Arnerich Massena
Building Better Portfolios

A Field Guide to Exchange-Traded Products

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A Field Guide to Exchange-Traded Products

"It is not only fine feathers that make fine birds."– Aesop

Since exchange-traded products leapt onto the scene in the early 1990s, their growing popularity has led to a proliferation of different types of exchange-traded products. There are now at least six different exchange-traded structures, each of which can behave differently in given market conditions. Investor interest in the various types of exchange-traded instruments continues to increase, but tracking the different structures and anatomies of each "species" can be as confusing as distinguishing between a Madagascar Partridge and a New Zealand Quail.

In our April 2012 white paper, *Examining Exchange-Traded Funds*, we discussed the proliferation of ETFs, describing how these relatively new investment products are constructed and traded. In this paper, we'll take a deeper look at the different species of exchange-traded products: how they're constructed, their risks, and how they might fit into a portfolio. We will help you identify and classify the following by their distinguishing characteristics:

- Exchange-traded funds (ETFs)
- Exchange-traded notes (ETNs)
- Exchange-traded certificates (ETCs)
- Limited partnership (LP) ETFs
- Master limited partnerships (MLPs) ETFs and ETNs
- Unit investment trusts (UITs)

Exchange-traded products are broadly defined as derivatively-priced securities that are traded intra-day on a stock exchange. Exchange-traded funds (ETFs) make possible intra-day trading, a potentially cost-effective method for small investors to gain the diversification of an index fund, and a diversified instrument that can be shorted. Other exchange-traded products, such as exchange-traded notes and certificates, are designed to take advantage of the exchange-traded structure to make intra-day trading possible, and to provide access to the returns of particular securities without necessarily owning the underlying assets.

A quick refresher on exchange-traded funds

Exchange-traded funds arose as a way to provide investors with a cost-effective method for investing in a diversified index and the ability to trade that portfolio at any time. ETFs are created in large blocks — creation units — by authorized participants or market makers. That entity then lists the shares on national exchanges, where they can be bought and sold by investors. While an ETF has a calculated net asset value (NAV) based on the market value of its underlying holdings, the actual market price of shares may vary depending upon supply and demand.

ETFs come in all shapes and sizes. There are index-based ETFs, which are passively managed to replicate the returns of traditional indexes; rules-based ETFs which track a particular basket of securities; actively-managed ETFs; leveraged ETFs; inverse ETFs, which aim to provide the inverse return of an index; sector ETFs; and commodity ETFs, among others. As ETF popularity has soared, they have seen immense inflows, and ETF sponsors have created new types of funds to meet the demand for increasingly esoteric asset classes.

ETFs offer some tax advantages in that they generally have no need to sell assets to raise liquidity for redemptions, virtually eliminating fund-level capital gains taxes. However, individual shareholders will realize capital gains or losses when selling ETF shares.

The expense ratios of traditional index ETFs may be lower than those of passively-managed mutual funds. But investors typically pay transaction fees, such as brokerage fees and commissions, when buying and selling ETF shares. Additionally, ETF prices may vary from their NAV, creating tracking error and impacting an investor's return.

ETF Quickguide	
Benefits	**Risks**
A diversified investment available in small quantities	Tracking error risk relative to the index being tracked
Intra-day trading	Possiblity of bid/offer spread in the market
Can be shorted	Liquidity issues during times of market volatility
Lower fund-level turnover increases tax-efficiency	

Exchange-traded notes

Exchange-traded notes were created with the intent of combining the best aspects of a bond instrument with the best aspects of an ETF. ETNs are senior debt securities which the buyer can either hold until maturity or sell on the market prior to the maturity date. The issuer guarantees a return based on a particular index (or whatever type of asset it tracks). While many ETNs do track indexes, they may also track more obscure assets, such as currencies, commodities, and future contracts. An ETN does not own the underlying securities that it tracks; like a synthetic ETF, it uses derivatives to simulate the return.

