

What Mutual Fund Boards Need to Know About Exchange Traded Funds

Overview

As more active mutual fund providers have filed for active ETFs it became clear to me that many of the board members for traditional mutual funds are ill prepared to discuss the key differences between operations of mutual funds and ETF funds.

Traditional mutual funds don't have the same operational processes as mutual funds and therefore the board member are/will be ill prepared to understand the supervisory roles which will include:

- Investment Management system and process changes
- Statutory Distribution responsibilities, operations and interfaces
- Exchange listings, oversight, trading and regulatory oversight
- Impact on D&O and E&O insurance coverage
- Central Depository processes, operations and controls

The above are just a few of the topic items most traditional mutual fund boards don't deal with on a regular basis and will need to understand if they are to meet their fiduciary responsibilities to investors in the funds and supervision over the trust.

This additional board training needs to be supplied by experienced Exchanged Traded Funds market members. Several public accounting firms have established ETF consulting units, but are ill prepared to provide this board training. These units have read significant amounts of ETF material, but are not familiar with a broad understanding of daily operations of the ETF marketplace.

Investment Management ("IM")

IM practices have significant system and processing changes required to account for in-kind ETFs trades. One of the key system changes is the creation of a new transaction type for processing in-kind trades. The traditional fund IM process involves the receipt or delivery of cash from investors and conversion of this cash into or out of security positions through trades. These buy and sell transactions are booked through the traditional investment management systems using "B" and "S" transactions codes that include market impact costs, broker commissions, and custodial fees to receive or deliver shares to settle the trades.

ETFs do not have these costs. Authorized Participants ("APs") delivers the shares into the fund, pays the fees for the ETF's custodial services and bears the market impact costs of buying and selling the fund holdings. Traditional transactional indicators are not sufficient for in-kind creation and redemptions. The IM systems need to create another transaction type other than "B" and "S" indicators. The new transaction type maybe "C" and "R" as the in-kind transaction type will drive a different tax lot accounting process to maximize the capital gains distribution to the APs by delivering out the shares on redemptions with the greatest capital gains to the Authorized Participants. Traditional IM systems would seek to minimized capital gains through buy/sell transactions. Walking traditional mutual fund board members through this process is only one of the board educational needs.

Another significant change is the need for corporate action projection reports to support the production of Portfolio Composition files on trade date minus one business day (“T-1”). The IM, or its designee, must generate a file that accurately projects the impact of these trade date portfolio changes on trade date minus one to support market participants in their arbitrage activity.

The public trading of ETF shares in the secondary market is not familiar to mutual fund boards. These boards must understand the purpose of portfolio composition files, portfolio load files part A and B, indicative intraday values calculated by third party service providers, and published to the market using the Consolidate Tape system. Real time posting of ETF trade prices by the exchanges for distribution to the public creates additional IM liabilities.

Statutory Distributor (“SD”)

The use of Statutory Distribution (“SD”) is not unique to ETFs but their service offering is significantly different from traditional mutual funds. In ETFs, the SD is party to the SEC filings, who serves as the order taker and receives the creation and redemption instructions for the in-kind AP activity and forwards the orders to the IM and custody bank on trade date.

In addition to serving as the AP order taker, the SD performs advertising oversight on the factsheets, press releases, website, and marketing material for FINRA compliance. The SD also, provides supervisory oversight for regulatory filing schedules and performance reporting.

SD doesn’t replace OTC marketing and sales directly. The real shift in ETF distribution is that assets must be gathered as asset completion models, allocation models and portfolio tools that help investor analyze their current holdings so as to arrive at portfolio solutions based upon investor profiles or demands. ETFs must be sold and can’t be bought through the use of broker incentive payments, 12b1 fees or channel concession agreement.

Exchange Listing (“EL”)

Exchange listing is another significant board topic for ETFs. The completion of the exchange listing document is the first step in the process. The selection of the lead market maker or liquidity providers to support market making is a process most board members would not be familiar with. The market making skills of the chosen liquidity providers can help an ETF succeed or fail.

If an OTC mutual fund manager plans to enter the ETF marketplace the OTC managers will need to shift their overall distribution models to meet the ETF marketplace transparency requirements dictated by the SEC and FINRA approvals to trade on the public markets.

