Vanguard | 365

Mini Guide to ETFs

Vanguard ETF Knowledge Centre

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ETFs – an introduction

Since their introduction in the 1990s, ETFs have grown rapidly to become one of the most popular products in the global investment industry. This guide has all the basics you need for finding out what they are, the different types available and why to choose them, plus how they are managed and how to trade them.

What are ETFs?

Exchange-traded funds (ETFs) are the most common of a group of investments known as exchange-traded products (ETPs).

What gives them much of their popularity is that they combine the diversified nature and professional management of mutual funds with the liquidity of individual shares.

Just like regular shares, they can be traded on a stock exchange and their prices can fluctuate during the day.

Most are index ETFs – they track a traditional index such as the S&P 500, which is made up of the shares of the largest listed US companies, or the FTSE 100, comprised of the shares of the largest listed companies in the UK.

They can also be structured to track specific sectors, themes, factors or commodities. Active ETFs are becoming more popular – these have the aim of managing risk or outperforming the market.

The features of ETFs

ETFs offer four key features: low cost, liquidity, diversification and transparency.

Low cost

ETFs are generally cheaper to manage than mutual funds. In addition, index-based ETFs usually cost less than actively managed funds and ETFs. These lower costs mean that more of a fund's returns can go to the investor. (However, transaction costs such as broker commissions should also be factored in.)

Liquidity

ETF units can be traded throughout the day at market-determined "bid" or "ask" prices (the prices at which an investor can sell or buy the ETF), just like individual shares. They can also be traded on any market that's open, even when the markets on which their underlying constituents are traded are closed. This makes it quicker and easier for investors to react to changing conditions.

Transparency

All Vanguard ETFs provide full transparency on their constituent elements, performance relative to the benchmark and costs on a regular basis. In particular, index ETFs are typically more transparent relative to most actively managed funds.

Diversification

An ETF that tracks an index might contain hundreds or even thousands of individual securities. This diversification helps spread risk that might be associated with a particular security or market segment. Multi-asset ETFs provide further diversification across stocks and bonds.

Managing ETFs

How index ETFs track their benchmarks

Most ETFs (and all Vanguard ETFs) are classified as physically replicated because they hold some or all of the actual securities that make up the index that they track. There are three main ways a physical ETF tracks its benchmark index. The most common is full replication, reproducing a target index by purchasing securities according to their relative weight in the index.

When there are too many holdings to replicate easily, or not all the index constituent securities are available to purchase, then sampling is used. The ETF just holds a representative sample of the securities.

The third option is optimisation, which uses a computer-generated quantitative multifactor model. Most equity ETFs tracking indices with lots of constituents, such as the FTSE All-World Index, use optimisation.

Synthetic ETFs rely on derivatives, mainly swaps, to execute their investment strategy. In essence, a synthetically replicated ETF can track an index without actually owning any of its securities.

What affects index tracking?

Tracking difference (sometimes referred to as excess return) and tracking error are important metrics to consider, especially when evaluating traditional index-based ETFs.

Tracking difference measures an ETF's performance against its benchmark index over a specific period of time. Calculating tracking difference is simple: subtract the index's total return from the ETF's total return.

Tracking error is the annualised standard deviation of tracking difference – that is its variability over time. Some investors may be happier with higher tracking error (assuming outperformance), while others prefer lower tracking error, even if average returns are lower, because they're closer to the benchmark.

Comparing management approaches

ETFs can differ greatly when it comes to the management of their underlying portfolios:

- **Traditional index ETF**s – these are index-based and market-capitalisation-weighted
- **Alternative index ETFs** – also index-based, these involve taking active risk and follow rules-based management
- **Active factor ETFs** – these also involve taking active risk and follow rules-based management, but with active management by the ETF manager.

Why investment costs matter

Investment costs are a key driver of long-term performance.

