several key characteristics to look for.

Some investors believe that managing an index fund is straightforward and simple. Perhaps counterintuitively, it is, in fact, a complex undertaking that requires experience and sophistication. Achieving consistent fund performance that mirrors a benchmark index over time requires experienced and highly skilled portfolio management teams. Not all teams are created equal. In asset management, performance is the great equaliser.

When evaluating an asset manager's portfolio management capabilities, it is vital that fund performance is viewed over the long term. This ensures the evaluation captures multiple market cycles, as each cycle can present unique challenges.

Some asset managers are differentiated by time-tested, risk-controlled processes. These processes are carefully designed to track a fund's benchmark, including minimising explicit and implicit (market impact) transaction costs.

If an asset manager has the capabilities, value-added strategies can offset multiple incremental costs. Success is dependent on these strategies being applied consistently and within a risk-controlled framework, requiring organisational resources and expertise.

Building a portfolio - sampling techniques

Sampling refers to the approach or technique that an asset manager uses to select the constituent stocks or fixed income securities of an index fund. The most desirable approach is to purchase every security in an index – sometimes referred to as "full replication".

However, indices often contain securities with low or limited liquidity, making them difficult and prohibitively expensive to trade and increasing the cost of building a portfolio. This is especially true for some fixed income securities. As a result, an asset manager may apply what's known as a sampling approach, in which portfolio managers balance tracking-error risk against transaction costs by purchasing a representative sample of an index's securities. The aim is to match an index's performance while minimising an index fund's tracking error.

With this sampling approach, an index fund can buy fewer of the securities that make up the underlying benchmark, thus lowering the cost of managing the index fund that tracks it. It should be noted that taking a sampling approach can expose investors to additional risks, potentially weighing on their returns.

Accordingly, investors should opt for full replication if practicable. If not, they should scrutinise an index fund's tracking error when assessing an asset manager's capabilities.

Keeping it in line

Excess return (also known as tracking difference) and tracking error are two key measures to consider when evaluating index funds. While these terms are sometimes conflated, they have very different meanings.

Excess return

Excess return measures the extent to which an index fund has outperformed or underperformed its benchmark. It is calculated as the fund's return minus its benchmark's total return. As a fund's return is net of fees, the excess return after fees of an index fund can often be negative, assuming all other things being equal.

Some index managers look to compensate for this performance drag by seeking to add value through efficient portfolio management, with the goal of reducing this structural negative excess

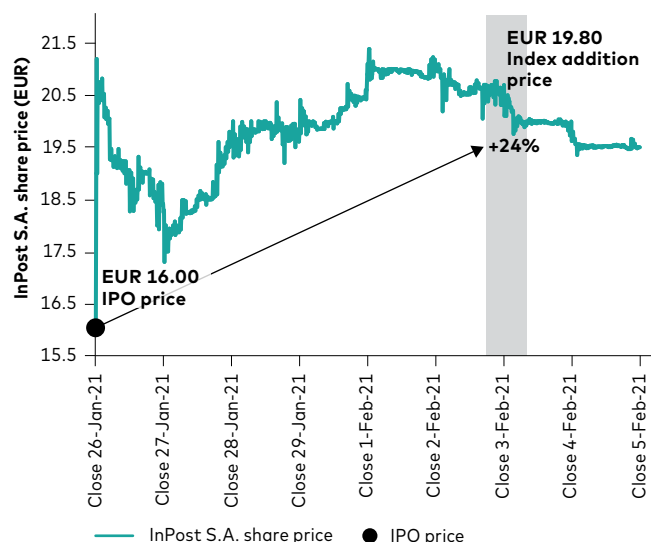
return. For example, if an index fund with a 10 bps (0.1%) expense ratio has an excess return of zero, it means that the value added through efficient index management has offset the fund's expenses. Conversely, a less skilled asset manager may either worsen the structural negative excess return or have only a marginal positive effect on excess return.

The following example highlights one of several value-add strategies index fund managers can use to generate positive excess returns.

FIGURE 3.

