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The ETF Handbook

How to Value and Trade Exchange-Traded Funds

Second Edition

DAVID J. ABNER

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Preface

The number of available exchange-traded funds (ETFs) and the quantity of assets underlying them has been growing exponentially in recent years. For the future growth of the industry it is important for new users of these products to understand how to execute trades in the broad range of ETFs. Educating a new and expanding client base has become a universal endeavor among ETF issuers. Even the largest ETF providers in the industry have products that do not trade the high volumes of the few most popular products. In order for the client base to utilize the broader range of available products, it needs to understand how efficient executions are achieved. Understanding the proper methods of valuing and trading ETFs will enable investors to expand their product usage. It will enable the trading community to provide the services necessary to nurture the future growth of this young industry. *The ETF Handbook* presents both the tools necessary for valuing these funds and the concepts required for trading and executing ETF order flow. This information is important for traders and for the investor base.

ETFs IN THE REAL WORLD

Recently I encountered two examples that clearly demonstrate the need for this information. In the first, I received a call from a client seeking help in executing ETF order flow. The client's initial comments were: "I've been trying to buy two of your ETFs and the intraday volume is very light. I have been bidding for the shares for about a week, and I haven't been getting any executions. Can you help me?" This was not the first time I had heard this request. The adoption of the ETF product by an expanding user base has created a flood of such client calls to product issuers. I have been dealing with similar inquiries for the past 15 years. In the early years, the questions involved helping the new product adopters, primarily institutions and hedge funds, to achieve desired liquidity.

Lately, I have found myself in the role of champion of the smaller investor, helping advisors and our broader client base to achieve their desired executions in a more complete suite of ETFs. First, I attempt to understand what the clients have been doing so far and what their investment goals are. In this case, the client was an advisor trying to buy

50,000 shares each of two of our ETFs that each trade approximately 15,000 shares daily. The typical market that would be quoted on the ETFs is roughly 10 cents wide with approximately 500 shares on either side of the market. Without a solid understanding of how the ETF market works, one might think this would be a multiday trading adventure or, worse, a hopeless situation. It is far from that, however, and I was able to help the client achieve a very satisfactory execution. I learned that the client was placing very small limit orders on the bid side of the market. Then, every time the market started moving down, he would lower his order price. By doing this, he never let liquidity providers see any real size to buy in the ETFs; and he never let his order get near the value of the ETF, where opposing liquidity would be provided. This is the same as setting out in a boat to go fishing but never actually dropping a line in the water with a hook and some bait. You may be out fishing, but you will not catch any fish!

The client and I then had a conversation about his investment goals. I explained to him how the valuation of an ETF is determined. I explained that, in a low-volume ETF, most of the trading will take place against a liquidity provider. It is important to let the provider know you are willing to trade at a price close to the ETF value for the provider to be willing to offer the desired liquidity. With that understanding in mind, we calculated that the fair value for each of the ETFs was approximately three cents inside the offer side of the market at the time. So we did something that seemed very radical to the client: We decided to show our whole hand electronically. Instead of bidding for just 500 shares at a time, the client put a bid in each ETF into the system for all 50,000 shares at the price he was willing to pay that was in line with the valuation of the ETF.

The ETF marketplace has grown so broad that you sometimes need to trigger the alerts on trading systems in order to trade. This is analogous to a bell being attached to the door of a store so the proprietor can hear clients coming in and out. When the large bid showed up in ETFs that did not trade very much daily volume, the liquidity providers were alerted via their systems. Sometimes, if I see a large bid or offer show up in one of my products, I will call the liquidity providers myself to make sure they are aware of this trading opportunity. We did not adjust our price based on small market movements, interpreting them as noise within our strategy. This client's intention was to place a longer-term trade with a significant upside goal. He was indifferent as to whether he paid $30.10 or $30.07, but he had been adjusting his pricing as the market moved around. This kept him constantly under the fair value level that would enable his order to be satisfied. The upshot of this situation was that both of his large orders were filled almost immediately.

