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File Number S7-11-15  
Request for Comment on Exchange Traded Products

I would like to provide additional comments to file number S7-11-15 which specifically address several of the important questions present by the SEC. I have answered only a few of the specific questions asked by the SEC within the Request for Comment.

However, if the SEC would like I would be willing to sit with members of the Commission to discuss any or all of the questions in persons as I have prior to the approval of the first 40Act ETFs.

Please see the answers below.

## A. Arbitrage and Market Pricing

1. Do these mechanisms work better for some types or categories of ETPs? To what extent do arbitrage mechanisms help to ensure efficient market pricing for ETPs throughout periods of market volatility, including times of market stress?

### **Response**

All ETF and ETC pricing is directly related to the market liquidity of the assets as defined by the benchmark, the Portfolio Composition File (“PCF”) and the investor order flow. Hedging can be accomplished through the purchase of all of the securities contained within the PCF, and related ETFs and ETCs that can be shorted and borrowed. Additional hedging can be achieved through correlation trades, index futures, ETF options, correlated equity and commodity options, and non USD securities highly correlated to the ETF or ETC. In general ETFs and ETCs have more hedging opportunities than individual stocks.

ETNs can be hedged as well through related assets trades or benchmark trades. The one component of an ETN trade that can’t be hedged by any retail investors is the credit risk of the bank exposure. Market makers and institutional investors have means through which they can hedge the credit risk, but retail investors don’t have the means or the models to accomplish this.

During period of market volatility ETPs will respond to the market volatility in the form of wider bid/offer spreads. If a significant portion of the PCF components have stopped trading the arbitragers will not be able to make reasonable investor markets and the ETP should be halted by the listing exchange. A key driver to any exchange initiating a trading halt on an ETP is when two or more of the top ten holdings/benchmark securities have halted trading, the ETP should be halted as well unless there is an alternative hedging opportunity in derivatives.

It should be noted that the SEC should make it a priority to bring transparent bond trading to the market through the creation of an electronic market dedicated to major bond categories that would include government, agency, corporate and top 100 junk bonds. Sufficient technology now exists to display to market participants the current market bid/offer spreads and the dealing sizes. Bond ETFs have started to facilitate this process, but investors need additional transparency in the bond market to build confidence in the link between the ETF prices and the underlying bond components.

2. Do commenters believe that there are others mechanisms besides arbitrage mechanisms that do or could, help ensure efficient market pricing of ETPs? Do other factors play a role in efficient market pricing of ETPs? If so, what are these mechanisms or factors and how effective are they? Are these mechanisms or factors more effective for certain types or categories of ETPs? To what extent are these mechanisms or factors effective during periods of market volatility?

## **Response**

An analysis of the ETF SPY shows that order flow to the exchange can create super liquidity that is more efficient than arbitrage. The SPY currently trades at market impact costs far below that of the S&P500 futures contracts, standard or mini, and the underlying ordinaries of the PCF file. The super liquidity is not limited to the SPY and even extends into emerging market ETFs when trades occur at value far below the purchase of the underlying ordinaries and market restrictions.

Because of the many ways of hedging ETPs the price of derivatives and the use of correlation and short trades can enhance market making opportunities of the ETP liquidity providers. Competitive stock loan rates from market professionals can provide inventory to cover short positions and permit the liquidity providers to cover their positions when the market trends in their favor.

Domestic equity ETFs benefit the most from the arbitrage mechanisms and the use of index related derivatives or specific equity options on other ETPs. Bond ETFs continue to expand their market efficiencies using the repo market, but still reflect the lack of the overall liquidity in fixed income due to QE efforts and ownership concentrations within the bond market by buy and hold investors. The use of cash creations by bond ETPs permits the ETP advisors to purchase the components of the bond PCF or similar performing bonds not contained in the PCF.

ETNs are always cash creations as the bank may choose to hedge or not hedge the performance of the ETN promised to investors. For ETN banks, ETNs offers the bank the opportunity to fund themselves at interest rates below the cost of LIBOR. This leveraging of the bank's balance sheet is monitored under several regulations including Basel III and the Federal Reserve.

During period of market volatility the diversity of hedging tools will facilitate a more orderly market in ETPs. However, in time of severe market stress, ETPs will suffer from wider spreads as the stress expands into the derivative markets or other hedging tools.

