T. ROWE PRICE ASSOCIATES, INC.

WWW.TROWEPRICE.COM

LEGAL DEPARTMENT

4515 Painters Mill Road
Owings Mills, Maryland
21117-4903

Toll Free 800-345-2000
Fax 410-345-6575

August 18, 2015

Brent J. Fields
Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-8549

Re: Request for Comment on Exchange-Traded Products ("**RFC**") (File No. S7-11-15)

Dear Mr. Fields:

We are writing on behalf of T. Rowe Price Associates, Inc. (**"T. Rowe Price"**), which together with other affiliates, serves as investment adviser to the T. Rowe Price family of mutual funds (**"Price Funds"**) with over $773 billion in assets as of June 30, 2015. While T. Rowe Price has yet to launch an exchange traded product, we have been planning to do so for several years having obtained exemptive relief for fully transparent, actively managed exchange traded funds ("**ETFs**"), and more importantly, we have been pursuing exemptive relief for a non-transparent, actively managed ETF – potentially, the first of its kind.[1] Accordingly, some of questions posed and issues raised by the RFC are ones we have been addressing with the Securities and Exchange Commission ("**SEC**") staff in considering our application for exemptive relief.

On June 12, 2015, the SEC published for comment a release on a range of issues related to the trading of exchange traded products. T. Rowe Price, as an investment adviser to a family of over 160 open-end mutual funds, has been seeking to provide some of its same successful mutual fund investment strategies in an ETF structure. However, because the SEC has yet to approve a non-transparent version of an ETF, investors have been denied access to an ETF version of our funds. We believe non-transparent ETFs, if approved, have attributes that benefit both investors and asset managers. Asset managers and investors benefit from the fact that a non-transparent ETF would not require daily disclosure of the fund's portfolio holdings, which shields the asset manager's proprietary investment strategies from disclosure to the public and protects investors from the potentially harmful effects of predatory trading by others seeking to take advantage of this information. Investors additionally benefit from some of the attractive attributes that ETFs offer (e.g., daily liquidity, lower cost and tax efficiency) – even in non-transparent form. Accordingly, T. Rowe Price is keenly interested in the questions raised by the RFC as we believe our proposal for a non-transparent ETF adequately addresses many of the issues raised by the SEC.

T. Rowe Price's Proposed Non-Transparent ETF

---

[1] See Application for exemptive relief (File No. 812-14214) filed by T. Rowe Price Equity Series, Inc. and T. Rowe Price Associates, Inc. (Sept. 23, 2013; as amended Mar. 14, 2014).

T. Rowe Price's proposal for a non-transparent ETF relies on disclosure of a robust set of data about the fund's portfolio holdings in order to allow market makers to effectively hedge their risk in transacting ETF shares while at the same time maintaining confidentiality of the ETF's current portfolio holdings. Our view, which is informed by input from market participants, is that knowledge of a fund's real-time portfolio holdings is not necessary for market makers to hedge their risk – rather, there is other information about the fund's portfolio that can be provided as a reasonable proxy for market participants to trade in ETF shares, keeping the non-transparent ETF's market price closely tied to its NAV.

Under our proposal, in lieu of full portfolio transparency, the ETF would provide a high-quality pricing signal for trading in ETF shares and a high-quality hedging instrument for positions in ETF shares. The ETF's intraday indicative value ("**IIV**") per share would be a high-quality pricing signal because of the limitations we would impose on the ETF's portfolio holdings: 95% of the ETF's holdings would be exchange-traded and also traded during the same trading window as the ETF's shares such that their prices can be continuously updated throughout the trading day. In addition, the ETF will invest in common stocks and exchange-traded equities such that 95% of the portfolio will be deemed liquid with sufficient volume to reflect current market prices. The IIV calculation agent would know the ETF's actual portfolio holdings and be able to calculate a high-quality IIV without the potential problems produced by stale priced or fair valued holdings. In addition to the IIV, the conditions discussed below enable market participants to create their own proprietary pricing signals, reflecting their expertise and knowledge of trading conditions. This can provide another high-quality pricing signal and may in fact become the primary signal for market making activities.

