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ETFs have some unique characteristics that may make them useful for some investors, including low costs (depending on broker’s fees), liquidity and transparency.

In a similar way to traditional index mutual funds, an index ETF also offers diversification in the form of holding the broad market, rather than concentrating risk in fewer holdings.
Costs

The annual charges for index ETFs are on average less than many conventional index funds and significantly less than actively managed funds. However, you’ll need to consider the full ‘all in’ cost of investing in ETFs to determine if they are right for a given client or portfolio. This is because ETFs also include costs associated with trading in the stockmarket, such as broker commissions (or flat fees) and bid-offer spreads.

Diversification

Index funds invest in all, or a representative sample, of securities in an index, providing a highly diversified investment. This offers investors scale, and access to a wide range of investments which may not be accessible otherwise to an individual investor.

Liquidity

The ability to create and redeem ETF securities on a regular basis ensures an underlying depth of liquidity.* Unlike mutual funds, ETFs can be traded at market prices throughout the trading day, at a price quoted on the stock exchange.

Transparency

With straightforward ‘physical’ index ETFs, the issuer provides daily information to the market including the ETF basket, or a close representation of the ETF portfolio, and the Net Asset Value (NAV) of the ETF – making ETFs a highly transparent investment option. The difference between physical ETFs and more specialist ‘synthetic’ ETFs is covered further on in this guide.

*See later section titled “Understanding how ETFs operate” for an explanation of how this works in practice.
ETFs: just another type of pooled investment fund

Exchange Traded Funds (ETFs) are really just another type of investment fund, usually based on a well-known index, which can be readily traded on a stock exchange.

This guide will help you understand how ETFs work along with the potential ways that you can use them in your clients’ portfolios.
What are ETFs?

ETFs available in the EU are pooled investment funds, often regulated under the European Union’s UCITS regime, which can be bought and sold through stockbrokers or stockbroker platforms. Their prices vary throughout the day, which means they can be purchased at a known price anytime markets are open, instead of once a day like most OEICS or Unit Trusts.

Like conventional index funds, ETFs offer investors a way to invest in an index portfolio. The indexing approach seeks to track specific market indices, offering the benefits of low operating costs, diversification and simplicity.
ETFs: just another type of pooled investment fund

How do ETFs work?

The most popular and straightforward ETFs are based on an indexing approach, which simply seeks to track the return of a target index. For example, a 2% rise or fall in the index should result in approximately a 2% rise or fall for an ETF which tracks that index.

ETFs are not traded directly with a fund management company. Instead, they are bought or sold any time during stockmarket trading hours directly through a stockbroker. The open-ended nature of ETFs allows for the creation and redemption of shares in the underlying fund to meet investor demand.
ETFs are bought or sold any time during stockmarket trading hours through a stockbroker. The open-ended nature of ETFs allows for the creation and redemption of shares in the underlying fund to meet investor demand.
ETFs in context

Index funds come in a number of different fund structures, including ETFs, OEICs, Unit Trusts and Investment Trusts. A detailed comparison of the four main structures in the UK can help put ETFs in context.
Exchange Traded Funds (ETFs)

An open-ended investment fund with shares that are traded on a stockmarket. ETFs are priced and traded throughout the business day, and traded through a stockbroker. ETFs can be actively managed or indexed, although the vast majority of ETFs currently available are indexed.

OEIC (Open-Ended Investment Company)

A pooled investment fund similar to a unit trust, but established under company law, rather than trust law. As such, it issues shares, rather than units, but these are not traded on a stock exchange, they are issued by the OEIC itself. Like ETFs, OEICs increase or decrease the numbers of shares issued in response to demand from buyers and sellers.

Unit trust

A pooled fund established as a trust. A unit trust is an open ended investment. This means that the manager can create or cancel units depending on public demand.

Investment trust

A closed-ended fund (a fund with a limited number of shares) established as a company, with the aim of producing returns by investing in other companies. Investment trusts trade like shares on stock exchanges and are priced and traded throughout the business day. They can be bought and sold through a stockbroker.