Implementing an effective corporate-action management strategy can add value

Corporate action case study: InPost IPO – participation in fast-track inclusion into the index



Plan + prepare

- We estimated potential index weight and impact on the funds based on price range.

Implement

- We participated in the IPO which was ahead of the inclusion into the index.

Outcomes

- Mitigation of the potential performance impact by not waiting until after the listing date to trade.

For illustrative purposes only. Price is in euros. Past performance is not a reliable indicator of future results.

Source: Vanguard and Bloomberg, as at 5 February 2021.

Tracking error

Tracking error is the variability of excess return; it can be considered a measure of the stability of a fund's excess return over time. More formally, tracking error is the annualised standard deviation of the excess return (Figure 4). It describes the spread (or probability distribution) of excess return over time.

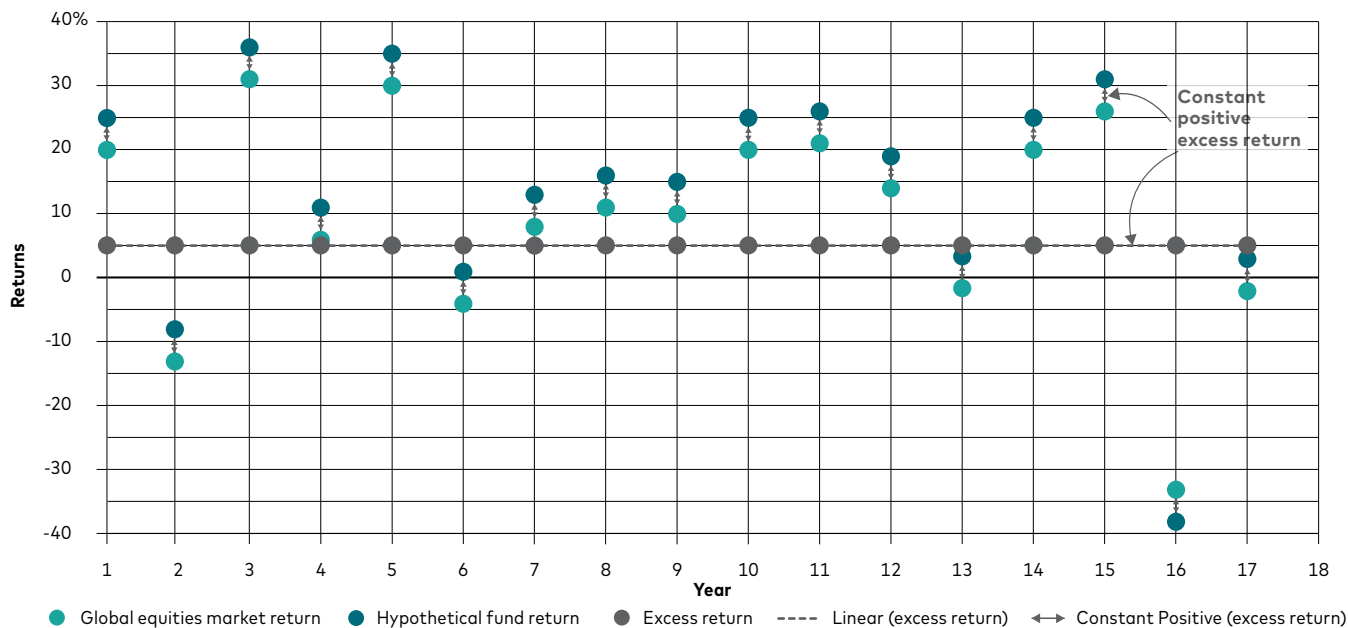
Tracking error defines a fund's risk relative to its benchmark and is inherent in an asset manager's performance. The higher the tracking error, the greater the spread of returns and the more volatile a fund's excess return. Portfolio management decisions driving index tracking error higher could include sampling techniques, the use of derivatives, buying or selling stocks at prices other than at close-of-market prices and the management of index changes or rebalancing, amongst others. It is important that tracking error is not evaluated in isolation, as context is vitally important. Two critical factors need to be considered.