The 'zero-sum game' helps explain why. This states that the aggregate holdings of all investors in a particular market form that market. At any time, half of invested assets must outperform the average market return and the other half must underperform it. Once costs are subtracted, though, it becomes increasingly difficult to beat the average market return.

This suggests costs should be kept low, regardless of whether you choose an index or active strategy. Our own research also shows that what an investor pays for an investment can affect their net returns more than anything else[1].

1 Vanguard, 2017. Vanguard's Principles for Investing Success. Valley Forge, Pa.: The Vanguard Group.

Trading ETFs

Who are the key players?

- **Primary market** – ETF managers are responsible for managing the ETF and its portfolio of securities. Authorised participants (APs) are the institutions which interact directly with an ETF manager.
- **Secondary market** – market makers and liquidity providers compete to provide liquidity for securities during the day. Investors trade ETF shares on an exchange at an agreed price.

Where do ETFs get their liquidity?

It's a common misconception that an ETF's liquidity is best gauged by its average daily volume (ADV), which measures the trading activity in an ETF. Most liquidity is from non-trading sources, particularly the underlying portfolio of securities.

- **Exchange liquidity** – generally easily visible, this is the on-screen liquidity measured by the ADV.
- **Over-the-counter liquidity** – inventory and balance-sheet usage of authorised participants/brokers away from exchanges.
- **Liquidity from the underlying market** – the ETF creation/redemption process allows institutional investors to trade ETFs in amounts that far exceed the ADV by buying or selling the ETF's underlying shares or bonds.

What are common order types?

- **Market order** – speed is the priority here: you buy or sell immediately at the best available current price.
- **Stop order** – to limit a loss or protect a profit, you set a price – the "stop price" – at which you automatically buy or sell.
- **Limit order** – to prioritise price over speed, you set a price and execute your trade only if shares are available at that price or better.
- **Stop-limit order** – like a stop order, but in addition to the stop price, you also set a "limit price" to try to limit a loss or protect a profit.

Placing orders

A number of factors can influence how you place ETF orders. There are two common scenarios:

- **You want to place your order straight away** – just execute a simple limit order through your trading site. If it has a low ADV, it may be better to contact your ETF trading desk.
- **You want to complete an order over time** – whether an ETF has a low or a high ADV, it's best to contact your ETF trading desk to ensure the best possible average trade price.

Premiums and discounts

These are a result of the supply and demand of ETF shares and the underlying securities. If the cost of buying the underlying securities is higher, the result may mean a wider range of premiums and discounts.

If the underlying securities trade on an exchange that is open at a different time from the exchange the ETF trades on, there could be deviations between current and stale security pricing, resulting in perceived premiums or discounts.

ETFs in some asset classes – for instance, fixed income – tend to have relatively large and constant premiums and discounts.

Best practices

By following a few best practices, you can help achieve favourable prices:

- **Use limit orders** – these determine maximum or minimum price.
- **Consider market volatility** – major market events can cause prices to move sharply and generate wider bid-ask spreads or larger premiums or discounts. Limit orders can provide price protection here.
- **Watch the news** – central bank statements, economic indicators and earnings figures can all generate price swings.
- **Understand liquidity** – a common misconception is that ETFs with lower ADVs are less liquid. What matters most is the liquidity of the ETF's underlying securities.
- **Watch the clock and the calendar** – opening and closing times can affect spreads and pricing.
- **Use an ETF trading desk** – this gives you trading tools to help you source liquidity for a large order.

Find out more

Find out more now about how Vanguard ETFs can bring you and your clients extra diversification and liquidity – with both low costs and high transparency.

Links to Vanguard ETFs, plus ETF guidance videos, infographics and quick guides on individual topics are available online at the [ETF knowledge centre]

Investment risk information

The value of investments, and the income from them, may fall or rise and investors may get back less than they invested.

ETF shares can be bought or sold only through a broker. Investing in ETFs entails stockbroker commission and a bid- offer spread which should be considered fully before investing.

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