Pooled funds: key characteristics at a glance

<table>
<thead>
<tr>
<th>Fund type</th>
<th>Open ended</th>
<th>Closed ended</th>
<th>Daily</th>
<th>Throughout the day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Trust</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>OEIC</td>
<td>✓</td>
<td></td>
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<td>✓</td>
</tr>
<tr>
<td>Investment Trust</td>
<td></td>
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<tr>
<td>ETF</td>
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<td>ETF</td>
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<tr>
<td><strong>Structure</strong></td>
<td>Open ended</td>
<td>Open ended</td>
<td>Open ended</td>
<td>Closed ended</td>
</tr>
<tr>
<td><strong>Pricing</strong></td>
<td>Dual priced with bid-offer spreads, with price linked to NAV. Price also affected by market demand (but arbitrage helps keep the price close to the NAV)</td>
<td>Single pricing, linked directly to NAV</td>
<td>Dual priced with bid-offer spreads, price directly linked to NAV</td>
<td>Price indirectly linked to NAV and driven by market demand, can vary dramatically from the NAV</td>
</tr>
<tr>
<td><strong>Trading</strong></td>
<td>Anytime during market hours at realtime prices</td>
<td>Once a day on unknown future prices</td>
<td>Once a day on unknown future prices</td>
<td>Anytime during market hours at realtime prices</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>Purchased and sold on stock exchanges through stockbrokers</td>
<td>Directly with fund manager, online platform or adviser</td>
<td>Directly with fund manager, online platform or adviser</td>
<td>Purchased and sold on stock exchanges through stockbrokers</td>
</tr>
<tr>
<td><strong>Investment style</strong></td>
<td>Active or index</td>
<td>Active or index</td>
<td>Active or index</td>
<td>Active (small number of index)</td>
</tr>
<tr>
<td><strong>PEP/ISA?</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
ETFs are dual priced with bid-offer spreads, with the price linked to the NAV. The price is also affected by market demand, but arbitrage helps keep the price close to the NAV.
Using ETFs in client portfolios

You can use ETFs in a number of different ways, depending on your client’s investment objectives and risk profile.

ETFs can help you to build tailored, diversified, low-cost portfolios exclusively, or to complement an existing portfolio.
Determining your client’s suitability to ETFs

You can think of index ETFs as just another way to access investment exposure to a market index. But there are a few things that you’ll need to consider when determining the suitability of ETFs for a given client, including:

• Whether the client wishes to invest a lump sum, or add to their investment regularly
• The size of the client’s portfolio and the transaction amounts
• The client’s investing time horizon
• The relevance of trading strategies for the client’s portfolio, such as stop-loss orders
• The client’s appetite for risk

Lump sum versus regular investing

Clients need to know that stockbroker fees and bid-offer spreads apply when buying (and selling) an ETF, even if the ETF has cheaper annual expense ratios when compared to a similar OEIC or Unit Trust. These up-front costs can mean that an ETF might be more cost effective for clients making large, infrequent contributions to their portfolio. However, investors making ongoing, smaller contributions may be better suited to a traditional mutual fund where costs are based on a small percentage of each contribution instead of a fixed amount per trade. You will need to analyse the full investing round-trip costs involved carefully before making a recommendation.
### Transaction amounts

Some stockbrokers or broker platforms charge a percentage or flat fee for each trade, whether buying or selling. You will need to consider how high this fee is relative to the amount that you are likely to invest in an ETF. If the trade is relatively small, it might not make sense to use ETFs, but with larger trades, it might. The other side of this issue is that there is no minimum investment amount with ETFs as even single shares can be purchased.

### Time horizon

ETFs often have cheaper annual expense ratios when compared to an equivalent mutual fund, which can make them attractive as a long-term investment. However, when investing for the shorter term, stockbroker charges can actually make them more expensive. Again, you will need to analyse the full cost of investing to find where the ‘breakeven’ point would be when deciding between an ETF or a mutual fund to ensure your client gets the best deal possible.