I believe regulation NMS/NBBO should be repealed as it has fragmented the liquidity of the listed securities market and the exchanges have become a feeding ground for ibanks and HFT traders seeking to impose their will over the exchanges in the form of rebate demands and order types that make no sense except as to provide a mechanism for extracting rebate payments or front running orders. The SEC has bowed to the definition that speed of executed is equivalent to a good execution. The Commission seems to believe the combination of quantity and price no longer applies in the definition of good execution.

3. What characteristics of an ETP facilitate or hinder the alignment of secondary market share prices with the value of the underlying portfolio or reference assets? What characteristics of an ETP underlying or reference assets facilitate or hinder the alignment of secondary market share prices with the value of the underlying or reference assets? Does the liquidity in the market for an ETP's underlying or reference assets affect

arbitrage, and if so how and to what extent? Does the availability of current and historical pricing information, as well as trading history, for the underlying or reference assets affect arbitrage, and if so, how and to what extent? To what extent does the availability of correlated hedges for the ETP's underlying or reference assets affect arbitrage and pricing efficiency? To what extent does an ETP's use of sampling methodology (investing in a subset of the components of an index) to track an index affect arbitrage and pricing efficiency? Does the use of over-the-counter instruments by an ETP affect the opportunity for market makers or other participants to engage in arbitrage, and if so how and to what extent? Do non-synchronous market hours between an ETP and its underlying assets (e.g. international equities) affect the pricing of an ETP and the opportunity for arbitrage, and if so, how? Does the use of cash-only creation or redemption baskets and variable cash fees affect efficient marketing pricing, and if so how?

### **Response**

The liquidity of the underlying or reference asset is the key determining factor for the efficient pricing of an ETP, but not the only factor. Hedging and order flow also plays an important role in the market making process. Hedging can be accomplished through long/short trades in other liquid ETPs, index futures, and optimal basket of securities. In the US domestic market liquidity can be affected by the selected reference assets. Small and micro capital stocks that have limited liquidity will reflect the reduced liquidity of their shares when compared to large cap stocks.

For non-US benchmarked ETPs the foreign exchange markets play an important role as well as fair value pricing. During the New York trading day if there is a significant move in the stock market, the custodians will use fair value prices and the London 4PM WM Reuter prices in the NAV calculation. However, market makers can only use the market closing prices and the real time foreign exchange rates as they change during the trading hours plus some derived internal calculation to the U.S. markets and the domestic market of the foreign securities. The movement between the fair valued security prices and the change in foreign exchange rates can create what appears to be a noticeable difference between the exchange 4PM closing price and the closing NAV of the fund.

Basis trades or long/short trades are a common arbitrage hedging tool for ETP traders. Many of the ETP trading models are designed around finding the optimal correlation trade to a long or short position in ETP securities. Included in the analysis within these models are market impact costs and borrowing costs for stock loan. When the reference assets are illiquid the correlation analysis to alternative ETPs, futures, and options play a key role to seeking hedges in non-related asset classes that can be correlated to all or a portion of the trader's exposure. A very good example of these technics was the original hedging models for the Russell 3000 ETF prior to the launch of the related futures contract. The hedge at this time was a combination of S&P500 futures, Nasdaq100 futures and orange juice futures. The orange juice futures performed like the fat tail component of the Russell 3000 ETF that was not correlated to the two equity futures.

Using unlisted securities like swaps and open-end OTC mutual funds are less preferred hedges due to the expense of ownership. The downside of mutual fund hedges is the uncertainty of their asset holdings due to the delayed reporting. These hedges are used mostly for multi-asset ETPs and municipal ETPs where stock loan borrowing rates are typically very high.

Non-synchronous market hours do not play a significant role in the pricing of non-US securities during NY trading hours as the market makers in ETPs use correlation trades to hedge their market exposure to the foreign securities. The correlation trades measured against index ETPs or index futures, based upon various series analysis of the two markets provide sufficient price risk hedging for ETP market makers.

There is a significant amount of resources dedicated by market makers to analyzing the market movements between the S&P500 index and the other global market indices which share foreign security components of the ETP. The emerging markets offer the greatest challenge during NY hours, but the market makers during U.S. trading hours and they will widen bid/offer spreads between the ETP in order to compensate for the additional security and foreign currency risks and U.S dollar. The launch of the MSCI futures and other non-U.S. market futures provide additional hedging opportunities for market makers to expand their hedging opportunities.