His executions make sense for several reasons. For one, he was bidding a level in the ETF that was considered to be fair value by the liquidity-providing community. He also showed enough size to attract some attention. The client was very satisfied with the executions. He had achieved the exposure he was looking for in the ETFs at a price that he was comfortable paying. He had not initially understood where the liquidity came from but was now comfortable with a method that he could use to get in and out of his positions in an acceptable manner. There are many intricate details to learn to achieve executions in your ETF orders. What is even more important to understand, however, are the concepts of what is happening in the marketplace. You will find all of those details in this *ETF Handbook*.

The second example shows the client achieving exposure via an alternative solution. This time, I received a call from a very large institution indicating that it liked the methodology behind our ETFs and wanted to make some purchases. It had heard about the potential liquidity available in ETFs and wanted to learn more about the ways of executing orders to achieve institutional goals. The caller was concerned because the ETFs they were interested in were trading with very low average daily volume. Since this was a large institution, it wanted to buy several hundred thousand shares of several ETFs that tended to trade fewer than 50,000 shares per day. Its investment horizon was longer term, and it was indifferent as to whether it traded today, the following day, or even over a few days if required.

This type of order flow utilizes one of the most important facets of the ETF structure: the creation and redemption mechanism. This client had a trading relationship with a large broker-dealer who happened to be an authorized participant (AP). Being an AP enables the broker-dealer to interact directly with the ETF issuer in the creation of new ETF shares. To achieve the desired execution, the client gave the AP the order to buy the ETFs at a price based on the net asset value (NAV). The AP went into the markets, purchased the shares underlying the ETF, and delivered them to the issuer. In turn, the issuer delivered new ETF shares to the AP, who then delivered them to the client. The client was able to achieve an execution in line with the net asset value of the funds without having an impact on the ETF price in the marketplace. In this scenario, the average daily volume of the ETF was irrelevant because the client never actually traded the shares in the secondary market. Executions of very large size can be accommodated in the ETF structure utilizing this method; this ability has helped to facilitate their growth. Executions of smaller size, however, can also be executed this way by accessing the liquidity aggregators and understanding how that business works. The details of creations and redemptions and utilizing liquidity providers are found throughout this handbook because they are critical functions of the entire ETF structure.

WHAT YOU WILL FIND IN THIS BOOK

This book has three main parts that will appeal to different sections of the ETF universe. Part One introduces the various structures of exchange-traded products, the methodologies underlying those products, and the ways of bringing them to the marketplace. Part One is written from the perspective of my role within an ETF issuer. I have been working at an issuer for almost ten years at the time of the writing of this book. I had been trading ETFs for more than ten years prior to deciding to move to the other side of the fence. A brief history of my interaction with the ETF product may be helpful to you.

Throughout the mid-to-late 1990s, I was running the closed-end fund business at Bear Stearns in midtown Manhattan. I was facilitating customer order flow and running a proprietary trading strategy pursuing discount arbitrage opportunities. I was also a frequent user of the Country Webs products available at the time. Those products later became the basis for the iShares single-country ETF product set. One day a salesman on the desk stood up and said to me, "I've got an order in a strange fund I've never heard of, can you make a market?" Since that was my role at the time, I agreed. I was not well versed in the product but made a market in the QQQs (Nasdaq 100 Index Tracker) to satisfy the client's request. Almost immediately I lost a very large amount of money in my trading portfolio. In researching what went wrong, I learned much more about the product and became enthusiastic about this newer investment vehicle. It was then that I began to realize the potential of this unique product for the trading community and started to build an ETF business at Bear Stearns. I never expected the volume and asset explosion we have experienced in the last few years.

At that time I had my entire career leveraged to the markets and to my trading performance. I had always been a basket or fund trader and was never very comfortable buying single-company stocks. To manage my personal portfolio, I invested in mutual funds, mostly plain vanilla ones. I was diligently dollar cost averaging a small amount every month and watching it grow. When I got married in 2000 and my wife and I proceeded to buy a house, I sold all of my mutual fund positions to provide a significant down payment on the property. Two years later, when I had more money to invest and the ETF trading business began to soar, I decided I would never buy a mutual fund again but would utilize only ETFs for investing. I realized that this product makes great sense for the investor. I wanted to be involved in helping bring ETFs to market and helping investors utilize them for their investing goals. That is what planted the seed for my move to a seat at a young and innovative ETF issuer several years later.