### Trading strategies

When investing in ETFs, as with other stockmarket listed investments, you can use sophisticated trading strategies. This trading flexibility is a key benefit of ETFs, but not all investors need this flexibility in their investment strategy. Some strategies which require regular transactions may not be appropriate with ETF investments owing to stockbroker costs.
Diversification and asset allocation

Clients looking to improve diversification, or to create well-diversified portfolios, may be well suited to ETFs. ETFs offer a diversified investment, tracking all or a representative sample of the companies, geographies or elements of a given index. Some ETFs hold thousands of stocks, so a single investment can instantly diversify an investor’s portfolio in the particular asset class or regional ETF in which it invests. This diversification can help to reduce manager and individual security risk in a client’s portfolio.

ETFs in a core/satellite model

ETFs can serve as well-diversified core holdings or specialist satellite holdings in your clients’ investment portfolio due to their low cost and passive investment approach. Broad-market index ETFs can serve well as core holdings, while more specialist ETFs can be used as satellites.
Cost saving applications

Advisers looking to reduce their clients’ total investment management costs can look to ETFs as a potential solution. In a core / satellite structure, ETFs can be used as the core component of the portfolio to lower total portfolio fees while the satellite component can be restructured to capture investment opportunities or fine tune investment portfolios.

ETFs can also be used for short-term investments during a portfolio restructure. In fact, one of the largest hidden costs to investors can be the cost of being out of the market during a portfolio restructure. ETFs’ liquidity helps make them an effective temporary holding to maintain exposure to equity markets while you work out the longer term asset allocation for a given client.

Portfolio rebalancing

The success of an investment strategy relies on having a strategic asset allocation that meets the needs and objectives of the client. Over time the value of different assets change. Without management, or rebalancing, the portfolio soon moves from the strategic asset allocation and jeopardises the chances of meeting the client’s objectives. ETFs can be used to quickly and easily correct these imbalances.

Taxes on ETFs in client portfolios

Your clients should not experience any significant difference in taxation between an ETF and a traditional investment fund. Realised capital gains count against a client’s capital gains tax allowance, while income they receive will be taxed as income.
You can think of index ETFs as just another way to access investment exposure to a market index.
ETFs often have lower annual expense ratios, compared to traditional index funds. However, they also have some up front costs in the form of stockbroker commission and trading spreads. You will need to consider all of these costs before making a recommendation to a client.
Ongoing Charges Figure (OCF)

The OCF covers fees paid for administration, audit, depositary, legal, registration and regulatory expenses incurred in respect of the funds. The Funds’ Manager, if referring to Vanguard Funds plc, will usually pay those fees out of its periodic annual management charge (AMC), which means that the OCF will normally equal the AMC. There may, however, be certain extraordinary expenses which cause the OCF to exceed the AMC. The OCF does not include portfolio transaction costs incurred by a fund or the cost of subscribing for, or redeeming, shares in a fund.

Stockbroker charges (or platform commission)

Investors will incur stockbroker commissions (or flat platform fees/commission) when buying and selling securities on the stock exchange. The amount of this fee will vary depending on the stockbroker or broker platform.

Bid-offer spreads

When calculating the cost of investing in an ETF, you will also need to consider trading spreads.
Evaluating the cost differential

While OCFs for both traditional and ETF index funds are paid annually to the fund, you’ll need to take commissions and bid-offer spreads into account when investing in an ETF.

Over longer holding periods, the lower OCF of an ETF should overcome the spread and commission costs. Therefore, an investor’s holding period becomes an important factor when assessing the round-trip holding of a mutual fund versus an equivalent ETF.

Source: Vanguard Asset Management
Distributions

Investors in ETFs may receive income at the end of each distribution period made up of the dividends or interest of the underlying portfolio. These generally occur quarterly, but can vary. The amount received is based on the amount of ETF securities the investor holds and the declared dividend per security. The distribution may have separate taxable components such as dividends or interest income.
While you can think of ETFs as just another type of index mutual fund, there are differences in how the two structures operate. With mutual funds, advisers deal directly with the fund manager or fund platform. However, ETFs trade on the stock exchange, so to invest you will have to deal through stockbrokers or brokerage platforms.