First, what is a reasonable tracking error (or what level can be tolerated for a given investment strategy)? This will vary depending on the target market's characteristics. For instance, investors should expect a lower tracking error for an S&P 500 Index fund, as its constituents are ultra-liquid blue-chip US equities, compared with an emerging market equity index fund, for instance, which would typically include less-liquid stocks.

Second, take the situation where an index fund underperforms (or outperforms) its benchmark by a wide margin. The expectation is that this will result in a high tracking error. However, if the excess return is persistently at the same level, for example, constantly at minus or plus 2%, the tracking error will be zero. This happens because the excess return is a constant (or near constant), which results in an excess return variability, or standard deviation, of zero. This can potentially give the misleading impression that the index fund is performing in line with the market it is looking to track, when in reality it is not (Figure 4).

FIGURE 4.
A tracking error of zero

Context is important: Why tracking error should not be assessed in isolation



Note: This hypothetical example is used to illustrate a particular specific situation of how a tracking error of zero can be achieved and does not represent any specific investment

Source: Vanguard.

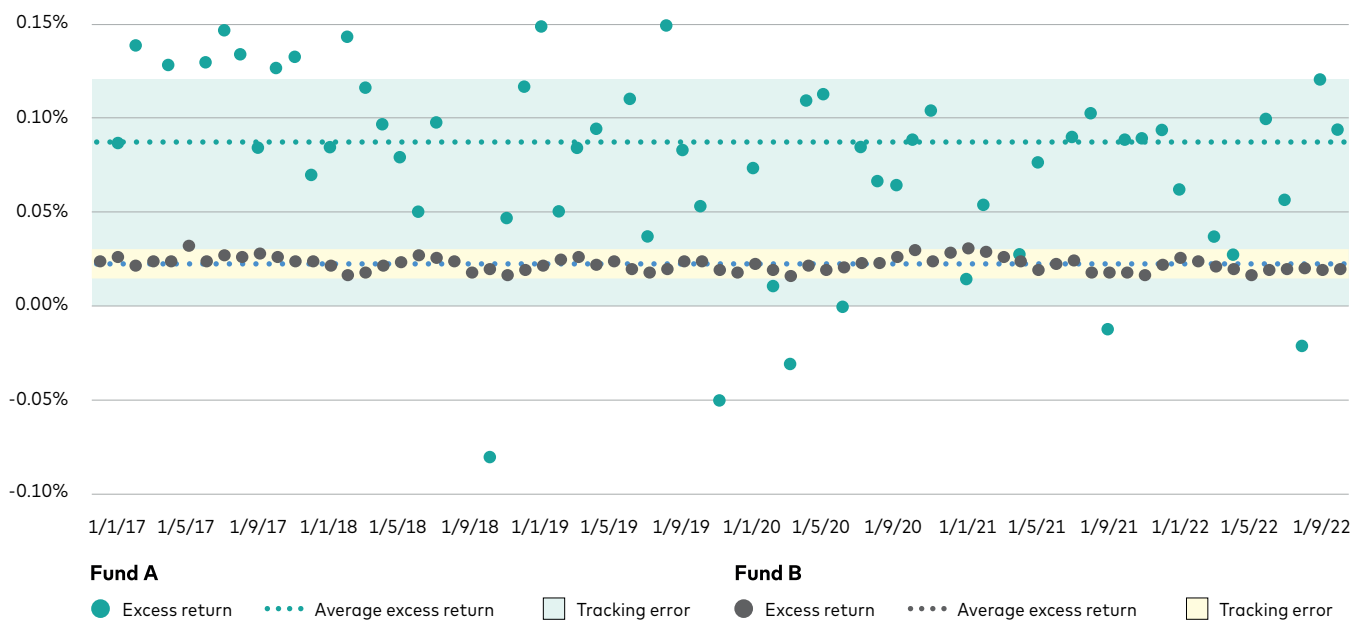
Tracking errors and what to expect

Excess return and tracking error for two hypothetical equity index portfolios:

Figure 5 further illustrates this point by comparing two hypothetical index funds from different asset managers. While Fund A shows a higher average excess return than Fund B, it's at the cost of a significantly higher tracking error. As a result of this higher excess return variability, returns to some investors who purchased Fund A will be

better than returns to those who purchased Fund B, while others will be worse, even though both investors may have invested under the impression that they would experience returns similar to that of the underlying index. However, the buyer of Fund B will have higher confidence that their expectations will be met. The risk with Fund A is that its highly variable excess return may not deliver on expectations, with the potential for disappointment.