Part One of this book presents many of the concepts related to bringing ETFs to market and how they fit into the investing landscape. I have avoided presenting more than a brief history of the ETF or reviewing every detail of the product mechanics, since those topics are well covered by other books. I focus on topics and concepts that have not been previously discussed in detail and may not have been fully understood unless the reader worked for a product issuer or had been a liquidity provider in the products. I bring the insider's perspective to the investor with the hope of creating a broader understanding for all interested parties.

We are living through a revolution in the way people invest. Never before have so many different investment products been available to investors at the click of a mouse via an electronic brokerage account. A leveling of the investing landscape is taking place that is bringing the tools of the institutional universe to the masses. As with any material shift in mindset or new product adoption, there are learning curves involved. The techniques for executing order flow in this investment vehicle are still not widely known and understood. Yet they are crucial because a main feature of the product is its availability on an exchange like an ordinary stock.

Part Two goes into an unappreciated core of the ETF ecosystem: trading. It is amazing how little some investors, large and small, know about the trading mechanism underlying the product that might make up their entire portfolio. I go deeper than ever before into the trading mechanism of the products, their underlying liquidity, and providing new ways for investors to rank products for usage within their portfolios by a detailed presentation of implied liquidity and my EBILS ranking system for ETFs. I also introduce you to all the different types of players in the ETF ecosystem.

In Part Three I discuss the mechanics of calculating the fair value for the products. I explain why an international ETF might be trading away from its intraday indicative value (IIV) during the trading day. Part Three also details the types of products available in the commodities category and the varying structures of the currency ETFs. Part Three presents a framework for understanding how to value those products to build the foundation for effectively executing ETF order flow. I often speak with people who are interested in getting into the ETF business; this will help them understand how the valuation process works. When an exchange-traded product moves to a premium, for instance, if you understand its underlying mechanism, you will know why this may have occurred and what may happen in the future.

Incredible growth and change is occurring in the universe of exchange-traded products every day. At the end of the book, I provide appendices that will lead you to some information about the industry. There is a guide to using Bloomberg for ETFs. I provide a list of issuers and their web page addresses. There are some details on global ETF markets in Japan and Europe to touch upon what is happening in the industry beyond the borders of the United States.

> **TRADING TIP**
>
> Throughout the book you will see highlighted sections to bring attention to specific points regarding trading ETFs in the market.

AS YOU BEGIN

This book is not the first book on ETFs. I bring to the reader, however, an insider's view of what is behind the curtain. The book is unique both in its content and in its perspective. It will help as a guide to the proper utilization of ETFs. The investing public deserves to know and understand the details of how the products work. The trading community needs to build an infrastructure capable of handling the avalanche of ETF order flow to come. It is my hope that readers will take advantage of the features of ETFs and use them for many years of profitable investing and trading.

DISCLAIMER

The concepts and ideas in this book are my own. I am in no way representing WisdomTree Asset Management with anything represented in this book. There are risks involved with investing, including possible loss of principal. In addition to the normal risks of investing, foreign investing involves currency, political, and economic risk. Funds focusing on a single country or sector and/or funds that emphasize investments in smaller companies may experience greater price volatility. Investors should consider the investment objectives, risks, charges, and expenses of the fund(s) carefully before investing. Please seek the counsel of your accountant for any tax-related matters, as no tax guidance is presented in this book.

Acknowledgments

I had no idea of the difficulty that lay ahead of me when I agreed to update *The ETF Handbook* for a second edition. In a way, writing books is similar to having babies. Having watched my wife go through childbirth three times, I am amazed that anyone would willingly choose to do it even once, let alone multiple times. But when you look at the child you have created, those difficult hours are almost completely erased from your brain. I am not implying that writing books is as difficult as having babies, but when you see that book in print, the agony of the work is forgotten! So when I decided to rewrite for the second edition, I could scarcely remember the hard work of the first. There was still demand for the information provided, and I felt duty-bound to provide the necessary updates.