Behind the scenes there are other participants in the ETF market that help to ensure liquidity by creating or redeeming shares, as well as ensuring orderly and efficient trading. This reduces the administrative burden on the fund manager compared to a traditional mutual fund. As a result, ETFs’ annual expense ratios tend to be less than traditional index mutual funds.
Primary market

The ETF market is made up of a primary and secondary market. The primary ETF market is made up of three participants:

- ETF fund manager (the issuers of ETFs)
- Authorised Participant (AP)
- Market Maker

The issuer of an ETF is the fund manager who manages the ETF and its underlying securities, such as Vanguard.
Authorised Participant (AP)

This term refers to large institutions which act as authorised trading participants with the stock exchange. They have an agreement in place that allows them to create and redeem ETF shares directly with the issuer.

An AP applies to the issuer for whole creation units, typically 100,000 ETF shares or more. APs can create or redeem shares by delivering a physical basket of securities (called an ‘in-specie’ or ‘in-kind’ transfer) or cash that equals the value of one unit. In exchange, the AP will receive a ‘creation unit’ of equal value. The basket of securities is published each day and reflects the necessary value of cash or basket of securities (with weightings that closely represent the index) that will need to be delivered by an AP in exchange for ETF shares. By creating and redeeming shares directly with the issuer in large blocks (in the primary market), APs can provide liquidity to investors that are looking to execute larger ETF trades.

Creating and redeeming shares

APs contract with the issuer (the ETF fund manager) to create and redeem ETF securities in large ‘creation units’. Only APs can create or redeem ETF shares with the issuer. In a creation, the AP applies for new ETF securities to be created in multiples of creation units (typically this is 100,000 shares). In return, they deliver the basket of securities or cash equivalent specified by the issuer. On settlement, the AP then has inventory of ETF securities that can be sold onto the stock exchange (the secondary market). The redemption process works in the opposite way: the AP applies to redeem shares in multiples of creation units and in return receives a basket of securities or cash equivalent.
The ETF share creation process

- Investor
- Broker
- AP
- ETF
- Stock exchange
- Cash
- Securities
- Securities in basket
- ETF shares

The redemption process is the opposite of the creation process
**Market Makers**

Market Makers provide liquidity for buy and sell orders in the secondary market for the ETF. By adjusting for continuous market movements of the underlying securities in the ETF, Market Makers set intra-day bid and offer prices for the ETF. The difference between the bid and offer price is known as the bid-offer spread. They provide continuously updated on-screen buy and sell quotes at which they are willing to deal throughout the trading day. The availability of real-time quotes is a key attraction of ETFs for many types of investors.

While many Market Makers are also APs, not all Market Makers have the ability to create and redeem shares directly with the issuer. Both APs and Market Makers serve important roles in ensuring ETF market buy and sell demands are met.

**Stock exchange**

The stock exchange’s primary role is to provide buyers and sellers with a platform (or marketplace) to trade ETF securities. Each ETF has at least one Market Maker assigned to actively quote the product, or provide liquidity. Each Market Maker is a member firm of the exchange, receiving a rebate from the exchange for trading shares, and is subject to stock exchange supervision rules.

**‘Physical’ vs. ‘synthetic’ ETFs**

Index ETFs come in two flavours: ‘physical’ and ‘synthetic’ (or ‘swap’ based). The physical index ETF holds all, or a representative sample, of the constituents of an index. Synthetic ETFs typically use derivatives.

Synthetic ETFs usually employ a financial derivative instrument called a ‘total return swap’. Buying a swap involves entering into a contract with a counterparty in the market who promises to pay the precise total return (capital and income) of a chosen index as cash. Synthetic ETFs can be effective passive investing tools, but for purposes of this guide, we will focus on the more straightforward physical index ETF.
The secondary market

The secondary market is primarily made up of buyers and sellers of ETF securities on a stock exchange. Different parties include:

- Stock exchange, for example the London Stock Exchange
- Investors, including financial advisers, stockbrokers or institutions

Financial advisers can trade ETFs on behalf of their clients through stockbrokers, some of whom simply execute trades on behalf of the adviser, while some can also offer advice and guide an investor through the investment process.