The importance of shares traded per day, average bid/offer spreads, premiums and discounts, and asset size of the funds, plays a more important role in ETFs in the success or failure of ETFs than might be perceived by mutual fund issuers. Social media and bloggers also play an important role in the success of ETFs as analysis opinion can go viral and attract or reduce assets over short periods of time.

Another unique aspect of ETFs is the ability to gather fund assets as ETFs are used for hedging activity in trades or the short market transactions. Traders and investors will often use ETFs on the short side of

the market and hence the APs and liquidity providers will create inventory to lend in order to satisfy the marketplace needs. The traditional active mutual fund industry has no natural short-side fund uses.

Market transparency resulting from the exchange listing of ETFs brings a level of investor scrutiny usually reserved for publicly listed companies. The scrutiny also extends to the SRO oversight of FINRA, and the exchange surveillance staff looking for market violations in the trading of ETF shares and their listed options.

Another important role of the exchange is the control of trading in ETFs to handle market order types which is a concept alien to mutual fund boards. The use of various order types that include market orders, limit orders, market on open orders, market on close, peg orders, volume weighted average price, volume weighted average price, and many lesser known types. See Arca and NASDAQ orders types through the links below.

<http://usequities.nyx.com/markets/nyse-arca-equities/order-types>
<http://www.nasdaq.com/investing/etfs/etfa-trading-etfs-basic-order-types.aspx>

Director and Officers and Error and Emission Insurance Policies

Insurance prices and complexities increase on D&O and E&O policies on listed securities because of the potential for class action litigation on publicly listed securities as compared to OTC financial products. Class action lawsuits have a higher litigation instances as many law firms have build their focus around publicly listed securities and their ability to solicit large client bases for industry sources.

The class action law suits tends to be very public and receive significant media attention which adds to the overall policy coverage that needs to be incorporated in E&O and D&O insurance policies on publicly listed ETFs.

CNS, NSCC and DTC impact on Transfer Agent Services

Another significant advantage of the central depository systems is the guaranteed settlement process of all domestic ETF creations and redemptions using the Central Counterparty Systems (“CNS”) of the National Securities Settlement Systems (“NSCC”). The NSCC also consolidates the PCF files nightly for each ETF issuer for daily distribution to all of the ETF trading desks and market participants who purchase the file.

DTC, through its’ nominee, is the single shareholder of all ETFs, thus simplifying the work of the Transfer Agent (“TA”) to the ETF fund with regards to controls and daily reconciliations against the master certificate representing all of the ETF shares issued by each ETF fund. This simplified approach also contributes to the simplified settlement of creations and redemptions as the DTC direct withdrawal at custodian (“DWAC”) and Index Share processing applications facilitates the free receive and deliver process between the TA and the APs.

The above topics are just a few of the points that active mutual fund boards will need to familiarize themselves with as they begin to enter the ETF marketplace. Each of these processes change over time and new asset classes are added to the ETF marketplace and will thus add new demands to the boards that will be impacted by the market changes.

Indicative Intraday Value (IIV)

To support the trading of ETFs on a public exchange the ETF issuer/fund must calculate and publish the IIV every fifteen seconds across the Consolidated Tape (“CT”), under a separate but related exchange symbol, the estimated real time fair value of a share of the ETF. The purpose of this IIV is to permit investors the opportunity to compare the bid/offer of the exchange market prices to the fair value of the share.

For board member of an ETF fund it is important to select and oversee the vendor selected by the issuer/fund to complete this calculation. Like other technology vendors the board needs to be concerned about downtime, price source, CT access point, parallel processing and overall vendor support. As expected the large index providers and data distributors offer this service, but so do the exchanges through third party and in-house system providers. The most experienced vendors in providing this service are NYSE Arca, Standard and Poors and Dow Jones. New entrants into this market include Interactive Data Services, FTSE, Indexx, and Thomson-Reuters. One of the key points of failure is the access point into the tape. This access point needs to be through a member of the CT members which consists of exchange members. This connection needs to be robust and the latencies need to be very low. The most stable interface to the exchange access point is MQ and the balance of the interfaces is less stable.