Time series analysis of 90, 60, 30 and daily time increments helps the market makers manage the ownership and pricing risks to compensate the market maker for the exposure risks they might have on their books before they need to unwind their market exposure risks for time period they will hold any risk position to the foreign markets.

Included in most ETP trading risks are the implied financing costs differences between USD and the currency of the ETP's exposure to holidays, market settlement cycle differences and public holiday calendar differences.

Cash only creations for various ETPs, such as bond ETFs do offer some additional risk to the market makers, but not the investor, and takes the form of the selection of the bond price supplier that the custodian chooses. However, the prices which the ETP will use for the calculation of the NAV are known to the market makers and their real time models will use these market prices in the calculation of their bid/offer prices. The cash creation permits the advisor to purchase the necessary reference bonds or substitute bonds for the ETF in accordance with the index or benchmark. However, most bond pricing services are related to round lot sizes and not odd lot sizes.

The SEC has recently dedicates resources to understanding the market pricing differences between the round lot bond prices and odd lot bond prices. To date the major pricing services to the ETP fund accountants only deliver round lot bond price and the pricing services have developed mechanisms to capture odd lot prices for delivery to the custodian. This has created friction between the ETP market makers and issuers as the market makers are paying the higher round lot prices for the bond s that were purchased at discount odd lot prices.

Bank loan ETPs, municipal bond ETPs and other less liquid ETPs offer the market makers and the investors additional risks in that the prices for the NAV calculation are not easily verifiable by reference to a distinct trading platform, such as eSpeed, or a distinct trading exchange. These prices are often obtained from the street from several broker sources or ibanks. It has been my experience that these prices often reflect the principal position of these brokers, either: flat, long or short, and hence are more subjective. The creation and redemption process using these prices in the NAV can create additional volatility in the overall ETP pricing and hence risks. The market makers compensate for this in the form of larger spreads, and investors pay this additional premium or discount willingly in order to receive the excess yields reflecting the wider bid/offer spreads. What is often hard to demonstrate to the investors was the additional pricing spreads are truly captured in the yield return. Very little has been done to date to clearly show investors that they are earning the excess yields they are paying for in these ETPs.

MLP ETPs are also difficult for investors to understand the value of the excess yields to the ownership exposure represented by unpaid tax liabilities inside of the MLP structure. Managing the future tax liabilities or realizing the tax liabilities is a key role for the advisor to the MLP ETPs. The pricing for many MLP ETPs have been tight because of the order flow from investors. Long-term holders of these products have the greatest risk and I believe the potential tax exposure per ETP share should be disclosed on the website in a timely manner.

Multi-asset ETPs can present a greater pricing risk than single asset ETPs. The ETP models of the market makers are still being improved for multi-asset ETPs. Market makers have been traditionally operated on in silos with equity traders, bond traders, currency traders, trading with very little understanding of the current markets in the other asset classes. ETPs have changed the dynamics of this silo approach and ETP market makers needs to understand all the components pricings as defined in the PCF file. As a result the spreads for these ETPs tend to be wider to accommodate market movements than are being captured at different cycle periods [5 seconds, 1 second, microseconds, etc.]. This asynchronous pricing problem can only be compensated for with wider spreads.

4. How closely do investors or other market participants expect the intraday trading price of ETP Securities to be aligned with the contemporaneous value of their underlying portfolio or reference assets? Do these expectations differ depending on the type of ETP, the nature of the underlying assets, or market conditions? What methods, if any, do investors use to determine whether the intraday trading price of ETP Securities closely tracks the value of their underlying portfolio or reference assets?

### **Response**

The use of ETPs have expanded because of their transparency in performance, holdings and their use in asset allocation models to gain exposure or shift exposure to a multitude of asset categories or group of categories can be achieved easily. The selection process

for domestic, international, global, bonds, equities, currency and many additional asset categories can be made and executed quickly through ETPs for long-term, short-term or tactical investment decisions. This attribute is the primary driver for the growth in ETPs.

What make these decisions relatively easy are the transparency of the holdings and/or the ease of understanding the benchmark of the ETP. The certainty of the asset performance is far greater than mutual funds and is achieved at lower fees to the investors. Active mutual funds, attempting to achieve similar or better performance to index and active ETPs, are hindered due to their higher fee structure and wirehouse distribution compensation agreements. Investors and their advisors have the luxury of obtaining immediate market exposure or reduction in market exposure through exchange transactions. Thus the mutual fund investors will bear the full market change in value for each holding of the fund until the exchange/market close.