FIGURE 5.
Why tracking error and excess return should be viewed together



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

Accordingly, excess return and tracking error should be viewed together to determine how well an index fund is being managed. The objective of an index fund is to consistently mirror the return of its benchmark year after year. Key criteria when selecting a suitable index fund manager include whether they have delivered index-like performance and at a minimal tracking error that is stable over time.

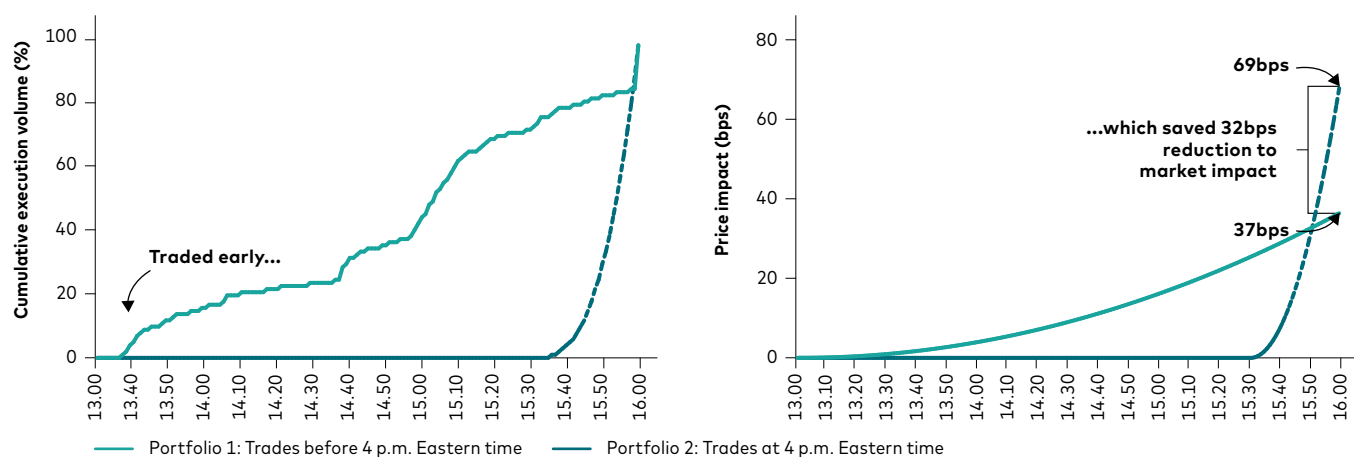
Market impact – efficient portfolio management

Portfolio management trading activity can affect a fund's return, whether it's an index fund or an actively managed fund. This is referred to as market impact (Figure 5) and results from the potentially detrimental effect that an asset manager's purchase or sale order can have on a security's price. Each security has an equilibrium price based on market supply and demand. However, an asset manager's trading activity can influence a security's price by temporarily unbalancing the market's supply and demand

dynamics, potentially pushing a security's price up or down. This affects all holders of the security and is a cost that needs to be effectively managed if it's not to diminish investor wealth. The effect can be significant, especially for large trades or in markets with low liquidity. Market impact is a key component of transaction costs. It can slowly, steadily and imperceptibly erode performance.

FIGURE 6.
Active cash-flow management reduces market impact

Trading early reduces costs. The chart shows how different trading strategies impact the costs on two portfolios with similar liquidity characteristics.



Past performance is not a reliable indicator of future results.

Note: Hypothetical example based on a US equity universe for illustrative purposes only.

Source: Vanguard.

