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- **ETFs: Separating Fact from Fiction**

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ETFs: Separating Fact from Fiction

There are a number of common misconceptions with regard to Exchange Traded Funds (“ETFs”). This article aims to correct some of the most prevalent ones.

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ETFs are open-ended index-tracking funds listed on exchanges. This means that, just like a mutual fund, the investment gives the investor access to a diversified portfolio of company shares, bonds or other asset types, such as commodities or real estate, which are priced continuously throughout the day. Like a share, ETFs can be bought or sold via broker-dealers or on exchange.

Since the launch of the first ETF back in 1993, the growth of the ETF industry has been phenomenal. The CAGR (Compound Annual Growth Rate) amounted to 27% over the last 10 years, which shows the popularity of these products, which constitute a cost-efficient and transparent alternative to mutual-fund investing. Globally, some $2.5trn is invested in ETFs. In Europe, the popularity of ETFs has also soared with products that have gathered around $433bn in assets to date.

Footnote: unless otherwise noted, all statistics in this document are referencing data points provided by consultancy and research firm ETFGI as of September 2014

With regard to the structure of the ETFs, broadly speaking, there are two ways in which ETFs track their benchmarks and deliver performance.

- A 'physically replicated' ETF holds all or a subset of the securities in the index it tracks – so, for example, if investors invest in a FTSE 100 ETF, that ETF will physically hold the constituents of the FTSE100 Index in the same or similar weighting scheme.
- A 'derivative-replicating' ETF holds a derivative (usually a total return swap) via a counterparty that will **then deliver the benchmark return to the ETF**.

Both are common structures in Europe, though it is important to note that the risk profile is different for each structure.

The ETF's liquidity is a key differentiator versus mutual funds. ETFs have two sources of liquidity – the primary and the secondary market. The secondary market is the exchange and, as such, investors seek liquidity in the ETF via the exchange. The primary market is where the Authorised Participants (i.e., approved broker-dealers) create and redeem ETF shares directly with the ETF (subject to a minimum size).

With the growth of the ETF industry, investors have seen an extraordinary proliferation of articles discussing the use of the products and with it there has been a build-up of misconceptions. We will now aim to address some of the most prevalent ones.

Misconception One – Issuers make markets and provide liquidity in ETFs

- Unlike mutual funds, ETFs can be bought or sold via a broker-dealer. Broker-dealers act as liquidity providers in ETFs. As such, they act in two distinct roles. The first role is the one of an Authorised Participant or "AP." An AP is an institution that is approved by the ETF to redeem and create units in the ETF in return for the basket of underlying assets or cash. ETF issuers may choose a single designated liquidity provider or multiple, competing liquidity providers.

  The second role is that of a market maker, which are on-exchange liquidity providers.

  ETFs are unique investment vehicles that have characteristics of both an index fund and a regular stock in the secondary market (either OTC or on exchange). ETF shares can be bought and sold at any time during normal market trading hours applying the same trading strategies as for the underlying asset. In the case of stocks, ETFs can be traded using execution benchmarks such as VWAP, in line with volume, TPOV, arrival price, close, etc.

  ETFs can also be bought once a day at the ETF's closing NAV (Net Asset Value). If the closing NAV is the chosen strategy, then the execution price will be available post-market close or in some cases the next day, upon receiving the official close of day NAV price from the issuer.

Misconception Two – ETF market makers are not incentivised to provide best price

- ETFs have official and unofficial on-exchange market makers, or "on-screen" as some refer to it. Official market makers must stand ready both to buy and sell their assigned products on a continuous basis. Official on-screen market makers are obliged to buy and sell up to a specific size within a defined bid/offer spread. Unofficial on-screen market makers provide liquidity as they see fit, but have no obligation to make prices within given parameters. Official market makers in addition get paid a fee from the issuers for providing liquidity on exchanges also. For example, the largest ETF issuer works with over 30 broker-dealers, which all make a market in their ETFs. Though many are unofficial market makers, they all aim to capture a piece of the ETFs flow business. As such, competition is high and prices of the ETF tend to be close to the prices of the underlying portfolios' NAV.