Most ETP investors should send their trades to the exchange using limit orders. In today's exchange market it is difficult to say how important the IIV plays in establishing the limit order. The FC's, RIAs and institutional investors seem to focus on order flow of the ETP for actively traded ETPs. For thinly traded ETPs, the IIV plays a more important role in establishing the limit price of the order.

With regards to the asset class, I haven't seen any examples where the IIV is considered more important for one asset class verse another. There is a relationship between the investor's understanding of the asset class and the use of the IIV. More experienced investor will have little or no dependency on the IIV while new investors in a specific asset class may study the IIV for a period before determining if the asset will provide the necessary diversification or alpha they are seeking to achieve. Novice investor for asset classes such as bank loans, MLPs, REITs, commodities, and any other asset classes the beneficial owner is not familiar with these asset classes and should insure that their FC or RIA understands the asset class and the lag times that might be involved in the pricing of the underlying securities of the PCF file. If the PCF file is a cash only creation, the RIA and FC must review the current daily ETP holdings, as available, and understand what market conditions might move the underlying creation/redemption portfolio for and the impact these events might have on the daily NAV pricing.

One of the key problems with the use of the IIV for investment purposes is the very limited availability to view the PCF securities upon which the IIV is being calculated. The PCF is currently limited to market makers and professionals who purchase this data from the NSCC or their party distributor. The custodian should be permitted to publish the PCF, in CSV format, to the issuer's website daily in a prominent location so investors can see the securities that would be redeemed or deposited into the trust during the creation and redemption process.

The assumption by the Commission that this data would create investor confusion when ETFs first began to trade was probably correct. However, as the use and types of ETPs have expanded the RIAs and FCs would benefit from this additional data in order to determine the proper limit orders to submit to the exchange on behalf of their clients.

Exchange prices and ownership costs do affect long-term investors and any savings is ultimately an increase in returns to the investor.

Index providers have been the biggest opponents to this publication of the PCFs in the past as they argue that the PCF would be a redistribution of their index data. However, publishing the share quantities to be deposited into the ETPs, as opposed to the security percentages, would not necessarily be redistribution of this information. The investor would need to calculate this value and adjust this value for the impact of the accrued income and expenses in order to successfully recalculate the individual security weightings contained within the index.

Another part of the ETP equation for investors has been the publication of market impact costs to investors at various execution times on the exchange. Many institutional investors will not trade between the times of noon and 2:00PM because of the perceived volatility in market impact costs between these hours. It would be beneficial for investors to see the average market impact costs between 9:30 and 10:00, 10-noon, noon to 2PM and 2PM to the market close for the vast majority of ETPs. Some European ETPs will tend to have lower costs until 11:30AM, other European ETPs will have little change in impact cost throughout the trading day and international and global ETPs will have higher market impact cost to domestic ETPs, but depending on market order flow the investor may realize opportunities to decrease their entry and exit costs into the ETP markets. The almost continuous trading of foreign stock index futures has provided a buffer to the market impact costs of the ETPs.

5. Do market participants conduct analysis of how well intraday prices of ETP Securities track the value of their underlying portfolio or reference assets? If so, how much weight do market participants place on such analyses?

### **Response**

For arbitrageurs, the tracking analysis is very important for in selecting their hedges when using futures, options on futures or equity options. Most professionals look for hedges that are highly correlated to their trading activity. Tracking error on trading inventory can add to P&L gains and losses.

Long-term holders want to be confident that the performance of the ETP and the benchmark tracking is in-line with the total expense ratio and the benchmark. Significant tracking error in the performance is often a large concern to many long-term investors. Tracking error for long-term investors often takes the form of purchasing one index based ETP over another. The decision must be based upon the index methodology, cost of ownership, and entry and exit costs of the specific benchmark asset class.

Short-term holders of ETPs may apply them in tactical asset allocations strategies, arbitrage transactions, and trading strategies. Significant variance in tracking error to the expected returns may play less of a role in their investment decisions.

Many investors believe asset allocation/diversification can be achieved through ETPs and this is the more important decision an investors makes in the use of ETPs within their portfolio. The investor migration away from single stock exposure is occurring and is evident by the percentage of market transactions occurring on the exchanges related to ETPs. The ability to gain broad market exposure with a single trade, at a specific price, is slowly replacing the decision of selecting a well-known active asset manager in the hopes of achieving some form of alpha. The under and overweighting of specific market exposure is a task more suited for ETPs. The growth in SMA and UMA accounts using ETPs has grown significantly and the expansion of more complex asset allocation models obtained through ETPs.

