ETFs Technically Speaking

Though many investors are familiar with the comparative features and uses of ETFs and mutual funds, not everyone knows the trading mechanics that underpin these instruments. Understanding the ETF creation and redemption process may help educate investors about the inherent transparency build into the very structure of ETFs.

A DEEPER UNDERSTANDING

ETFs that are structured as either unit investment trusts (UITs) or open-end ETFs, continuously offer shares through a daily in-kind purchase and sale (creation and redemption) process that reflects demand and increases transparency. Creations and redemptions occur at prices based on the next calculation of the net asset value (NAV), enabling market makers to match even slight premium and discounts to the NAV.

The process involves only a few large investors, known as authorized participants (APs) which are typically large institutional organizations such as market makers or specialists and they are the only organizations that can create or redeem units.

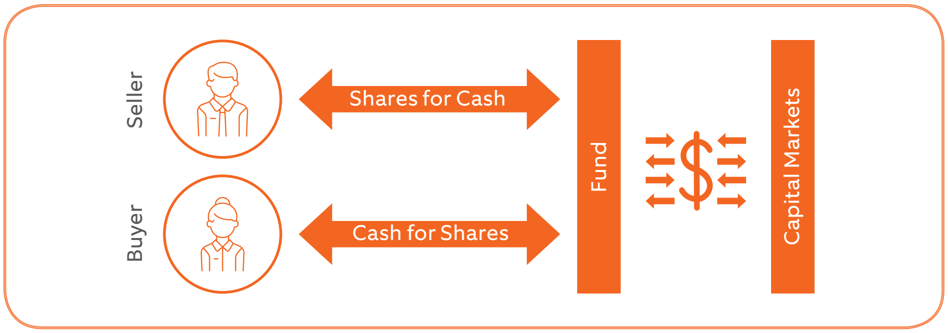
In a creation transaction, using the funds portfolio, the AP assembles a portfolio of stocks and turns them over to the fund's sponsor in exchange for new ETF shares. Similarly, for redemption transactions, authorized participants deliver ETF shares to the fund's sponsor in return for the underlying portfolio of stocks.

While there may be a minor cash component within the overall portfolio, during an in-kind process no other cash is normally exchanged. Each day the fund's underlying holdings are disclosed to the public.

ETF VS. OPEN-ENDED MUTUAL FUND

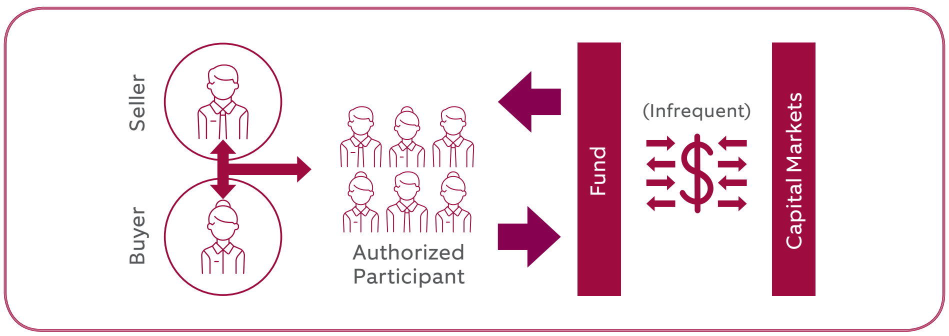
A traditional open-end mutual fund structure has one level of trading activity. Investors exchange cash for shares in the fund based on the net asset value (NAV) or offering price calculated at the end of each business day1. Investors can make transactions each business day after that price is posted and only at the day's price.

For retail investors, ETFs are traded on exchanges like individual stock and can be bought or sold at market prices throughout the trading day, subject to commission costs for each trade.



NAV is a fund's price per share, which is derived by dividing the total value of all the securities in its portfolio, less any liabilities, by the number of fund shares outstanding.

By contrast, ETFs have two levels of trading activity – primary and secondary. This distinction is vital to understanding how an ETF works.



EFT Primary Market Creation/Redemption

In the primary market, APs exchange a published basket of securities in-kind plus a published cash component in exchange for ETF shares.