Rebalance management – planning adds value

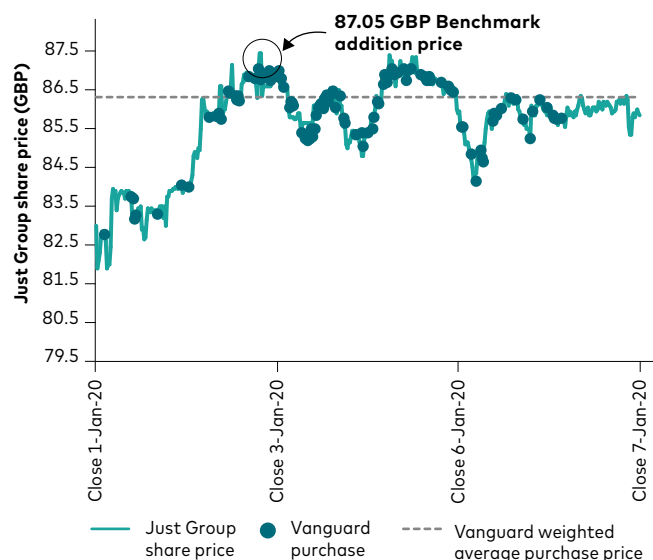
Managers run the risk of impacting the market when a new security is added to or removed from an index. This happens because the new security is priced at the close of its trading day, known as an index rebalance day. While this means an asset manager that trades at the market close can tightly track an index, they are exposed to market impact risk. To mitigate this risk, more sophisticated asset managers employ an alternative trading strategy, trading *before*, *during* and even *after* an index rebalance day. This is a risk-controlled decision given a trade-off with potentially higher tracking error (remember, the index provider uses each security's closing price on the rebalance day). To execute this strategy

successfully requires deep knowledge of market dynamics and benchmark construction methodologies, overlaid with disciplined and robust risk management. For example, how much higher would Just Group's share price (Figure 7) have closed if all index fund managers were unconcerned with the market impact cost and placed all their trades at the close-of-market price? Addressing this question underscores the importance of understanding an asset manager's approach to portfolio management costs and appreciation of market dynamics. As such, rebalance management is about effective planning and offers an opportunity to add value.

FIGURE 7.

Index rebalance case study: Just Group's addition to the FTSE 250 Index

Spreading rebalance trades over time can significantly decrease market impact



Plan + prepare

- Analysis of past ad hoc FTSE 250 adds shows upward move on effective day plus reversion over following days.

Implement

- Executed the whole trade over several days to mitigate potential market impact rather than executing all on the close on rebalance date.

Outcomes

- Took advantage of the expected reversion and resulted in a small gain for the fund which helped cover some of the costs.

Past performance is not a reliable indicator of future results. The performance data does not take account of the commissions and costs incurred in the issue and redemption of shares.

Note: For illustrative purposes only.

Source: Vanguard and Bloomberg, as at 7 January 2020.

Securities lending and efficient portfolio management

Securities lending is a practice that is widely used in the asset management industry. It involves asset managers temporarily lending securities from the portfolios they manage, in exchange for a fee. The borrowers they lend securities to are usually investment banks, hedge funds, market makers or other institutional investors, who may wish to borrow securities for risk management purposes, such as hedging strategies or for short selling. Securities lending offers benefits to both lenders and borrowers. For lenders, it generates additional income and enhances the efficiency of their investment portfolios while contributing to the overall health and liquidity of the market.

Although this basic framework is common across the industry, securities lending philosophies can differ markedly from firm to firm.

There are two basic approaches to securities lending that are fundamentally different and understanding the differences between them is critically important (**Figure 8**).

Value lending

On the more conservative end of the spectrum is an approach known as value lending. In this approach, an asset manager lends securities that are in short supply, demanding a premium or higher lending fees. Value lending restricts the shares eligible for lending. For fixed income securities, this approach may not be suitable

during certain parts of the market cycle: for example, during recessionary periods (when there is higher default risk) or during an interest-rate hiking period (when the opportunity cost is higher). In these situations, the best approach is to avoid securities lending.