> "It should be noted that ETNs do have an underlying foundation. Typically, they are constructed of futures, options, stock swaps, and other instruments to approximate the benchmark index return. However, the underlying foundation is irrelevant to the investor; if the bank's strategy fails to match the index, the bank is on the hook for paying off the rest of the gains to the investor."
>
> *– Carrel, Dion, & Dion, 2011*

Whereas an ETF may experience tracking error from its index, the ETN's return will match the return of its tracked index or asset exactly, less fees. However, while the ETN's structure eliminates tracking error risk, the ETN investor takes on counterparty risk. Just as with a bondholder, the value of the ETN depends on the creditworthiness of the issuer. Some ETNs are collateralized, providing the investor with some security; however, while ETFs are required to be 90% collateralized, there is no such requirement for ETNs, and they are often unsecured.

> "An ETN follows its underlying index like a train on a track. But where you need to look lively is that ETNs are often used to track exotica like future contracts, volatility indices, currencies or even just half a dozen stocks you might fancy a punt on."
>
> *– The Accumulator, 2011*

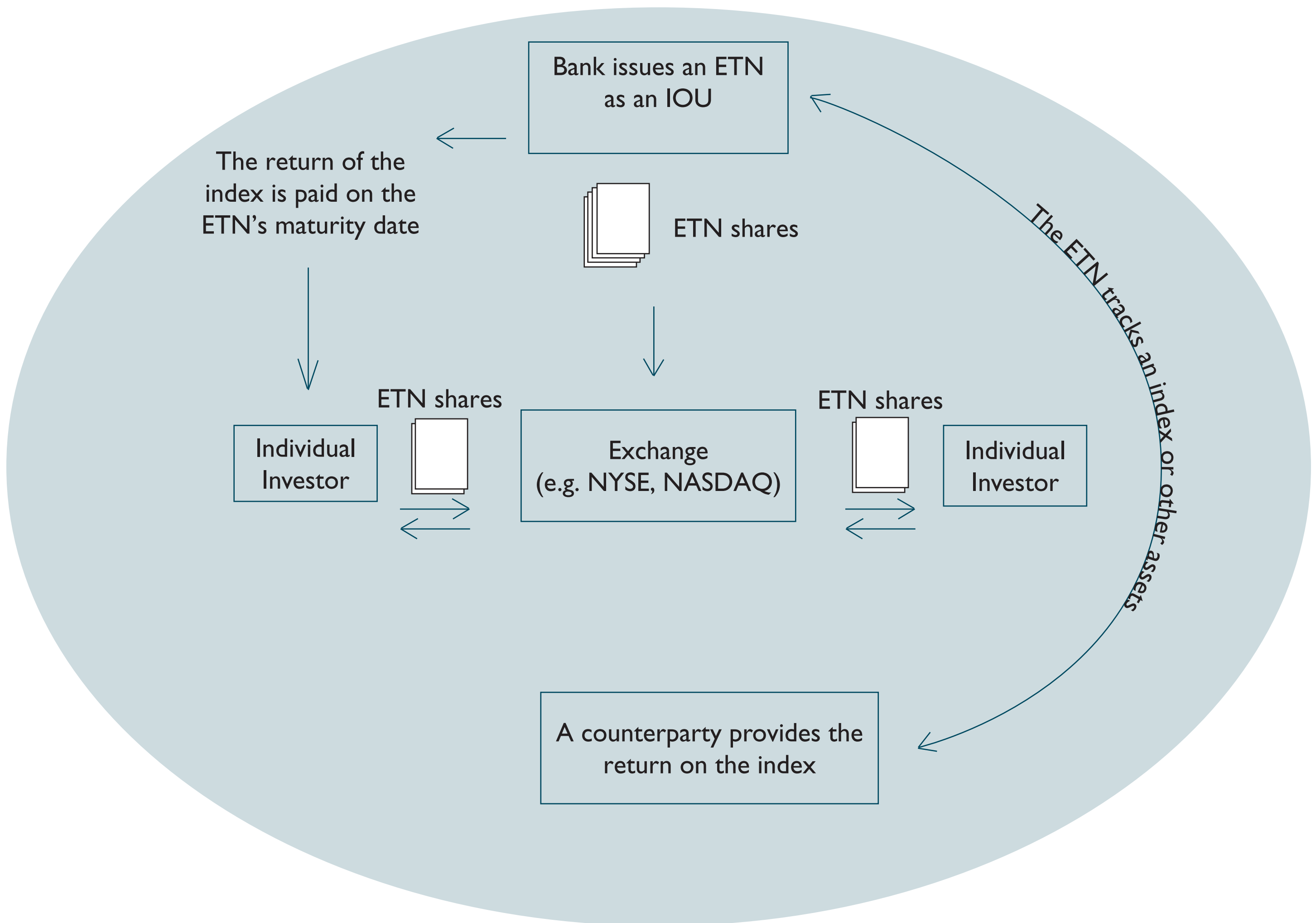
ETNs are known for their tax efficiency. Because they do not pay dividends and may be treated as pre-paid contracts, taxes are not applied until the investor sells the ETN or it reaches maturity, at which point the investor would be liable for taxes on any capital gains. This gives the investor the benefit of control over when they are taxed. Because ETNs are debt securities, ETN distributions are taxable as ordinary income; however, distributions from ETNs are not common.