For a high-quality hedging vehicle, the ETF would identify a hedge portfolio that would have a low tracking error versus the ETF's NAV and be highly correlated to the positions being hedged. For the hedge portfolio, we propose to use a broad-based index or the ETF's most recently disclosed portfolio holdings. The ETF would invest at least 80% of its total assets in the same securities as the hedge portfolio. In addition, we have proposed certain other limitations on the portfolio's investments and turnover to ensure that the ETF was managed in a similar fashion to the hedge portfolio. Finally, the ETF would publish daily a set of data about the ETF's actual portfolio as compared to the hedge portfolio in order for market participants to evaluate the performance of both and develop insight into the arbitrage risks of trading in the ETF's shares. This should help provide greater certainty to arbitrageurs and keep the premium and discount between the ETF's NAV and the market price of its shares more narrow.

Current Status

T. Rowe Price has been actively pursuing exemptive relief for its non-transparent, actively managed ETF for over three years now. We understand the SEC's concerns with these new and novel products and how these products might meet the needs of investors and be understood by them. We have responded to questions and comments from the SEC's staff with respect to our own proposed non-transparent ETF product – some of the same questions and comments raised by the SEC's RFC. We sincerely appreciate the SEC's mission of investor protection, including full disclosure to investors of all material information regarding regulated exchange-traded products, and we believe our proposed non-transparent ETF meets these critical requirements. We do not believe a "one-size-fits-all" approach is necessary to ensure non-transparent ETFs are

consistent with investor protection and market integrity goals. As a result, we encourage the SEC to move forward with exemptive relief for those non-transparent ETFs that meet these objectives. It is even more imperative to act upon these outstanding proposals to ensure equal treatment among ETP sponsors and allow for a competitive marketplace and further innovation to develop. Therefore, we think the time has come for the SEC to approve non-transparent ETFs, and we hope the answers provided in response to the RFC will give the SEC the necessary information to advance innovation more efficiently and confidently.

Responses to Questions

We will address only those questions in which we have relevant input from the standpoint of an asset manager of ETFs as opposed to those where market makers and other market participants are better positioned to address. For ease of reference, we have grouped the questions by relevant subject-matter.

Questions 1, 3 & 47

1) Arbitrage mechanisms are designed to keep intraday trading prices of ETP Securities equal (or nearly equal) to the contemporaneous value of the underlying portfolio or reference assets. Do these mechanisms work better for some types or categories of ETPs? To what extent do arbitrage mechanisms help ensure efficient market pricing for ETPs throughout periods of market volatility, including times of market stress?

The arbitrage mechanism designed to keep intraday trading prices of ETP Securities equal (or nearly equal) to the contemporaneous value of the underlying portfolio or reference assets has four (4) components:

1) Estimates of the intraday value of the underlying portfolio.
2) Information about the underlying portfolio so that market makers can determine effective hedges.
3) The availability of appropriate hedging instruments so that market makers can construct those effective hedges.
4) The ability to transact with the fund directly at the end of the day at NAV through the creation/redemption process.

All ETFs have the fourth component as part of their basic structure. That is, some market participants (Authorized Participants, or "**APs**"), have the ability to transact with the fund directly at the end of the day at NAV through the creation/redemption process. This component provides the means by which the market price will be forced to converge to the underlying value of the fund (NAV) each day.[2] In effect, this component allows an AP to close out an arbitrage trade initiated during the trading day and thereby profit from any meaningful premium/discount

[2] Note that the critical feature here is that the creation/redemption must be done at NAV. It is not only the ability to create/redeem in-kind. The in-kind feature makes it more cost efficient for the APs to execute a creation/redemption and will therefore help to reduce spreads.

that may have occurred during the day.