I learned three things from this updating process:

1. Much of the core ETF mechanics information provided in the first edition is still relevant today and will be throughout the lifespan of the product set.
2. The ETF industry has more than doubled in five years and thus there is a tremendous influx of new industry participants for whom this information is very important.
3. The people who were happy to contribute to the first edition generally made themselves scarce if they noticed me looking for assistance with the current work!

Only two people helped me with both editions of the handbook. Anita Rausch has been a friend of mine for longer than I care to recall. She is also a tremendous asset to the WisdomTree team as she guides the efforts of our Capital Markets group. She has read every word of both editions, which are immeasurably better because of her contributions. Our daily conversations about the industry have greatly influenced my thinking. And my mother-in-law, Lynne Cohen, has read every word of both ETF handbooks and even the *Visual Guide to ETFs* and rearranged my words into actual sentences that make sense. Anyone who makes it through this text should thank her personally for enhancing their reading experience. Alissa Kleinman assisted by bringing those changes into the digital world.

In the beginning of this endeavor I took on the assistance of an intern. Benjamin Hershkowitz, a student at Yeshiva University, was the driving force

behind much of the organization of the information in Part One. In the short time we had together, he displayed the passion that a "millennial" can have for the ETF industry.

Since my books focus on the mechanics and trading of ETFs, it makes sense that the Capital Markets people in my office are always offering their opinions. Zach Hascoe, Michael Barrer, and Paige Corbin were ready, willing, and able to help. Not only do they bring a wealth of knowledge, they also exhibit positive energy unrivalled among competitors. I was able to tap the next generation of Fixed Income ETF information in Ambar Bajaj. He reviewed and improved the fixed income chapter. Rebecca Sheehan is also deep in the thick of the ETF industry. She helped with a variety of components of the book and I can't thank her enough for that assistance. Ryan Louvar applied his structural mastery to the section explaining those facets of the industry. That chapter is much tighter thanks to his work. The appendix on Europe was assembled by Rafi Aviav and Nathan Jiang. The appendix on Japan was assembled by Masafumi Watanabe.

The team at WisdomTree is amazing. Hungry for ETF information that can be distributed to investors, they push every day to explain the mechanics better, to help investors gain a better understanding, and to innovate beyond compare in the financial products arena. Every day I am honored to be working alongside this team.

I am always amazed at how many friendships I have developed in the industry. One friend in particular, Julie Abbett, is passionate about this industry and brought her vast experience to bear on reviewing pieces of the book. I can't thank her enough for the help she provided.

I didn't imagine when I agreed to write the second edition how dramatically my life would change during the process. I became deeply involved with our firm's global expansion that caused me to travel more than I expected. My wife and children are so supportive it's sometimes unbelievable that they are not furious with me! But they're not. They want me to finish up and spend more time with them, but they also seem genuinely proud and consider themselves fellow soldiers in the ETF revolution. Lin-Manuel Miranda summed it up perfectly for them in the words of *Hamilton*, "This is not a moment, it's the movement"! And they are *not* throwing away their shot!

Introduction

Exchange-traded funds (ETFs) are the most interesting products in the financial industry today. In the same way that Lego building blocks are used by both children and adults to make creations of all sizes, ETFs are the portfolio building blocks of the modern age, usable by investors of all sizes and for a variety of portfolio demands. Small investors are enthralled with the lower fees, ease of use, and exchange listing standardization of ETFs, while large institutions can benefit from innovative products and advanced portfolio management tools, coupled with lower fees and greater transparency.

The most frequently cited chart in the ETF industry is shown in Exhibit I.1, demonstrating ETF asset growth over time.

This is one important way to look at ETFs. Assets under management show the amount of dollars committed by investors to the strategies, enabling industry observers to understand the top-line revenues of the industry participants. Another way to look at ETFs is via industry trading volumes over time. You can see the evolution of trading volumes in ETFs in Exhibit I.2.

From the percentage of volume trading in the markets on a daily basis, you can observe how important ETF products have become to the entire ecosystem of market participants and the markets in general.