Unlike mutual funds and ETFs, exchange-traded notes do not have a net asset value (NAV). For purposes of intra-day trading, the value of an ETN is calculated as an indicative value (principal amount per unit x current index / initial index level minus current investor fee). The value of an ETN may change over the life of the security, based in part on the up and down movements of the assets it tracks. The price may also fluctuate depending upon the perception of the credit risk of the issuer; if, for example, the issuer's credit rating is downgraded, the price of the ETN prior to maturity may drop. Because ETNs may be traded on the open market prior to their maturity date, there is always the possiblity of spreads between the bidding price and the offer price. As with ETFs, market makers typically keep the price of ETNs close to the indicative value by trading with the issuer, but "since the ETNs are entirely in the hands of the issuing bank, the isser may decide to halt new issuance of shares... Consequently, the ETN may experience extreme premiums or discounts since there are no opportunities to create or redeem ETNs to keep the share prices close to the indicative net asset value." (*Lydon, 2012*) For example, in February 2012, Credit Suisse ceased issuing new shares of the VelocityShares 2x VIX Short Term ETN (TVIX), prompting share prices to balloon up to a 90% premium to net asset value. But, when Credit Suisse started issuing new shares a month later, the share price dropped, losing 50% of its value. (*Shepherd, 2012*)

> "Unlike mutual funds and most exchange-traded funds, ETNs are not registered under the Investment Company Act of 1940, or the '40 Act, which obliges funds to have a board of directors with fiduciary responsibility and to standardize their disclosures. ETNs, on the other hand are weakly standardized contracts..."
>
> *– Lee, 2012*

ETNs do not charge an expense ratio; rather, their fees are expressed as an annual management charge (AMC). ETNs may also charge additional fees, such as currency hedging fees, depending on what they are tracking.

Figure 1: How ETNs Work



ETN investors would be wise to look carefully at the fees laid out in the ETN prospectus; some ETNs charge path-dependent fees, which are calculated differently from a straightforward expense ratio and can widen the investor's end-result tracking error.

Exchange-traded notes have piggybacked on the popularity of ETFs, and many ETN investors are seeking the same low cost without the tracking error. In the first quarter of 2012, for example, inflows into ETNs increased 71% from 2011 inflows. *(Moon & Toonkel, 2012)* While activity has surged, we highly recommend that potential ETN investors carefully consider an ETNs' cost, transparency, and counterparty risk.

ETN Quickguide	
Benefits	**Risks**
May allow investors access to often illiquid or inaccessible markets	Counterparty risk - the risk that the issuer will fail to live up to its obligations
No tracking error	Market risk - the risk of market price fluctuations away from the indicative value
Intra-day trading	Path-dependent and other unusual investor fees
Can be shorted	
Tax advantages – no capital gains until shares are sold	

Exchange-traded certificates

Exchange-traded certificates are, like ETNs, debt instruments. They are structured similarly to exchange-traded notes, but whereas ETNs originated in the U.S., certificates had their origin in Europe. Certificates can cover virtually any slice of the market, providing access to illiquid or otherwise inaccessible financial instruments. They are usually issued in limited numbers. Like ETNs, certificates have an established maturity date with prepayment terms, and can be traded up to the maturity date (or, at times, a predetermined date several days prior to maturity).

Exchange-traded certificates generally use derivative sources to replicate the index that they track but, as with ETNs, the issuer makes a promise to pay the index's return regardless. And, as with ETNs, the investor is subject to the market risk of the underlying index and to the counterparty risk of the issuer. Additionally, investors who trade certificates prior to the maturity date are subject to the risk of bid and offer spreads and market price fluctuations away from the certificate's indicative value.

