ETF BASICS

Before we delve into ETFs , one needs to understand the difference between Open Ended Fund, Closed End Fund and ETFs.

OPEN ENDED FUND :

1. This is also mostly referred as Mutual Fund. Herein the investor directly invests the money with the fund and redeems it directly from them. Following is an example.

2. John Invests $10,000 with the Fund. The fund receives his money and issues 100 shares of the fund to John, and invests the $10,000 in 20 different stocks.

3. Let us say after 3 months the stocks have grown 20%, the Funds Net Asset Value is $10,000 x 1.20 = $12,000. Net Asset Value / Share = $120.

4. If Tom wants to buy 100 shares of the Fund, Tom would need to invest $12,000 with the Fund and the fund would issue him 100 shares as well. The fund would invest his money in those 20 stocks.

5. The Funds net Asset Value is $12,000 (NAV of John's investments after 3 months) + $12,000 (Tom's capital) = $24,000.

6. NAV per share = $24,000 / 200 = $120.

7. If after 4 months the stocks are 30% overall, NAV would $26,000. NAV / share = $26,000 / 200 = $130. If John plans to redeem 50 shares and Tom plans to redeem 25 shares, the fund has to come up with 75 x $130 = $9,750.

8. It will sell some of the 20 stocks it held in its portfolio to generate the cash and pay back the two investors. John ($6,500) and Tom ($3,250).

9. The Net Asset value is now $26,000 - $9,750 = $16,250.

10. Net Asset Value / share = $16,250 / 225 = $72.22

    NOTE : To keep things simple , we are ignoring the Fund management fees and any Tax consequences.

CLOSED ENDED FUND :

1. John Invests $10,000 with the Fund. The fund receives his money and issues 100 shares of the fund to John, and invests the $10,000 in 20 different stocks.

2. Let us say after 3 months the stocks have grown 20%, the Funds Net Asset Value is $10,000 x 1.20 = $12,000. Net Asset Value / Share = $120.

3. If Tom wants to buy shares, then would need to contact John and would have to pay the amount he would demand.

4. Thus , we can see that basic difference between Open Ended Fund and Closed End Fund. In Open Ended Fund, the fund everyday issues / redeems shares based on new capital entering or leaving the fund.

5. Whereas in Closed End Fund, once the Fund raises the capital with Initial investors it does not issue or redeem its shares. Any new Capital needs to buyout existing shares and any shares that want to be redeemed need to look for new investors who are ready to buy its shares.

6. Closed End Funds can also use Leverage . In other words, the fund could borrow $5,000 by raising debt and invest in total $10,000 + $5,000 = $15,000.

LIMITATIONS OF OPEN ENDED FUND AND CLOSED ENDED FUND

1. Mutual Funds cannot be traded during Market hours. They can only be bought or sold after the close of the market.

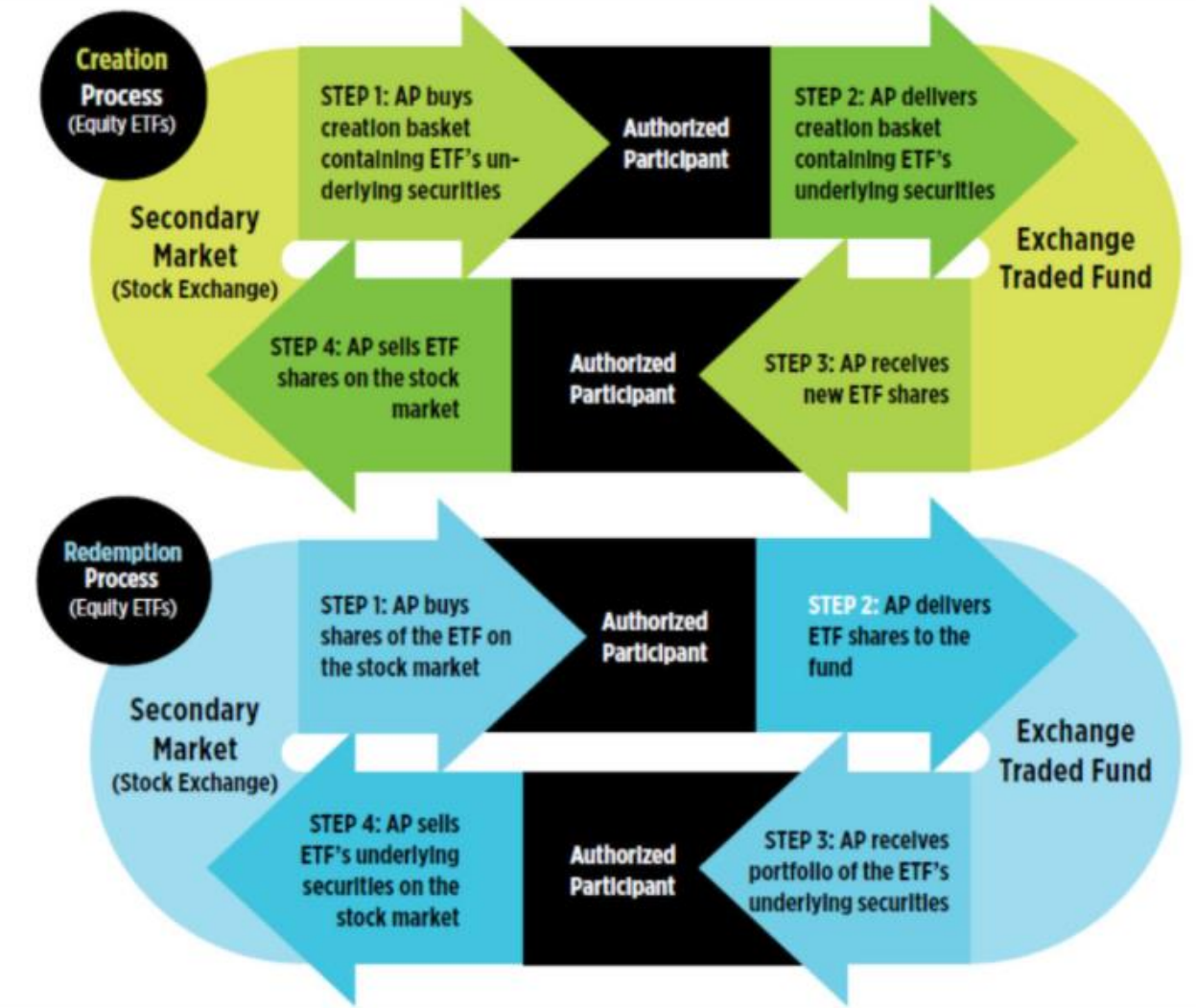
2. Mutual Fund managers have large overheads because they have to daily redeem or issue new shares.