Institutions can also access the secondary market for liquidity. However, for large trades, they tend to work with an AP or Market Maker directly to access the creation/redemption process directly in the primary market.

Other participants behind the scenes in the process include settlement and clearing facilities, such as CREST in the UK, and the ETF registrar which ensures the appropriate delivery of ETF shares and dividends.
ETF trading: prices, spreads and liquidity

There are several mechanisms in place with ETFs to ensure that the price stays close to the underlying NAV and spreads stay reasonable, while providing pools of tradeable shares for investors.
ETF pricing

ETFs are bought and sold on the secondary market at a market price. A number of factors influence the market price for an ETF including the share price movement of the underlying securities, currency exchange rate movements for international funds and investor demand for the ETF.

The issuer calculates and publishes the Net Asset Value (NAV) of the ETF daily. They base the NAV on the closing market prices of the securities in the underlying portfolio after fees and expenses. Although ETFs can trade above or below the intra day NAV at a given point in time, there is an arbitrage mechanism that generally keeps an ETF trading near its NAV (see below).

The market quotes for a given ETF can differ from the NAV which is calculated at the end of the day. A number of factors can affect the intraday market price, including the share price movement of the stocks in the index used by the ETF and investor demand for the ETF. Currency movements and share price movements in foreign markets can also affect the price of international ETFs.

Monitoring the price

You can monitor ETF share prices daily on the issuer’s website, which will normally provide a daily closing price. Or you can get delayed prices for free on many online services by simply using the ETF’s alphanumeric stockmarket ‘ticker’. The ticker is normally available on the ETF factsheet, which you can usually find on the issuers website. Your stockbroker or brokerage platform can also usually provide you with up to the minute ETF prices using subscription data terminals.

Trading spreads

The spread is the difference between the bid price and offer price.

**Bid price** – The bid price is the price at which participants on the secondary market are willing to purchase a parcel of shares.

**Offer price** – The offer price is the price at which participants on the secondary market are willing to sell a parcel of shares.
While at any time any market participant may have the best bid or offer on an ETF, it is the role of the Market Maker to ensure there are always quotes available. They also ensure that the spread remains within a certain range in percentage terms.

Better spreads and liquid markets are more attractive to investors, increasing the demand for securities which in turn creates higher trading volumes. Market Makers earn their revenue from trading and have a strong motivation to maintain tight ETF bid-offer spreads. If spreads widen too far it stifles demand and may result in less business for the Market Maker. Globally there has been rapid growth in ETFs issued and traded. As the ETF market grows it is a win-win situation for the investor, the trading participant and the issuer. Market uncertainty can affect spreads. When markets become unstable, spreads on all traded securities tend to widen, including ETFs.

**Liquidity**

ETFs uniquely provide two sources of liquidity: the primary and secondary markets. The primary market, offers further liquidity because the issuer can create or redeem ETF securities to meet investor demand. In this way ETFs are just like other open-ended investment vehicles. The secondary market offers immediate liquidity in the form of issued and tradable securities in the market. This double layer of liquidity helps make ETFs flexible and useful for certain types of investing.

For example, if an investor wanted to buy a large block of ETFs that exceeded market liquidity in the secondary market, they could contact an AP, who would arrange the creation of the required shares with the issuer to sell directly to the investor.

Conversely, if an investor wanted to sell a large block of an ETF, the AP would provide a purchase price for the securities with the investor and redeem ETF shares with the issuer.
The role of arbitrage

APs calculate the value of the ETF securities continuously throughout the trading day. If the price of the ETF moves from the value of the underlying securities an arbitrage opportunity arises.