Certificates Quickguide	
Benefits	**Risks**
May allow investors access to often illiquid or inaccessible markets	Counterparty risk - the risk that the issuer will fail to live up to its obligations
No tracking error	Market risk - the risk of market price fluctuations away from the indicative value
Intra-day trading	Path-dependent and other unusual investor fees
Can be shorted	
Tax advantages – no capital gains until shares are sold	

Limited partnership (LP) ETFs

Limited partnership (LP) ETFs are mostly focused on commodity futures and currency futures markets. These products are treated differently for tax purposes than either open-end ETFs or ETNs. Capital gains taxes are applied annually, whether or not there is a sale or other realization event. Furthermore, because LP accounts rarely distribute capital gains, the taxes typically come out of the investors' pockets. Investors are also taxed annually on interest on cash holdings held as collateral in these accounts, further decreasing their tax efficiency. For these reasons, many investors who choose to invest in LP ETFs will hold them in non-taxable accounts such as IRAs.

LP ETF Quickguide	
Benefits	**Risks**
Access to commodities futures and currency futures markets	Tracking error risk relative to the index being tracked
Intra-day trading	Possiblity of bid/offer spread in the market
Can be shorted	Annual capital gains taxes
	Possible interest income taxed as ordinary income

Master limited partership (MLP) ETFs and ETNs

Master Limited Partnerships (MLPs) are structured as partnerships instead of corporations, but still trade on a stock exchange, providing the tax advantages of a partnership with the liquidity of an exchange-traded instrument. Most MLPs are focused on the energy sector — commodities and infrastructure — providing diversification opportunities, high dividend yields, and attractive distributions of income, often with qualified dividend tax treatment of distributions. ETFs and ETNs focused on tracking MLPs are one way for investors to gain access to this space. However, because of the ETF and ETN structure, investors are not necessarily gaining the preferred tax treatment that they would if they owned an individual MLP.

In MLP ETNs, investors are treated as owning a debt instrument, not MLP securities. Investors' income is ordinary income rather than qualified dividends or partnership distributions. MLP ETFs also do not offer the tax advantages of MLPs. "Whereas almost all ETFs are classified as 'regulated investment companies' (RICs) under the 1940 Act, an MLP ETF doesn't qualify for the reduced taxation of RICs because RICs are prohibited from holding more than 25% of their portfolios in MLPs. The result is that an MLP ETF is classified as a regular 'C' corporation instead of a RIC and is subject to much higher taxation. An MLP ETF is required to take account of this higher taxation by withholding 37.5% of the daily change in its net asset value." *(Fink, 2010)* Investors should carefully consider the double taxation of this vehicle (corporate and state income tax paid by the MLP ETF, plus capital gains tax paid by the investors) before investing in an MLP ETF.

MLP ETN Quickguide	
Benefits	**Risks**
Access to MLP returns	Counterparty risk - the risk that the issuer will fail to live up to its obligations
No tracking error	Market risk - the risk of market price fluctuations away from the indicative value
Intra-day trading	Path-dependent and other unusual investor fees
Can be shorted	
Tax advantages – no capital gains until shares are sold	

MLP ETF Quickguide	
Benefits	**Risks**
Access to the MLP asset class	Tracking error risk relative to the MLP index being tracked
Intra-day trading	Possiblity of bid/offer spread in the market
Can be shorted	Liquidity issues during times of market volatility
	Potential higher tax liability (corporate and investor level taxation)

Unit investment trusts (UITs)

Whereas most ETFs are structured as open-end funds, since this allows the greatest flexibility, some ETFs are structured as unit investment trusts (UITs).

A unit investment trust is a registered security which hold a fixed portfolio of securities. The portfolio is not managed, but is supervised so that changes can be made in unusual situations. UITs have a fixed maturity date, which is often rolled or extended. Unit investment trusts typically hold income-producing securities but do not reinvest dividends; rather, they pay dividends to shareholders quarterly or annually.

Some of the oldest ETFs, such as the original SPDRs, are set up as unit investment trusts. With this structure, a fixed number of UIT ETF shares is issued. UIT ETFs are required to fully replicate their underlying indexes, and may not use stock lending. Because dividends are paid to shareholders rather than being reinvested, UITs may experience what's called "dividend drag," when the cash exposure from the payout can cause tracking error from the underlying index. UIT ETF investors have some voting rights, voting on special proxies that represent the UIT.