Volume lending

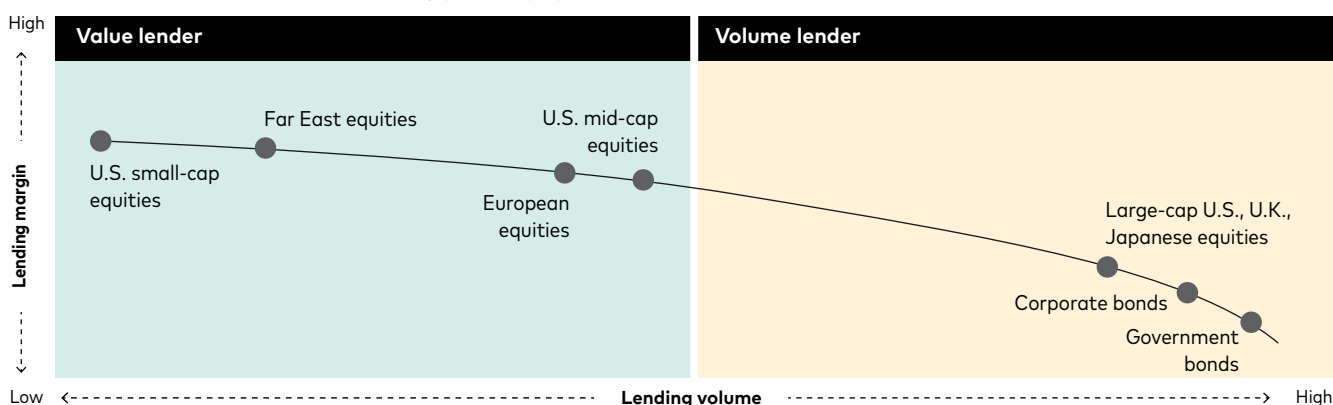
By contrast, volume lending is a more aggressive approach. This strategy involves either lending low profit-margin securities, which requires a higher quantity of shares, or taking on riskier collateral to generate revenue.

The key distinction between the two approaches is the risk-adjusted return they can generate. Value lending usually generates higher risk-adjusted returns. If a value-lending strategy and a volume-lending strategy produced the same return for two identical index funds, for example, the value strategy's return is achieved using a smaller proportion of a portfolio. Therefore, the lower the value of securities lent, the better the risk-adjusted return.

Value lending is broadly a lower-risk approach. The practice uses a smaller proportion of a portfolio's holdings to achieve the same return as a volume-lending strategy. As a result, the potential loan write-down or investment loss is lower.

FIGURE 8. Securities-lending philosophies drive the level of programme risk and vary widely among asset managers

Value versus volume securities-lending philosophy illustration



Source: Vanguard.

Securities lending programme costs and sharing of fees

We believe that an investor in a fund should be appropriately rewarded for securities-lending risk. This is another area of difference among asset managers.

Securities lending programme costs can vary depending on whether an asset manager runs its own lending programme, contracts with a third-party agent lender or both. All other things being equal, lower programme costs mean higher returns for fund investors.

Some asset managers may return all the remaining revenue (after deducting programme costs) to a fund, while others may retain a substantial portion as the firm's profit, rather than distributing the large part to fundholders. The percentage of gross revenue returned to a fund from a securities-lending programme can range from over 95% to as little as 50%. Therefore, it's important to know what proportion of securities lending revenue is retained by an asset manager, as it affects a fund's return. This is another important factor when assessing the quality and incentives of an asset manager's securities-lending programme and how this aligns with their clients' interests.

Securities lending risks

Value lending and volume lending are both exposed to two key risks associated with securities lending: borrower-default risk and collateral risk.

1. Borrower-default risk: This is the risk that a borrower fails to return the securities. This is usually because of financial hardship on the part of the borrowing firm or entity. It's important for a fund's investors to understand how rigorously an asset manager assesses the credit quality (or default risk) of potential borrowers.