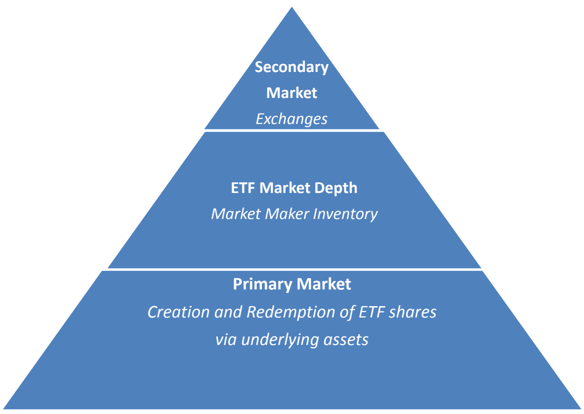
Misconception Three - There is not enough competition amongst ETF issuers

- The number of exchange-traded funds in Europe hit 1,441 in September 2014, compared with 828 in 2009. The ETF market is crowded. To put this into perspective, there are eighteen long-only ETF products tracking the Euro Stoxx50. As such, competition in ETFs is high and ever-increasing, though there is a high concentration amongst the top three ETF issuers globally. These three providers account for 70% of the market share globally. Many asset managers look to have a piece of the market share, with even active managers seeing ETFs as an effective wrapper and as a result have started launching their own series of ETFs.

Further evidence of an ever-increasing competitive landscape is also demonstrated by the largest issuers' cutting the expense ratios on their index ETFs in the past two years.

Misconception Four - ETFs are not liquid – only the largest ETFs trade actively

- ETFs may appear illiquid due to low on-exchange volumes; however, thanks to the ability to create and redeem through the primary market, ETFs can be as liquid as the securities in the benchmark that the ETF tracks. In Europe, due to fragmentation and many cross-listings, as well as lack of reporting requirements, the true liquidity of the ETF is hidden. Secondary-market volumes on exchanges are only a small proportion of the true volumes traded by market makers. As a rule of thumb, it is estimated that roughly 60% of the traded volume in ETFs happens OTC (Over The Counter – i.e. between the broker and the client). Before assessing a product based on its on-screen liquidity, it is always best to speak with the broker-dealer or the issuer's capital markets desk, which can advise on the best method of execution and accessing the true liquidity of the product.



Misconception Five – ETFs are always more expensive to trade than the underlying

- With very liquid ETFs and a liquid underlying, you often have tight spreads and low discrepancy between where the underlying is trading versus where the ETF is trading on exchange. Factors which result in the ETF spreads to differ are driven by spread of the underlying, stamp taxes and creation/redemption costs.

  It is important to highlight that there are instances today where certain ETFs, due to their size and popularity, have come to be obtainable at more favourable costs than the underlying. One example involves one of the most actively traded MSCI Emerging Markets ETF listed on the NYSE and its sister product listed on the LSE. The bid/ask spread is 5.8bps for the US listed ETF, respectively 9.8bps for the LSE listed ETF compared to the underlying of 17.3bps (Source: MS Analytics 1 October 2014). Another good example is the largest FTSE100 ETF listed on LSE, which is one of Europe's most traded ETF. The fund has an AUM of GBP 3.9 billion and trades on average GBP 46.5 million at an average bid/ask spread of 4.2bps versus the underlying of 5.2bps (Source: MS Analytics 1 October 2014). Another benefit of buying ETFs tracking the FTSE 100 index in the secondary market is that they do not attract stamp duty fees like the underlying assets do. As such, provided the supply is a given in the secondary market, investors won't be required to pay the 50bps cost on your purchase.

Misconception Six - ETFs only trade when the underlying market is open

- ETFs are listed and cross-listed on many different exchanges and trading starts and stops in line with the opening hours of the respective exchange. In that regard, unless the underlying assets of an ETF listed on the London Stock Exchange (LSE) contains domestic securities, and then the trading times of the two will differ. In other words, transactions in ETFs in most instances can be facilitated at any time, i.e. close to 24 hours, 5 days a week for many exposures. A good example is an investor gaining exposure to Japanese equities. There are ETFs listed on the Tokyo Stock Exchange which trade during the time the underlying market is open. There are also products listed in London, which are available for trading during LSE's trading hours. After the LSE closes, clients can still obtain exposure to Japanese equities using products listed the in the United States and can be traded until NYSE closes a couple hours before the local market opens again.