UITs Quickguide	
Benefits	**Risks**
A diversified investment available in small quantities	Tracking error risk relative to the index being tracked (particularly when dividends are issued)
Intra-day trading	Possiblity of bid/offer spread in the market
Can be shorted	Possible interest income taxed as ordinary income
Lower fund-level capital gains	
Voting privileges	

Gold ETPs

Exchange-traded products and gold seem to go hand in hand in the news. Why? Exchange-traded products provide an efficient method for investing in gold and other precious metals or commodities. Investors can access the returns of gold without the storage or liquidity issues of owning actual gold. Investors can find gold ETFs, gold ETNs, and gold certificates, which carry the same features and risks of these products but track the price of gold. There are a variety of ways in which investors can access gold (or other commodities) via exchange-traded products. Some products are designed to access the gold industry, tracking investments in gold mining, for example. Some products track changes in gold prices through derivatives contracts. Like other ETFs and ETNs, gold exchange-traded products can be shorted.

For investors who are interested in investing in gold, an examination of your objectives is helpful to choosing an appropriate method and structure. For instance, if you are seeking the perceived safety of owning actual gold, an exchange-traded product will not serve that purpose. If you want to track the price of gold, investing in a gold-industry ETF is a step removed from that goal. Gold ETFs may be subject to tracking error risk, and gold ETNs and certificates are subject to counterparty risk.

Physical precious metals, like gold and silver, are considered by the IRS to be "collectibles," and when held for more than a year are taxed at a higher rate (maximum 28%) than regular capital gains. Gold ETFs that hold physical metals are subject to this higher tax rate when held for longer than a year, unless the ETF is held in a tax-protected retirement account such as an IRA. Gold ETFs that don't hold physical gold — those that focus on gold mining stocks, for example — are not subject to the collectible tax. Gold ETNs, also, are typically treated as securities and subject to regular capital gains, not collectible rates.

Active ETFs

While the ETF market has been gaining ground over mutual funds in passively-managed investments, active management has traditionally been the purview of mutual funds. Perhaps no longer: one of the newest twists on exchange-traded products is the actively-managed exchange-traded fund. Actively-managed ETFs have yet to grow with the same popularity as index ETFs, but have recently come into vogue with the introduction of the PIMCO Total Return ETF, BOND — an actively-managed PIMCO ETF that mimics the PIMCO Total Return Fund — which has garnered more than $2 billion in assets in less than five months. (*Lydon, 2012*)

> "Actively managed ETFs will be challenged to balance their need for portfolio transparency against their managers' desire to make effective active trading decisions."
>
> *– Kish, 2007*

With passive ETFs, investors gain access to a diversified investment that tracks a segment of the market. An actively-managed ETF provides the investor with a diversified investment that is strategically managed with the goal of outperforming an index. Active ETFs offer the same tax advantages as passive ETFs — namely, reducing fund-level capital gains distributions with in-kind tax management strategies.

The growth of active ETFs will depend on how the industry addresses some structural issues and limitations. ETFs disclose their holdings daily, making it possible for authorized participants to engage in arbitrage and keep the ETF's price close to its net asset value. While this transparency is straightforward for an index ETF, active managers are typically less willing to disclose their investment-picking strategy. After all, what's to keep other parties from duplicating it on their own, or front-running, in which "traders identify shares in which a fund manager is building a postition and start buying the shares, too, which then drives up the price while the manager is still buying the stock." *(Coleman, 2012)* A number of firms have proposed alternatives to daily disclosure of underlying holdings to the SEC, but as yet, non-transparent active ETFs have not been approved. Meanwhile, some firms continue to initiate active ETFs even with transparency of holdings.

Active ETF Quickguide	
Benefits	**Risks**
A diversified investment available in small quantities	Possiblity of bid/offer spread in the market
Active management strategies	Potential arbitrage negatively affecting shareholders
Intra-day trading	Liquidity issues during times of market volatility
Can be shorted	
Lower fund-level turnover increases tax-efficiency	

Exchange-traded product "float"

For all forms of exchange-traded products, size matters. One of the advantages of exchange-traded products is their liquidity — the ability to trade them at any time. But the liquidity of an exchange-traded product depends on a number of factors, one of the most significant being its trading volume, or "float." Those ETPs with a high degree of supply and demand, and thus a high trading volume, will be easier to trade and less likely to show large bid/ask spreads.