These baskets are generally very large, and one creation or redemption unit is equal to a fixed number of ETF shares. The ratio varies by product, but it usually 50,000 ETF shares per unit.

1 NAV is a fund's price per share, which is derived by dividing the total value of all the securities in its portfolio, less any liabilities, by the number of fund shares outstanding.

A single creation unit consists of the published basket of securities plus a cash component to equal the NAV per unit.

The intraday value of the underlying PCF on a per share basis is called the indicative optimized portfolio value, or IOPV.

Arbitrage is the simultaneous buying and selling of securities in different markets or in derivative forms in order to take advantage of differing prices for the same asset.

NET ASSET VALUE

Basket (securities) + Non-Basket (cash component)=PCF=NAV

From a bottom-up perspective, the non-basket (cash component) is primarily comprised of dividend and tax accruals, expense accruals, cash and potentially restricted securities. Restricted securities could be odd lots that don't fit into the basket, or securities that are for some reason restricted from trading.

Creations and redemptions occur at the end of the day NAV, where the value of the securities basket plus the cash component equal the NAV, so there is no dilution to existing shareholders. The published securities basket along with the published cash component is called the portfolio composition file (PCF) and is distributed to AP and market data vendors as well as service providers.

INTRADAY VALUE

For each ETF, Bloomberg (a financial market information firm) provides a ticker for ETF shares, the IOPV and the underlying index.

The IOPV value represents the underlying basket of securities plus the cash component and is updated every 15 seconds through the trading day. The IOPV helps market participants relate the value of the fund and its underlying securities to the value of the ETF shares trading in the secondary market on the exchange.

ARBITRAGE AND ETF PRICING

Arbitrage activity not only seeks to efficiently match the outstanding supply of shares with demand, but helps to keep ETFs from trading at large premiums or discounts to the NAV. This also may help support closer tracking between the exchange-listed ETF shares and the fund's NAV.

Most analyses comparing the costs of using futures versus holding underlying securities versus ETFs consider only the case of an investor limited to transacting at the ETF share level. However, the economics of two different ETF transactions must be considered.

If the investor is an AP, they are faced with a situation in which futures, securities and ETFs are fungible (or interchangeable.) That is, if you buy either future or the underlying securities, you can easily convert to ETF shares via creation units. (This assumes that a liquid futures contract exists on the same index and the market's price at the same time.)

Three examples that may help illustrate the arbitrage opportunity that ETFs offer APs within the secondary market that historically has provided the basis for keeping their market offering price in-line with their underlying securities.

Example One

ETF shares look cheaper than futures or underlying securities. Investor (AP) decision: consider ETF shares.

Example Two

Underlying securities look cheaper than futures or ETF shares. Investor (AP) decision: buy securities, convert to a creation unit and end up holding ETF shares.

Example Three

Futures look cheaper than underlying securities or ETF shares. Investor (AP) decision: buy futures, exchange for securities, convert to a creation unit and wind up with ETF shares.

The assumptions of fungible futures and same-time trading/pricing do not hold in international markets or in some U.S. markets due to differences in market hours. Where that is the case, premiums and discounts tend to exist intraday and revert day-over-day. In addition, markets affected by a Stamp Tax (the United Kingdom being most notable) can cause certain markets to always trade with a rich basis to the IOPV. This effect results from taxes incurred during the creation process when buying the basket of underlying securities.

Additional Considerations

Management fees – which accrue over time - reduce the total return received from holding ETF shares relative to futures or a basket of actual securities. Expenses ratios of ETF shares vary based on the particular fund, with more specialized exposures costing more.

FIND OUT MORE

The FlexShares approach to index-based investing is, first and foremost, investor-centric and goal oriented. We pride ourselves on our commitment to developing products that are designed to meet real-world objectives for both institutional and individual investors. If you would like to discuss the attributes of any of the ETFs discussed in this report in greater depth or find out more about the index methodology behind them please don't hesitate to call us at 1-855-FlexETF (1-855-353-9383) or visit **www. FlexShares.com**.

IMPORTANT INFORMATION

Before investing, carefully consider the FlexShares investment objectives, risks, charges and expenses. This and other information is in the prospectus, a copy of which may be obtained by visiting www.flexshares.com. Read the prospectus carefully before you invest.

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