2. Collateral reinvestment risk: In mutual fund and ETF structures, securities borrowers must deliver enough collateral to cover 100% or more of the borrowed security's value (the loan), which the lender (the fund) generally reinvests for the term of the loan. In the

event of a borrower default or insolvency, the collateral will be used to fully cover the repurchase of the loaned securities. This process creates collateral-reinvestment risk.

Collateral-reinvestment risk was more apparent during the 2008 global financial crisis, when several firms experienced significant losses that related to their securities-lending programmes. These losses occurred because of significant declines in the value of the collateral, which resulted from aggressive reinvestment strategies, such as using mortgage-backed securities, rather than from the securities lending practices themselves.

These risks drive the return of each type of lending programme. Over 10bps (0.1%) can be added to a fund's performance, depending on which lending approach is followed.

Unlike a fund's expense ratio and tracking error, securities lending costs and risks are not immediately apparent to investors. Transparency is critical, and investors should be wary of any asset manager unwilling to provide clear visibility into their lending programmes. As a result, it's important for investors to understand how securities lending programmes differ and discuss the lending risks with their asset manager.

Ultimately, securities lending depends on investor preference and risk appetite. In our view, a conservative strategy is preferable from a risk-adjusted return perspective. Investors should also make sure that the revenue-share approach is transparent and equitable.

Vanguard's European-based funds limit collateral to government debt, government-like debt or cash denominated in US dollars. The specific collateral mix is dependent on the fund's country of registration.

Important additional considerations

Scale benefits

Economies of scale refer to savings that accrue as a firm's production volume expands over time as fixed costs are covered. Scale is a key differentiator in asset management. 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-added capabilities, including, but not limited to, the following examples:

- **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. These eliminate brokerage commissions. In addition, scale relationships can significantly reduce commission rates. Scale at the fund level enables access to tighter bid-ask spreads (the difference between the buying and selling price) by trading in round (as opposed to odd) deal sizes.

- **Securities lending**

Large asset 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 greater the opportunity for a firm to optimise its securities-lending programme (as previously noted, optimisation does not necessarily mean more but rather smarter lending). Also, asset managers of index funds with scale can command a higher interest rate in the securities-lending market due to their size and ability to help brokers complete large transactions. Lastly, index fund managers can command a higher loan rate, as they are less likely to recall loans early.

- **Global trading platform**

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 fund trades in

ways that best align with a fund's underlying strategy, such as global or regional portfolio trading during the relevant time zone.

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, being indifferent to maximising value for an asset manager's clients. Furthermore, the local market expertise afforded by a global platform empowers an asset manager to perform due diligence more effectively. This is especially important when an asset manager is considering how to approach trading strategies in various capital markets around the world.

At Vanguard, we have equity and fixed income trading desks around the world, enabling us to trade 24 hours a day. This generates further cost efficiencies that benefit Vanguard funds, offering investors the potential for better fund returns.

- **Replication**

Scale increases an asset manager's ability to accurately track indices that contain less-liquid securities. Firms without scale typically attempt to optimise portfolios using a less-diversified representative sampling technique, with the risk of adding to tracking error.

Looking beyond expense ratios: Headline costs are no longer king

What distinguishes one index fund manager from another? The answer is an array of factors beyond price alone. When selecting an index fund provider today, investors should look beyond a simple headline fund cost. Other expenses and organisational incentives, portfolio management capabilities, securities-lending programmes and scale are as important in delivering successful, low-cost index-based investing.

Vanguard index funds and ETFs

A range of solutions to help investors reach their goals

Our range of funds and services caters to a wide variety of investors. In every case, our focus is on long-term performance that helps investors achieve their goals at a low cost.

Index funds

Vanguard is a pioneer of index funds, having developed the first index fund for individual investors in 1976. Low-cost and simple by nature, index investing can be the ideal foundation for almost any investment portfolio, helping to achieve broad diversification and market-like returns.

ETFs

We launched our first ETF in Europe back in 2012. It was still early in the ETF journey, but our vision was fixed on the future. This is because all our ETFs share a common purpose: they are designed to be held for decades.

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