The IIV selection process must also take into consideration the need for total redundancy of the calculation module. The calculation needs to be supported by redundant data input feeds and calculation systems for the IIV through multiple backbone interfaces. Because the IIV is a mandatory piece of data that must be given to the market every fifteen seconds it is two different technology paths into the CT and the physical locations for these paths should be separate as well. The real time prices for the IIV calculation should originate with a minimum of two pricing vendors who supply real time prices to the markets. Vendors such as Reuters, Thomson, Dow Jones and others provide this fundamental service.

The IIV is calculated using the Portfolio Composition File (“PCF”) that is widely distributed to the NSCC daily to Authorized Participants and market makers in ETFs.

The PCF is comprised of two separate files call Portfolio Load File (“PLFs”). The two files are referred to as the PLF-A and PLF-B. The PLF-A file is prepared by fund accounting after the NAV for the day has been calculated. The NAV file is adjusted in the following manner: 1) all creates and redeems for the day are booked to the portfolio and cash components added to the ETF fund, 2) corporate actions, splits, reverse splits, dividends and other complex corporate actions are booked added to the ETF fund, 3) income and expenses for the next exchange value date are estimated for the ETF fund. The ETF fund is now divided by the shares outstanding in order to determine an estimated value of one share and the value of the net income.

Next the PLF B is determined by either the investment manager of the ETF fund or an automated process of the fund accounting group. For index ETFs this is a prorate slice of the fund’s portfolio as adjusted by the PLF-A process and equal to the index weightings. This process can be exact to the single per share calculation or rounded to the nearest exchange round lot by market. This process ultimately results in a portfolio to be used for creation and redemption based upon the closing NAV of the ETF fund times the number of shares in a creation unit, plus a cash difference such that the PLF-B portfolio, plus the PLF-A provides market participants with an estimated fair value of a creation/redemption unit in shares and money and a per share value of the ETF in shares and money.

The PLF-A files and the PLF-B files are sent daily to the NSCC who assembles these files and distributes them as the PCF file for the IIV calculations and market making activity on each ETF. To help the market making activity the PCF files are broken into Domestic Equity Portfolios, International Equity Portfolios, and Other Portfolios. The Other Portfolios include fixed income, commodity and currency ETFs.

The SEC and Finra are starting to crack down on ETF issuers who don’t produce the IIVs as specifically stated in their exemptive orders or prospectus. Specifically, ETFs that are not calculating their IIV prior to the exchange open (the process starts at 8:30AM using the prior day’s closing prices), should not open for trading at 9:30AM as the fund takes on additional liability of being in violation of their order or prospectus. Also, if the IIV calculation goes down during the trading day, the exchange may halt the trading of the ETF on thinly traded ETFs where price discovery may be limited due to low turnover.

Bid/Offer Spreads

A wide bid/offer spread by the lead market maker can seriously hurt the viability or success of an ETF. Investors will not trade an ETF when the spread is greater than 8-10 cents between the bid/offer. Investors perceive ETFs with wide spreads to be illiquid and or risky.

All ETF market makers look to the market impact costs of the underlying equities and creation costs of the ETF or the hedging cost of an ETF position to determine the necessary bid/offer spread need to make money trading the security. If the underlying constituents of the ETF basket unit, costs associated with the creation process or the hedging costs are not measureable an additional risk premium is added to the bid/offer spread to compensate for this as well. Additionally the issuer needs to take into consideration the share price for the initial issuance of an ETF as the cost above will be reflected in the bid/off spread.

For example on an ETF price at twenty dollars per share and market impact costs of 20 basis point will result in a bid/offer spread of eight cents or four cents per share on the offer side and four cents per share on the bid side. If the market impact costs are 50 basis points than the bid/offer spread will be twenty cents or ten cents on the bid and ten cents on the offer.

If the issuer prices the new ETF offering at fifty dollars per share and the market impact costs are 20 basis points than the bid/offer spread will be twenty cents with ten on the bid side and 10 cents on the offer side. If the market impact costs on the same ETF are fifty basis points than the spread is fifty cents wide or twenty-five cents on the bid side and twenty-five cents on the offer side of the market.

There are several ways that ETF market makers can reduce the bid/offer spreads to less than the market impact calculations. If the market makers see good two way order flow, they will trade the order flow between buyers and sell and not worry about spread margins for redemptions and creations. Additionally, market makers may be able to hedge their exposure with future contracts that are either highly correlated or equal to the ETF benchmark.