<table>
<thead>
<tr>
<th>If the ETF price is higher than the NAV</th>
<th>Arbitrageurs may buy the underlying securities, exchange them for new ETF securities and then sell the ETF securities on the open market for a profit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the ETF price is lower than the NAV</td>
<td>Arbitrageurs may buy ETF securities on the open market, redeem those securities in exchange for the underlying securities, and then sell the individual shares on the open market for a profit.</td>
</tr>
</tbody>
</table>

Arbitrage activity among APs and Market Makers ensure that the ETF price trades in a range that sticks closely to the value of the underlying securities. This helps give investors confidence that the quoted market prices for an ETF closely match the value of the underlying portfolio and index that the ETF represents.
Glossary

**Arbitrage** – The simultaneous buying and selling of an asset to profit from a price difference between two markets, or of two forms of the same asset. ETF arbitrage involves buying or selling of ETF shares against the underlying ETF fund securities.

**Authorised Participant (AP)** – An institutional investor, specialist or Market Maker which is authorised by an ETF issuer to transact directly with the fund or trust on an ‘in-specie’ (or ‘in kind’) basis to create and redeem shares in the ETF.

**Bid-offer spread** – The difference between the buying and selling (offer and bid) price of a share. The size of the spread is affected by factors such as current trading volumes and market conditions. When investing in an ETF, you will need to take the bid-offer spread into account when calculating the full, or ‘round trip’, cost of investing.

**Closed-end fund** – A pooled investment scheme that issues a fixed number of shares, such as an investment trust. Shares in closed-end funds are usually bought and sold on a stock exchange, like individual company shares.

**Commission** – The fee charged by a stockbroker for buying or selling shares of an individual security or ETF. It can also refer to the payment received by an intermediary who sells investments. When investing in an ETF, you will need to take stockbroker commission into account when calculating the full, or ‘round trip’, cost of investing.

**Creations/Redemptions** – The process where an Authorised Participant transacts directly with the ETF issuer to create ETF shares that can be sold to investors. Either by paying cash or delivering a specified basket of securities in exchange for ETF creation shares (or vice versa).

**In specie (or ‘in kind’)** – In the context of ETFs this refers to the trading of ETF shares for a basket of securities that those shared would represent. This is usually undertaken by Authorised Participants who have a formal arrangement in place with the ETF issuer.

**Intraday trading** – Buying and selling market-traded securities such as stocks and shares during the stock exchange’s regular business hours.
**Liquidity** – Refers to the relative availability and ease with which an asset can be bought or sold. It also refers to the ability to rapidly buy or sell an asset without substantially affecting the asset’s price.

**Market Maker** – An institutional investor or specialist which agrees to ‘make a market’ by quoting the prices they are willing to buy or sell an ETF. Market Makers help to ensure that there is a liquid secondary market in ETF shares.

**Net Asset Value (NAV)** – The value of each share of a fund as determined by the value of its underlying assets net of its liabilities. NAV is calculated by dividing a fund’s total net assets by its number of shares outstanding. In calculating NAV, a fund generally values its investment portfolio at market price. ETF shares trade at market prices, which can sometimes differ from NAV, although arbitrage activities help to ensure that this doesn’t happen very often or to any great degree. See Premium/Discount.

**Open-ended fund** – A pooled investment scheme where the number of units in the fund varies according to the number of investors buying and selling holdings in the fund. In the UK, these are usually structured as unit trusts, OEICs or ETFs.

**Premium/Discount** – The amount by which the trading price of an ETF is greater than (Premium) or less than (Discount) its net asset value (NAV).

**Spread** – see bid-offer spread.

**Ticker** – The alphanumeric system used to identify a stock, mutual fund, or ETF on an exchange. Every ETF has one.

**Ongoing Charges Figure (OCF)** – Each share class of a Fund has an Ongoing Charges Figure (OCF) which is based on projected expenses for a given period. We review these projections regularly to make sure they are appropriate. The OCF covers fees paid for administration, audit, depositary, legal, registration and regulatory expenses incurred in respect of the funds. The Funds’ Manager, if referring to Vanguard Funds plc, will usually pay those fees out of its periodic annual management charge (AMC), which means that the OCF will normally equal the AMC. There may, however, be certain extraordinary expenses which cause the OCF to exceed the AMC. The OCF does not include portfolio transaction costs incurred by a fund or the cost of subscribing for, or redeeming, shares in a fund.
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