Over the years, I have answered many questions about ETFs. I have spoken at conferences, I have had thousands of individual meetings with investors of all sizes, and I have written two books explaining these products. You are holding the second edition of the first book I wrote about this industry in 2010. After writing my first book, I realized that there are two main types of investors interested in ETFs: One type of investor wants to ask in-depth questions, read articles and books, and have meetings. The other type of investor would rather read something brief that explains just the salient points. In this second edition, I will help both types of investors. I hope this makes *The ETF Handbook, Second Edition* more accessible for all types of readers and investors, no matter how deep they want to dive into the subject.

To begin, I will first lay out some important and frequently asked questions about the industry, providing answers to each. The following questions and answers will give you a strong foundation for understanding the industry and will be useful as a reference tool as you navigate your way through using the products.

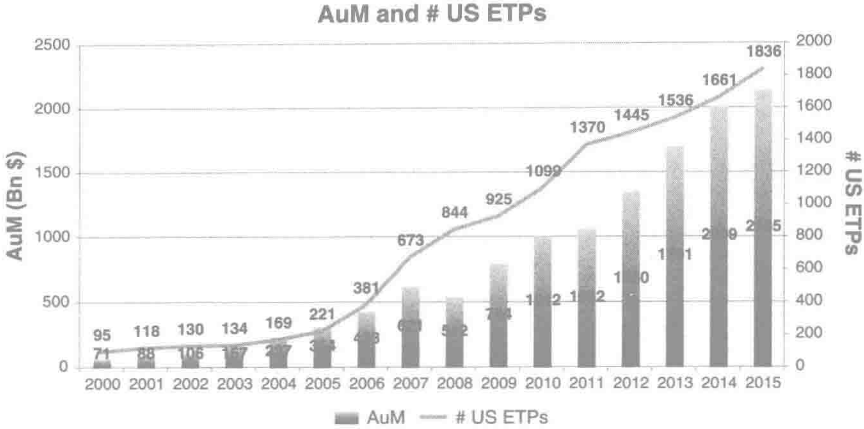

EXHIBIT I.1 Asset Growth Chart
Source: BlackRock, Bloomberg

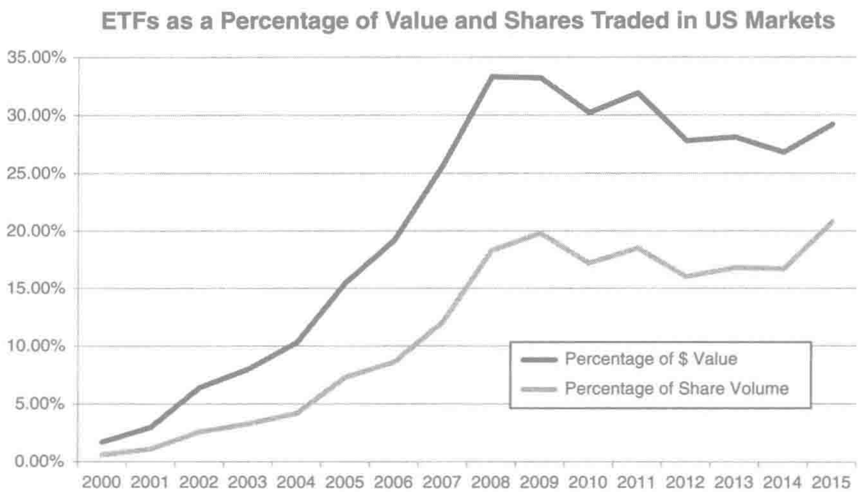

EXHIBIT I.2 Trading Volume Growth
Source: Credit Suisse Trading Strategy Group

QUESTIONS ASKED ABOUT ETFs

1. **What are the main differences between an ETF and a mutual fund?**
An ETF can be considered to be part of the mutual fund product set. Both products are pooled investment trusts launched under the Investment Company Act of 1940. The markets have changed dramatically since the 1940s and there are pieces of the 1940 Act that are not as imperative in a more modern age.