3. Even though Closed End Funds can be traded in market, but its value can vary with reference to its NAV. Because the prices are set by the demad and supply of the shares and not by the NAV.

ETFs tend to solve the above problems.

Here the Fund hires professional Bankers called Authorized Participants (AP)and places orders of buying stocks that it wants to hold in its portfolio and in-turn issue them creation Units. Which usually contain 50,000 shares of the Fund. AP can then market those shares to public and maintain its supply. Thus freeing up the Fund to just focusing on Investment research. General public can own funds that are traded in market and hence can benefit from the high liquidity.

HOW ETF’s WORK?



The key to understanding how ETFs work is the "creation/redemption" mechanism. It's how ETFs gain exposure to the market, and is the "secret sauce" that allows ETFs to be less expensive, more transparent and more tax efficient than traditional mutual funds.

The Role Of Authorized Participants

When an ETF company wants to create new shares of its fund, whether to launch a new product or meet increasing market demand, it turns to someone called an **authorized participant (AP)**. An AP may be a market maker, a specialist or any other large financial institution. Essentially, it’s someone with a lot of buying power.

It is the AP’s job to acquire the securities that the ETF wants to hold. For instance, if an ETF is designed to track the S&P 500 Index, the AP will buy shares in all the S&P 500 constituents in the exact same weights as the index, then deliver those shares to the ETF provider. In exchange, the provider gives the AP a block of equally valued ETF shares, called a creation unit. These unit are usually formed in blocks of 50,000 shares.

The exchange takes place on a one-for-one, fair-value basis. The AP delivers a certain amount of underlying securities and receives the exact same value in ETF shares, priced based on their net asset value (NAV), not the market value at which the ETF happens to be trading.

Both parties benefit from the transaction: The ETF provider gets the stocks it needs to track the index, and the AP gets plenty of ETF shares to resell for profit.

The process can also work in reverse. APs can remove ETF shares from the market by purchasing enough of those shares to form a creation unit and then delivering those shares to the ETF issuer. In exchange, APs receive the same value in the underlying securities of the fund.

Why Is The Creation/Redemption Process Important?

The creation/redemption process is important for ETFs in a number of ways. For one, it's what keeps ETF share prices trading in line with the fund's underlying NAV.

Because an ETF trades like a stock, its price will fluctuate during the trading day, due to simple supply and demand. If many investors want to buy an ETF, for instance, the ETF's share price might rise above the value of its underlying securities.

When this happens, the AP can jump in to intervene. Recognizing the "overpriced" ETF, the AP might buy up the underlying shares that compose the ETF and then sell ETF shares on the open market. This should help drive the ETF's share price back toward fair value, while the AP earns a basically risk-free arbitrage profit.

Likewise, if the ETF starts trading at a discount to the securities it holds, the AP can snap up 50,000 shares of that ETF on the cheap and redeem them for the underlying securities, which can be resold. By buying up the undervalued ETF shares, the AP drives the price of the ETF back toward fair value while once again making a nice profit.

This arbitrage process helps to keep an ETF's price in line with the value of its underlying portfolio. With multiple APs watching most ETFs, ETF prices typically stay in line with the value of their underlying securities.

This is one of the critical ways in which ETFs differ from closed-end funds. With closed-end funds, no one can create or redeem shares. That's why you often see closed-end funds trading at massive premiums or discounts to their NAV: There's no arbitrage mechanism available to keep supply and demand pressures in check.

An Efficient Way To Access The Market

The other key benefit of the creation/redemption mechanism is that it's an extraordinarily efficient and fair way for funds to acquire new securities.

As discussed, when investors pour new money into mutual funds, the fund company must take that money and go into the market to buy securities. Along the way, they pay trading spreads and commissions, which ultimately harms returns of the fund. The same thing happens when investors remove money from the fund.

With ETFs, APs do most of the buying and selling. When APs sense demand for additional shares of an ETF—which manifests itself when the ETF share price trades at a premium to its NAV—they go into the market and create new shares. When the APs sense demand from investors looking

to redeem—which manifests itself when the ETF share price trades at a discount—they process redemptions.

The AP pays all the trading costs and fees, and even pays an additional fee to the ETF provider to cover the paperwork involved in processing all the creation/redemption activity.

The beauty of the system is that the fund is shielded from these costs. Funds may still pay trading fees if they have portfolio turnover due to index changes or rebalances, but the fee for putting new money to work (or redeeming money from the fund) is typically paid by the AP. (Ultimately, investors entering or exiting the ETF pay these costs through the bid/ask spread.)

The system is inherently more fair than the way mutual funds operate. In mutual funds, existing shareholders pay the price when new investors put money to work in a fund, because the fund bears the trading expense. In ETFs, those costs are borne by the AP (and later by the individual investor looking to enter or exit the fund).