Although one of the key drawbacks to UMAs investors using ETPs has been the sale of order flow by the wire house brokers in return for rebates and the excess market impacts borne by the investors as all the UMA providers try to access the market once they receive or implement the rebalancing of the models. The executing brokers seem to care little for the market impact cost knowing full well they will achieve best execution as currently measured by NMS. However, the beneficial owner suffers the market impact cost that can be as high as two percent a month in performance loss for UMA strategies. Currently the UMA providers are not required to disclose this data to their clients, but it should be noted as part of the UMA returns to investors.

6. Under what circumstances might the prices of ETP Securities not track (on an intraday, temporary end-of-day or permanent basis) the value of their underlying portfolio or reference assets? Are there circumstances in which the price of the ETP Securities, though different from the NAV, might be a more accurate measure of the value of the ETP underlying assets? What are the implications for investors (both individual and institutional) and other market participants if intraday prices for the ETP Securities do not closely track the value of the underlying portfolio or reference assets, either on an intraday, temporary end-of-day or permanent basis?

### **Response**

The more significant driver for ETPs not to track the underlying portfolio or reference asset is when the reference is not trading simultaneously with the ETP market. The ETP continues to trade outside of the domestic market assets and the ETP price will reflect the use of correlation trades by the market makers to hedge their price and position exposure.

When the S&P500 futures change in value beyond where they were at the close of the Tokyo market, the price of the related U.S. listed ETP will move in the direction of the change when the S&P500 changes more than 25 basis points.

Municipal Bond ETPs have an inherent pricing difference between non-taxable institutional investors, not impacted by the specific tax benefits of municipal bonds and that of retail investors who may not be able to benefit from the tax benefits of municipal bonds.

7. To what extent do arbitrage mechanisms affect trading in an ETP's underlying or reference assets? Does the answer vary depending on whether the underlying or reference assets are equities, fixed-income securities, commodities, derivatives, or another type of asset? If so how?

**Response**

For the majority of all ETPs the price of the ETP can be more efficient due to order flow, but this will not drive the price of the underlying securities within the ETPs unless the ETP represents an illiquid asset class in general or is founded on a limited number of securities. For ETPs where the reference asset is one commodity it is possible for the ETP to drive the price of the commodity. This is especially true when the asset class was previously restricted to investors. GLD is a good example of the ETP influencing the price of the underlying commodity due to an expanded universe of investors. However, ETPs that expand the base of investors will see an escalation in pricing activity initially until the demand is satisfied.

For the super liquid ETPs, like SPY, QQQQ, and EEM the pricing of these ETPs are more efficient than the underlying securities. However, they do not drive the prices of the underlying equities.

8. To what extent do ETNs offer opportunities for arbitrage? How do market participants engage in arbitrage for ETNs? How is arbitrage affected by ETNs issuers' ability to suspend and restart issuances of notes at their discretion? How is arbitrage opportunities affected when an issuer suspends the issuance of its ETN? Are certain ETNs easier or more difficult due to the nature of the ETNs reference asset or index, and if so, which ones?

**Response**

ETNs offer exposure to their benchmarks and their creation redemption process is done in cash. ETNs are not back by assets of the issuers, but by the balance sheet of the issuing bank. There is no true arbitrage process with ETNs as the issuer delivers the benchmark performance at maturity. In the interim the ETN trades at the benchmark's current value plus the spread.

Issuers of ETNs stop the issuance of ETNs for various reasons, but occasionally the issuance is stopped due to balance sheet usage. On occasions the issuance of ETNs has been halted when the issuer has exhausted their registered shares with the SEC. The lack of ETN issuance has occasionally caused significant premiums in the price of the ETNs and rapid price declines once the issuance of the ETN is renewed.

The arbitrage trading in ETN is where the performance of one security is shorted against the performance of the ETN to establish as basis trade to the benchmark.

ETNs are often targeted to institutional investors who express a need for a specific return. The need could be due to investment restrictions on security types, equities verses

commodities or domestic versus foreign asset ownership. However, the publicly listed ETN is the one of the preferred method to circumvent the investment restriction and achieve the specific investment return.