Components numbered 1-3, on the other hand, are intended to provide market participants the means by which they can identify arbitrage opportunities and initiate arbitrage trades as they occur during the day. The ability of each of these to provide sufficient information and instruments to market participants for effective arbitrage to take place will vary depending on the particular circumstances of each fund. It is important to note that, within any given day, the width of spreads quoted for an ETF by any market maker will be heavily dependent on the amount of risk that market maker perceives they must bear in their intraday trading activities. This, in turn, will be determined by how closely they believe they can trade to the underlying value of the fund and how accurately and cost efficiently they can hedge any inventory risk they take during the day. Therefore, it is clear that the more accurate any estimated intraday value and information disclosed regarding the underlying portfolio and the more effective the hedging instruments at the market makers' disposal, the easier it is for market makers to accurately price the ETF, as well as accurately and cost efficiently hedge their risk. The result is a more effective arbitrage and, thus, more accurate pricing and tighter spreads.

Thus, it can be seen that for many current domestic equity ETFs -- in which the underlying portfolio is fully disclosed, intraday prices are based on that fully disclosed portfolio whose constituents trade synchronously with the ETF, and a variety of effective hedging instruments are available (including the component securities themselves) -- market participants have access to the most current and accurate information possible (components 1-3). Not surprisingly, this approach results in very effective arbitrage, accurate pricing and tight bid/ask spreads.

However, not all current ETFs operate under such ideal circumstances, yet still trade actively and price relatively efficiently given the information market participants have at hand. Take the example of the many current ETFs whose underlying portfolio is comprised of non-U.S. equities which do not trade synchronously with the ETF. In these instances, even though the underlying portfolio is fully disclosed, there are no concurrent prices for the ETF's holdings which prevents market makers from precisely estimating the fund's value during the trading day (component 1). In addition, this non-synchronous characteristic also means that effective hedging instruments are not as readily available (component 3). In this case, however, market makers have been able to utilize their own proprietary techniques to calculate their own estimates of the fund's value (albeit less accurately than if the holdings traded concurrently) and utilize the hedging instruments that are available to them. This lack of precision results in more risk for market participants and less efficient trading, as evidenced by the somewhat wider spreads for these ETFs. However, as their trading activity and growth in assets attests, many of these ETFs are still actively traded and are priced efficiently enough to enable the products to be quite successful.

As another example, there is at least one case of a current ETF that does not fully disclose its holdings to the market. Instead, an optimized basket made up of a subset of the actual holdings, is disclosed.[3] This "proxy portfolio" approach results in less accurate intraday estimates of the fund's value (component 1), as well as some uncertainty about an effective hedge (component 2),

[3] The motivation for using this approach is transactional efficiency for the create/redeem mechanism (component 4).

both of which result in increased risk for a market maker engaging in arbitrage. However, as in the case of ETFs based on non-U.S. equities, market makers have been able to manage that risk such that the product has traded very efficiently.

Because the arbitrage mechanism provides a means to transact directly with the fund at the end of each day at NAV, market volatility, in and of itself, will not harm its effectiveness. However, to the extent that increased market volatility results in increased difficulty estimating an intraday value (component 1) and/or less liquidity for the hedging instruments (component 3), then this will result in increased risk for the market makers. This increased risk, in turn, will be reflected in less accurate pricing and widened spreads. However, market makers have shown themselves to be quite adept at dealing with these circumstances under a variety of market conditions.

In summary, the arbitrage mechanism for ETFs, with its four components, has shown itself to be a robust and effective means to keep intraday trading prices of ETF shares equal (or nearly equal) to the contemporaneous value of the underlying portfolio or reference assets across a wide array of ETFs and market conditions. This is largely due to the skill of market makers in managing the different levels of risk presented in the arbitrage mechanism for each ETF across a variety of market conditions.

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's underlying or reference assets facilitate or hinder the alignment of secondary market share prices with the value of the underlying portfolio or reference assets?