The main features of an ETF that are different from a mutual fund are:

i. Exchange listing—This leads to standardized product use across the investor spectrum, the ability to trade throughout the day, and enhanced liquidity as compared to traditional mutual funds.
ii. Daily transparency of holdings—This enables all investors to understand the fund holdings every day. This facilitates the arbitrage functionality ensuring that the ETF and the underlying assets can trade in a manner that is independent yet related.
iii. Tax advantages—Many ETFs pay out much lower capital gains distributions than a corresponding mutual fund. This is due to the nature of the creation and redemption mechanism enabling the ETF to transfer assets into and out of the fund without generating tax consequences across all investors.
iv. Lower fees—This is a feature of ETFs that is often debated because we are in a period of dramatic fee compression across all funds. What is not debatable is that removing the execution process from the fund management process leads to lower expenses to investors being passed through the mechanism. Investors are not disadvantaged by the actions of other investors in the same ETF. This is critical because whether you are the only holder of an ETF, or one of millions, you are not impacted by the actions of other investors entering and exiting the funds. This is very different from a mutual fund that passes those fees of executing asset changes across the investor base.

Two key differences are that an ETF has to be listed on an exchange and an ETF takes in assets and disburses assets through a process known as creation and redemption. Trading on an exchange enables the ETF to act independently from the actual basket of underlying assets while still being tethered to that basket by the creation and redemption mechanism. This tethering structure is often referred to as arbitrage whereby you can exchange the underlying basket of assets for the ETF shares and vice versa. This keeps the price of the ETF shares to be trading always in relation to the assets for which they can be exchanged. In a sense, the ETF shares act as a transference mechanism delivering both the performance and the liquidity of the underlying assets to the holder of the ETF in a convenient wrapper. If the underlying assets were the only form of liquidity for an ETF, then the liquidity would be the same as an ordinary mutual fund. Instead, exchange listing adds another entire component to the liquidity infrastructure. Because an ETF is listed on an exchange and trades throughout the trading day, it enables a wide variety of market participants to apply the principles of modern markets to the products. In order to be listed on the exchange the ETF is very transparent, making its holdings available on a daily basis, and in the U.S. markets ETFs have only a single share class, causing all investors to come together in the same product on the exchange. This is a big difference from many mutual funds that have multiple share classes for different investors typically at different prices depending on their status. The confluence of a variety of different investors all trading the same product on exchange for different reasons creates an additional layer of liquidity for ETFs that goes beyond the underlying assets. This is liquidity from the marketplace that develops in the form of participants using the ETFs for a wide variety of trading strategies, and being able to develop highly sophisticated mechanisms for trading the ETFs against other products. This has led to a marketplace where ETF liquidity is greater than the liquidity that might become available in a similar mutual fund. This is explained in more depth in the next question.

2. **How is the liquidity of an ETF different from the liquidity of a mutual fund?**
At the base level, an ETF and a mutual fund (MF) present the same amount of minimum liquidity. Investors in a MF can send almost any size check to the manager, and they will receive shares in the fund. In this case the money is going directly to the manager, and the managers are interacting with the brokerage community to purchase the necessary assets representative of the increase in assets of the MF. In the case of an ETF, instead of delivering a check to the manager, you are typically purchasing your shares directly through a broker in the secondary market. It is their job to purchase the underlying assets and deliver those to the ETF manager, in the form of a "creation unit." If you are an institutional-sized investor, your broker can utilize the creation mechanism on your behalf to help you enter your ETF position at net asset value (NAV) plus expenses. While the terminology may be different, the concepts are similar: New money flowing into both structures gets allocated to the underlying assets, and new shares are issued. ETF investors use a measure called "implied liquidity" to assess how much money can be invested into a given ETF on a daily basis. This measure is used to try to prevent market impact from investments. A similar measure is used by

the trading teams at mutual funds to determine how to trade when they are tasked with purchasing the assets for new investments; that measure is called transaction cost analysis (TCA). So, the first step in thinking about liquidity in ETFs versus mutual funds is that if they are based on the same underlying assets, their base liquidity will be the same.