Market Making

Unlike OTC mutual funds, fund boards need to understand market making activities of ETFs. Monthly or quarterly, the listing exchange of an ETF will send to issuers a review of the market making activity on an ETF. The key focus of this reporting is judge the performance of the lead market maker ("LMM"). However, the report contains considerable information on the bid/offer spreads as a percentage of the ETF price.

The bid/offer spread is a measure of many factors including: the market impact costs of buying the underlying securities of the ETF unit, the creation/redemption fee, the cost of the underlying equities, hedging costs in derivatives, profit margin, and order flow. Order flow is an often overlooked area of ETF spreads as they can increase or decrease the bid/offer spread as market makers can match buyer and sellers within spreads that aren't representative of their execution costs. ETFs that trade in excess of 250,000 shares a day begin to attract hedge funds and high frequency traders and as such start to achieve some level of enhanced liquidity. Examples of ETFs that trade with enhanced liquidity are SPY, QQQ, DIA and most of the ETFs that trade in excess of 5 million shares per day. The super-liquidity order flow ETFs will trade at market impact costs measured at less than 1 bps. Thinly traded ETFs, with hard to purchase underlying securities, will result in spreads of 1-2% that reflect the fully loaded trading costs of the market makers.

Many times market makers might hedge in index future contracts if the correlation between the ETF and the contract falls within acceptable ranges. The market maker will sell the ETF short and purchase the futures contract as a temporary hedge until they execute the purchase of the underlying ordinaries and liquidate the futures. Another alternative is that the market maker may not purchase the underlying ordinaries, but instead will borrow the underlying ordinaries needed to complete a creation. This decision is always based upon the cost of borrowing the securities and the expectations of the market maker for a decline in market prices.

Board should not only focus on the market spreads, but the relationship between the AUM of the ETF fund and the amount of short shares in the marketplace. Many ETFs have short positions that are multiples of the current issued shares. Some issuers believe the short shares positions should be charged fees payable to the issuer, but to date the SEC has not permitted this to occur. Ultimately short share positions can only be closed out through ETF share creations. These creations may not occur immediately as market makers can take 15 days to close-out their short positions. However, short positions can be transferred through market activity through ETF share borrows or exchange activity.

How Are Mutual Funds Assets Raised

Mutual Fund Asset Gathering

Mutual Funds are often seeded by the issuers or raised by active wholesaling

Investments are made by converting cash into securities through trade executions

Trade executions incur market impact costs, commissions, trade settlement costs, and counterparty risks

Assets are often “bought” as wholesalers or channel owners receive AUM based fees

Liquidity is not a consideration to investors as all shares are bought and sold at NAV basis
The 4PM market closing prices

Mutual fund shares have no premium/discount concept between primary and secondary prices

Mutual fund shares don't have bid/offer spread concerns as investors always receive NAV pricing

Mutual funds have no market maker equivalents

Mutual Funds don't produce real time fair value calculations on the fund holdings

Mutual funds don't disclose their holdings of the fund's website daily

ETF Asset Gathering

ETFs seeded by an Authorized Participant

Investments are through in-kind contributions by Authorized participants at NAV

Authorized Participants incur the market impact costs, commissions, trade settlement costs, and fund does not deliver ETF shares until assets are received or fund receives collateral against fails

Asset must be “sold” by delivering client solutions to asset allocation models or tactical allocations

Liquidity is a consideration to investors and is typically measured by shares traded daily on a public exchange. The premise is not based on fact, but is based on historical associations to public company share trading

Premium/discount prices are followed daily to advise investors as to the market trend on the investment concept

ETFs have bid/offer spread concerns because primary and secondary market trading occurs simultaneously

ETFs have market makers who support the market through arbitrage transactions

ETFs must produce intraday fair values on the fund holdings called indicative intraday values (“IIVs”)

ETFs must disclose their holdings daily on their public websites sufficiently enough for investors to have a transparent view of the investment strategy

Mutual funds are not listed on a public exchange. Only FundServe for distribution of daily closing prices.

Active wholesaling and channel owner compensation traditional method to asset gathering activity

Secondary market trading subject to exchange listing and regulatory oversight, NSCC/CNS guaranteed settlement, FundServe price distribution and real time trade price distribution

Active wholesaling, social media, press articles, and research are key to the asset gathering activity