The primary characteristics of both an ETF and the underlying or reference assets that facilitate or hinder the alignment of secondary market share prices with the value of the underlying portfolio or reference assets are related to the four components of the arbitrage mechanism mentioned in the answer to Question 1 above. Clearly, the ability to transact directly with the fund at the end of the day at NAV (component 4) is the lynchpin for efficient trading and, as such, is a basic characteristic for all ETFs. Components 1-3 refer to information and instruments available to market makers in order to properly price and hedge the ETF and thereby engage in arbitrage trades. To repeat, the more accurate any estimated intraday value and set of information disclosed regarding the underlying portfolio and the more effective the hedging instruments at the market makers' disposal, the better it is at allowing market makers to accurately price the ETF, as well as accurately and cost efficiently hedge their risk. The result is a more effective arbitrage and, thus, more accurate pricing and tighter spreads.

As also noted, however, perfect information is not required nor achieved for a number of current ETFs and yet market makers are able to achieve sufficient trading efficiency to allow the products to trade actively and enjoy great success.

To what extent does the availability of correlated hedges for the ETP's underlying or reference assets affect arbitrage and pricing efficiency?

The availability of correlated hedges for an ETF's underlying or reference assets is one of the primary components affecting arbitrage and pricing efficiency. This was previously discussed in the answer to Question 1 above as component 3 of the four components to the arbitrage

mechanism. As important, however, is the availability of sufficient information regarding the underlying portfolio or reference assets such that market makers can identify the appropriate correlated hedges. This was also discussed previously as component 2 of the four components to the arbitrage mechanism. If either of these components is insufficient, or absent, the risks for market makers will increase and result in less efficient arbitrage and pricing.

Note, however, that correlated hedges need not be perfectly correlated to be effective. Market makers have demonstrated, both in ETF trading as well as other areas of their trading business, that they are quite adept at trading very efficiently with less than perfect information.

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?

As mentioned specifically in the answer to Question 1) above, we believe non-synchronous market hours between the trading of an ETF's shares and its underlying assets will affect both the pricing of an ETF and the effectiveness of any arbitrage. Such conditions increase the risk market makers face due to both uncertainty about the accuracy of any intraday value for the fund (component 1 of the four components) and the increased difficulty in constructing effective hedges. These increased risks will result in less efficient trading. However, as previously mentioned, there are numerous examples of current, successful ETFs where such conditions exist yet market makers are able to manage these increased risks such that these ETFs still trade quite efficiently with substantial volumes.

47) What use do investors or other market participants make of publicly available information such as the index value, IIV, NAV, or portfolio holdings of an ETP? Does the answer depend on the type of market participant? If so, why do certain market participants use certain information? If market participants do not use certain information, why not? Do the answers depend on the type of underlying asset?

Publicly available information regarding ETFs such as the index value, IIV, NAV, or portfolio holdings are utilized to varying degrees by a variety of market participants for a number of different reasons. And the answers do indeed vary depending on the underlying asset.

For ETF market makers, all of this information is evaluated for each ETF in terms of its usefulness in enhancing one or more of the four components of the arbitrage mechanism discussed in the answer to Question 1 above.

For example, for an ETF whose underlying portfolio holds domestic securities which trade synchronously with the ETF, market makers will use the portfolio holdings to determine both an appropriate hedge and to calculate their own estimate in real-time of the intraday value of the underlying portfolio, a value which we have termed as the "ANAV". This ANAV becomes the market maker's primary estimate of intraday value and their primary pricing signal. The IIV, the intraday estimate of the value of the underlying portfolio calculated by an ETF's external pricing agent and distributed to the market every fifteen (15) seconds, is utilized by market makers at most as a secondary pricing signal. The reasons for this are two-fold. First, a 15-second interval for receiving an estimated intraday value is far too long for market makers who must deal with a world that operates in fractions of a second. Second, the calculation of the ANAV is under the

market makers control whereas the calculation of the IIV is dependent on an external third party. Since the market maker is ultimately responsible for their trading profits and losses in ETF shares, a proprietary calculation of the ETF's intraday value is preferred by it.