The ETF, however, has an advantage in liquidity terms because of the unitary fee structure, single share class, and daily transparency of its basket. Because an ETF trades on an exchange and its holdings are published daily, a wider variety of potential users can be utilizing the fund on any given day. These additional users can be creating excess liquidity in the ETF that works to the benefit of all other investors in the ETF. The most pure example of this is the SPDR S&P 500 ETF Trust (SPY). If you look at the implied liquidity of the underlying basket, it displays the potential to trade 35 million shares per day in ETF terms, while being no more than 25 percent of the average daily volume (ADV) in any of the underlying stocks. This is equivalent to a potential notional of approximately 7.35 billion USD daily. The average daily volume of that fund is approximately 105 million shares per day, or a notional of 22 billion daily. This excess liquidity that you see in the ETF develops because of the variety of other trading strategies for which people use the ETF: things like index arbitrage against the futures, options trades, high-frequency trading strategies, and others. So the ETF presents an additional amount of liquidity that a mutual fund never can because of the wider variety of market participants all interacting in the same structure, and at the same pricing, on the exchange. We can see this additional liquidity in many ETFs, especially those in international markets. Many ETFs actually trade more in the U.S. markets than would be expected if you were only trading the underlying basket. This is the case for those ETFs tracking countries like India and Japan. Interestingly, several of the Europe-focused ETFs could trade many more potential shares on a daily basis if you examine their implied liquidity as compared to their average daily volume.

3. **Can institutional investors seed ETFs?**
   Any investor can seed an ETF. To "seed" an ETF is really just to make the first investment into the fund. That typically takes place in the size of one creation unit (approximately 2.5 million USD) or greater. The process by which an ETF receives assets into the portfolio is known as the "creation process." This is when a counterparty, known as an authorized participant (AP), delivers the underlying basket of assets to the ETF issuer in the proper weights, after which new shares of the ETF are issued to begin trading on the exchange. In the United States, seeders do not typically receive any benefit versus other investors in the ETF.

The main benefit is that when you deliver the first tranche of assets to the fund, you receive the exact initial NAV of the fund. While this is the same for all creations, it is very clear when it is being done for the first time. Often when institutions work with ETF issuers to design products around particular investment specifications, those institutions are the initial investors (seeders) of the fund. This process is great for the growth of the ETF because it immediately shows other investors that the underlying investment theme has been designed around a current target. While it is not necessary for the institutional investor to have other investors in the ETF, that growth provides a sense that they are not alone in their investment thesis. Another benefit of working with ETF issuers to develop and seed ETFs is the potential marketing and public relations opportunities around the ETF launch.

4. **How do I know if an ETF is going to close?**
   Every year many ETFs close for a variety of reasons. Typically, the ETFs close because of a lack of progress in gaining assets, coupled with a change in strategy from the ETF issuer. Many smaller ETF issuers have limited resources for running the business; therefore, the expenses of keeping ETFs without assets in the markets become too much to bear. The larger ETF issuers generally keep ETFs with smaller amounts of assets in the markets for longer time periods, as long as they still believe the investment mandate underlying the fund will become valuable to investors at some point in the future. ETFs are usually closed because of business restructurings around the corporate entity, or a desire to take the product suite in different directions. I have never seen an ETF close that had significant assets (over $50 Million USD) or that had an anchor investor for whom the ETF position was an integral part of their portfolio. In the scenario where there is a large institutional anchor investor in an ETF, it would most likely be a part of the distribution teams' responsibilities to communicate with that investor when appropriate if the ETF they held was going to undergo changes or delisting.
5. **What happens if my ETF closes?**
   The closing processes of an ETF and a mutual fund are extremely similar. If an ETF is going to close, it will announce to all shareholders in advance: typically, within a window of a stated number of days. Investors then have the ability to sell their shares, utilizing either the secondary market or the primary market (if they are trading in large blocks). If you choose to hold your ETF position until it stops trading on the exchange, at that point the ETF's underlying assets will be sold in the market. The value of those assets will be distributed to all remaining investors. In the case of investors remaining in the fund upon its closure, the costs of selling the remaining fund assets will be