> "Lower levels of liquidity lead to greater bid-ask spreads, larger discrepancies between net asset value and the value of the underlying securities and a decreased ability to trade profitably."
>
> *– Artzberger, 2011*

As you can imagine, large ETFs that follow well-known indexes, popular asset classes, and low-risk assets tend to have the highest trading volume. These most popular ETFs can trade millions of shares daily. "ETFs that invest in large-cap stocks, developed economies, broad market indexes and investment-grade bonds will be more liquid than those that invest in their riskier counterparts." *(Artzberger, 2011)* The proliferation of exchange-traded products over the past few years has resulted not only in large numbers of exchange-traded options, but also in ETPs that follow every possible index, asset, and niche investment strategy. Investors should be aware of the risk of decreased liquidity in products with low trading volume. Although there is no specific threshold at which an ETP becomes viable, experts suggest that funds with more than $500 million in assets are usually in solid standing, whereas those with less than $10 million in assets are likely to have little to no investor interest.

Exchange-traded product rating

Given the proliferation of exchange-traded products, it is only natural for the development of rating systems to help investors ferret out the better options. Already, rating systems have been developed by numerous agencies and organizations. Past performance, cost, tracking error, and diversification are fundamental measurements of ETFs, just as they are with index mutual funds. Some rating systems, such as Morningstar and Standard & Poor's, evaluate the underlying holdings of ETFs, a tool not available when evaluating actively-managed funds, but that the transparency of ETFs makes possible. Many ETF rating systems also include tax efficiency and liquidity as significant rating criteria. To assess liquidity, some ETF rating systems include not only the trading volume of the ETF itself, but also the trading volume of its underlying securities, which can also affect liquidity.

> "Investors say there is a growing need for a standardised metric to allow comparisons between ETF products that captures counterparty risk, structure, and replication method."
>
> *– Krouse, 2012*

Because no standard exists for the rating of ETFs, each rating agency evaluates ETFs with different metrics. As tools for investors, ETF ratings systems may be helpful, but are no replacement for thorough due diligence.

Where do exchange-traded products fit?

The value proposition of exchange-traded products lies mostly in that they provide access to markets and strategies that most small investors would otherwise not be able to access. With ETFs, investors can purchase shares of diversified indexes in small quantities. With ETNs and other products, investors can access commodities markets, futures markets, and other specialty asset classes, which previously required significant capital to enter. Exchange-traded products can be shorted, another strategy that was formerly difficult to impossible for small, individual investors. They can theoretically be traded at any time, making them highly liquid, and some exchange-traded investments provide tax advantages for taxable accounts.

From Arnerich Massena's perspective, the excitement generated by these new products has overshadowed an evaluation of their risks and complexities. The benefits to some investors have been generalized to all investors, over those for whom the advantages are questionable. Some of the excitement is justified; for instance, ETPs have been a boon to individual investors seeking a cost-effective way to put together a diversified portfolio or access rarified asset classes and strategies. Some ETPs offer valuable tax advantages in certain cases.

However, we believe that a diversified portfolio strategy that includes specialized, active managers can provide advantages compared to using only passively-managed index or ETF funds. Within such a portfolio, there may be occasions to make use of exchange-traded products for specific purposes. For our clients, those uses include:

- As a surrogate for an index fund in the passively-managed portion of a portfolio, particularly when daily liquidity is important
- As a short-term placeholder during transitional periods
- For portions of a portfolio in which a specialized product, such as commodities, is not offered by one of our active managers
- For sector concentration

Even in these cases, we will most often recommend straightforward physical ETFs and occasionally commodity ETNs. Due diligence on these products is necessary to ensure that they meet standards of transparency, diversification, liquidity, and tax efficiency where applicable.

We continue to monitor the exchange-traded universe as it develops and innovations proliferate. Many of the products are simply variations on a theme, but some structures, such as active ETFs, may be intriguing if the industry successfully addresses some regulatory issues. Arnerich Massena is also exploring alternative indexing strategies, such as fundamental indexing, which have the potential to add value over traditional market capitalization-weighted indexes. We will continue to share education and information about this space as it grows, which, if it continues along its current trajectory, is more than likely.

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