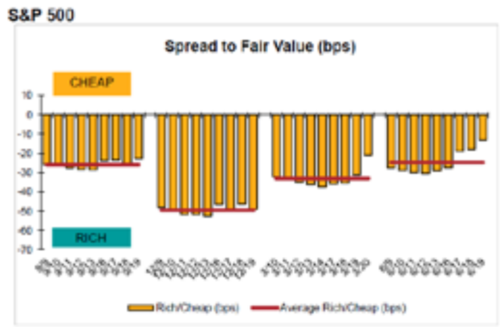
Provided that clients don't have a view on the market and pick the time of execution, trading larger sizes during the local market hours may be desirable, however. The challenge with trading outside the local market hours is in that the spreads quoted onscreen reflect the market makers' views, which are proxying any market moves after the local market close.

Misconception Seven – Derivatives are always more cost-efficient than ETFs

- This is an important debate at the moment amongst fellow investors, issuers and brokers. There is no easy answer or a one-size-fits-all solution. Understanding total costs is important when comparing delta one products. Morgan Stanley has developed a framework for comparing equity ETFs, futures, and swaps. We estimate both explicit and implicit costs, taking into account funding considerations, while assuming equivalent impact cost across all three products. In a nutshell, we estimate total cost on the long and the short side for our long-only and hedge fund clients and solutions may differ for each client.

  One example where ETFs currently offer a more cost-efficient alternative to gain long-only exposure for a period of one year is the S&P500 Index. Due to futures trading rich, the recent roll costs for the S&P500 futures amount to 34bps compared with the total cost of holding the most actively traded S&P 500 ETF at 26bps (ETF costs include tracking-performance difference; management fees and trading costs).

Indices Rich/Cheap Trends (Last Four Expiries)



Source: Morgan Stanley QDS New York

Misconception Eight – ETFs are only used to gain equity exposure

- ETFs are used to gain exposure not only to equities but also commodities and fixed-income instruments. It is, though, fair to say that some three quarters of the assets invested in ETFs to date are providing exposure to equities. As of September 2014, there are just under USD 421bn of assets invested in fixed-income products and some USD 132bn in commodities products globally.

  The recent growth has been predominantly in fixed income, smart beta and alternatives as well as the actively managed ETFs.

Misconception Nine – Physically replicated ETFs are always better and do not have counterparty exposure risk compared to swap-backed or swap-enhanced ETFs

- Under physical replication, the fund purchases either all of the underlying assets in the index or an optimized basket of securities in the index, which has been selected using a stratified sampling process. In swap-backed or swap-enhanced ETFs, the exposure is synthetically replicated. The risk factors of a swap-based ETF depends on the type of swap and how the collateral is held and who owns it.

  In a funded swap, an investor's cash in the ETF is paid to the swap counterparty who in turn posts collateral into a segregated account with an independent custodian. The collateral may either have the legal title transferred to the ETF or be a security pledged for the benefit of the ETF.

In the unfunded structure, the ETF combines the advantage of the synthetic replication while benefiting from a liquid and diversified basket of assets composed of assets like stocks constituting the underlying index and enters into a total return swap to achieve the performance of the index, mainly to reduce tracking difference to the benchmark.

In Europe, the number of products using the swap-replication method is greater than products that use physical replication. This is partly driven by the fact that when ETFs first came to market in Europe, the issuers were broker-dealers rather than asset managers and, as such, they had the capability to provide index replication through derivatives structures.

With regard to counterparty risk, all models bear some counterparty exposure risks, including the physical replication ETFs. Based on UCITS rules, the ETF is allowed to lend portfolio positions constituting a significant proportion of the ETFs assets provided it is able at any time to recall such lent assets. Counterparty risk in this case is linked to the risk of the stock borrower's defaulting and the ETF's losing its assets. Note that this risk is mitigated by collateral being provided by the stock borrower to the ETF –and such collateral is often subject to a haircut.

For synthetically backed ETFs, there are risks but issuers aim to reduce them by over-collateralising funded swap ETFs and re-setting unfunded swap-contracts frequently – in some instances daily – in an effort to reduce counterparty exposure and default risks.

So, is there any point to swap-backed or swap-enhanced ETF solutions? Two main reasons spring to mind: 1) Minimize Tracking Difference of the ETFs performance to the index – some asset classes or exposures are difficult to replicate through a tightly tracking physical basket, 2) Transaction costs - some exposures can be achieved at lower transaction costs through swaps. In some instances, swap-backed ETFs pay the full value of any dividends paid by the companies contained in the respective benchmarks.

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As a result, Morgan Stanley may indirectly benefit from increases in investments in hedge funds.

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