On the other hand, in a situation where the underlying portfolio holds securities which do not trade synchronously with the ETF, the IIV will have much more limited value since an intraday value cannot be calculated based on those holdings due to the unavailability of concurrent prices. In addition, the IIV is typically calculated to reflect only changes in currency exchange rates and, as such, is viewed by market makers as a poor pricing indicator. However, market makers have shown that they can overcome these limitations and manage the increased risk by using the publicly available information at hand in conjunction with their own proprietary analytics to calculate their own ANAVs and determine hedges. These efforts have shown themselves to be effective, as demonstrated by the successful trading of these ETFs.

It is interesting to note that, based on market research in which we have participated, retail investors and their advisors rarely, if ever, utilize disclosed portfolio holdings or the IIV in their evaluation and management of their ETF investments. We also believe that investors and advisers understand that for actively managed products, some level of portfolio non-transparency is to be expected.

In the case of ETFs, the fund's NAV takes on a different role depending on the market participant. For the APs, the NAV is the lynchpin of the arbitrage mechanism since this is the only price at which they can trade directly with the fund at the end of the day and close out their arbitrage trades or otherwise manage their inventory of that ETF. For investors, though, the NAV can only be a reference price since they cannot trade directly with the fund as they can in a traditional open-end mutual fund.

Question 4 & 5

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?

Market participants do expect the intraday trading price of ETF securities to closely track the contemporaneous value of their underlying portfolio or reference assets. However, these expectations differ depending on the underlying assets and market conditions. For highly liquid assets (e.g. U.S. Large-Cap Stocks), the tracking between the intraday trading value and the contemporaneous value of their underlying portfolio is expected to be tighter than less liquid assets (e.g. U.S. Small-Cap Stocks). This relationship reflects the risk associated with executing arbitrage trades to eliminate ETF mispricing. It is riskier to implement an arbitrage for ETF with less liquid underlying securities, thus the potential reward has to be sufficiently large to compensate for the additional risk. During highly volatile market conditions, the risk of trading is typically elevated for all asset classes. Therefore, the deviation between the intraday trading

price of ETF securities and the contemporaneous value of their underlying portfolio will increase due to higher risk associated with arbitrage trades.

Investors can utilize Intraday Indicative Value (IIV), which is published every fifteen (15) seconds, to evaluate the tracking of ETF market price and the value of underlying portfolio. More sophisticated market participants also use proprietary models to calculate real-time ETF pricing signals.

5) Do market participants conduct analyses 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?

More sophisticated market participants (e.g. market makers) do conduct analyses to evaluate the tracking of the intraday prices of ETF securities versus the value of their underlying portfolio. Market makers typically build proprietary models to calculate the value of underlying portfolio in real time and use that pricing signal to trade and hedge their ETF positions accordingly. Market makers rely heavily on those proprietary models for trading ETFs as they need real-time and reliable pricing data in order to effectively make market for ETFs.

Questions 12 & 13

12) ***How much disclosure about the contents of an ETP's underlying portfolio is necessary for arbitrage to function efficiently to keep the market price of an ETP aligned with the contemporaneous value of its underlying or reference portfolio? Please explain.***

As discussed in the responses to questions 1, 3 & 47, an effective arbitrage mechanism requires the presence of four components:

1) Estimates of the intraday value of the underlying portfolio.
2) Information about the underlying portfolio so that market makers can determine effective hedges.
3) The availability of appropriate hedging instruments so that market makers can construct those effective hedges.
4) The ability to transact with the fund directly at the end of the day at NAV through the creation/redemption process.

Information about the portfolio contents is required for the first two components: forming an accurate intraday value and constructing effective hedges. Accurate intraday values of the underlying portfolio are necessary to indicate when the market price of the ETF has diverged from the value of the of the underlying portfolio, thereby signaling the arbitrage opportunities necessary to drive the market price back to NAV. An effective hedge is one that generates returns highly correlated with the return of the ETF's NAV, over the duration of an arbitrage trade. The more highly correlated the two returns, the more effective the hedge, and the lower the risk in the arbitrage trade for the market maker. Lower risk generally results in lower spreads and more effective market making operations. For many portfolios, highly correlated hedges can be constructed without detailed knowledge of the underlying contents. Sufficient disclosure about the portfolio contents is required to allow market participants to construct high-quality

pricing signals and high-quality hedge portfolios for the ETF. The exact degree of portfolio disclosure required to provide for efficient arbitrage will depend upon the investment strategy followed in the portfolio and the nature of securities held in the portfolio, as well as other information provided in addition to the portfolio holdings.

13) ***In the absence of daily portfolio transparency for an ETP, could other mechanisms enable market makers or other market participants to make efficient markets in that ETP? If so, what are those mechanisms and how would they function? What, if any, information disclosure, characteristics of an ETP, or other circumstances would be necessary for those mechanisms to function?***

Market makers need high-quality pricing signals and high-quality hedges to facilitate efficient trading in ETFs. In the absence of daily portfolio transparency, efficient market-making could be facilitated through disclosure of a reference portfolio, highly similar to the underlying ETP portfolio, coupled with representations and limitations on the degree of divergence between the two portfolios. In certain circumstances, the reference portfolio could also be used as a hedge portfolio by market makers; it may also be used as a create/redeem basket for in-kind transactions by APs with the ETF. Furthermore, if the investment strategy of the ETF is limited to securities that are liquid, trade on exchanges, and trade synchronously with the ETF, signals generated from the reference portfolio, as well as the ETF's IIV, will provide accurate information regarding the state of trading for the ETF.

If the similarity between the actual portfolio and the reference portfolio is substantial, the values and returns of the two will track closely. In fact, it is possible to drive the tracking performance to a desired target level by reducing the difference between the information disclosed and the actual fund portfolio. One such mechanism is to disclose portfolio contents with a lag – as the lag is reduced, the tracking performance improves.

Additional steps can be taken to place direct limitations on the ETF's investment strategy or the similarity between the disclosed portfolio and the actual portfolio. Tracking performance can be estimated by measuring portfolio overlap or through the use of a commercially available holdings-based risk model. Parameters governing such comparisons can be selected to ensure that the disclosed holdings are sufficiently close to the actual portfolio contents such that the disclosed portfolio will be a high-quality hedge portfolio.

Market makers also need a high-quality pricing signal, which can also be derived from the reference portfolio when the similarity in holdings is substantial.

Public comments from the SEC staff have discussed potential flaws in the calculation of ETF IIVs based on the frequency of the calculations as well as imperfections in prices for the underlying securities. We agree that in many cases, the IIV is unsuitable as a primary signal for market makers. However, given suitable restrictions on the investment strategy of the ETF, the IIV in fact can be an excellent diagnostic tool that can be used to measure and refine the quality of proprietary pricing signals created by market makers. In particular, if the investment strategy of the ETF is limited to securities that are liquid, trade on exchanges, and trade synchronously with the ETF, the IIV will be a very accurate calculation of the ETF's real-time value. Under

these conditions, the IIV will be free of many of the flaws identified by the SEC staff. Market makers will be able to use the 1,560 separate IIV calculations each day to evaluate the accuracy of their proprietary signals, identify discrepancies, and potentially introduce additional measures to improve their ability to track changes in the value of the ETF. The combination of a high-quality pricing signal, derived from the reference portfolio, coupled with a high-quality diagnostic in the form of the IIV can, under certain condition as noted above, provide the degree of required accuracy to facilitate effective arbitrage and make efficient markets.

In closing, T. Rowe Price is pleased to provide the above information in response to the SEC's RFC and it is our hope that this public comment process will allow the SEC to have confidence in moving forward with the approval of non-transparent ETFs. We stand ready to assist the SEC and its staff in any way we can to ensure that the SEC's consideration of non-transparent ETFs provides benefits to investors and the capital markets. Please feel free to contact the undersigned if you have any questions or comments regarding our views.

Sincerely,

Richard T. Whitney	Kevin R. Yang	Darrell N. Braman
Head of Asset Allocation	Investment Analyst	Managing Counsel