THE ETF HANDBOOK

How to Value and Trade Exchange Traded Funds

Companion Web site Included

DAVID J. ABNER

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For Sophie, Sam, and Lucy Abner, my future ETF traders

Preface

The number of available exchange-traded funds (ETFs) and the quantity of assets underlying them has been growing exponentially in recent years. An important element for the future growth of the industry is the need 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. Yet in order for the client base to utilize the broader range of available products, it needs to understand how to achieve an efficient execution. Understanding the proper methods of valuing and trading ETFs will enable investors to expand their product usage and will enable the trading community to provide the services necessary to nurture the future growth of this young industry. *The ETF Handbook* presents the tools necessary for valuing these funds and the concepts required for trading and executing ETF order flow. This information will be important for both traders and the investor base to gain a true understanding of how these products function in the markets.

ETFs IN THE REAL WORLD

Just 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 adoption of the ETF product by an expanding user base has created a flood of such client calls to product issuers. 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. I have been dealing with similar inquiries for the past 10 years in the ETF industry. In the early years, the questions involved helping the new product adopters, primarily institutions and hedge funds, in achieving desired liquidity.

Over the last several years, I have found myself in the role of champion of the smaller investor, helping advisors and our broader client base achieve their desired executions in a broad suite of ETFs. The first thing I do in this situation is 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 starting 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 and that it is important to let the provider know you are out there and 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 3 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 to the world electronically. Instead of bidding for just 500 shares at a time, the client put a bid in each ETF in 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 do something 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. First, he was bidding a level in the ETF that was considered to be fair value by the liquidity-providing community, and he 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 surrounding the circumstances of achieving executions in your ETF orders. What is even more important to understand, however, are the concepts of what is happening in the marketplace. All of those details are available in this *ETF Handbook*.

The second example shows the client achieving exposure via an alternate solution. 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 did have some concerns because the ETFs the organization were interested in traded 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 on 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. However, executions of smaller size can also be executed using this methodology 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 in various ways. Part One introduces the various different structures of exchange-traded products, the myriad 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 two years at the time of the writing of this book. I had been trading ETFs for more than 10 years prior to deciding to move to the other side of the fence. A brief history of my interaction with the ETF product is helpful before moving forward with the description of the book.

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 QQQ's (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 and how I lost the money, I learned much more about the product and became enthusiastic about this newer and unique investment vehicle. It was then that I began to realize the potential of this product for the trading community and started to build an ETF business at Bear Stearns. Even then I did not expect 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 had really taken off, I realized I would never buy a mutual fund again but would utilize only ETFs for investing. That was when I realized that this product makes great sense for the average investor. I wanted to be involved in helping bring these products 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 a history of the ETF or presenting every detail of the product mechanics since those topics are well covered by other books. Several of those books are referenced throughout this text. 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 themselves. I bring the insider's perspective to the investor with the hopes of creating a broader understanding for all interested parties.

Part Two goes through the mechanics of calculating the fair value for the products. I will discuss why an international ETF might be trading away from its intraday indicative value (IIV) during the trading day. Part Two also details the types of products available in the commodities category and the varying structures of the currency ETFs. The main styles of ETFs are the focus of Part Two, which presents a framework for understanding how to value those products that will build the foundation for effectively executing ETF order flow. The broader ETF trading community will also find value in this part. I often speak with people who are interested in getting into the ETF business; they need an understanding of 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.

We are living through a revolution in the way people invest as demonstrated by the growth of the exchange-traded products. Never before have so many different investment products been available to investors at the click of a mouse via an electronic brokerage account. There is a leveling of the investing landscape taking place that is bringing the tools of the institutional universe to the masses. As with any material shift in mind-set 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. In Part Three I review many of the trading techniques being used today. I also look at some concepts for trading ETFs that might develop in the future as the industry matures. Additionally I take a look at the current market participants and the roles they play in the industry. It is important to know who is doing what so you can interact properly with all the market participants. If you are managing money for clients utilizing ETFs, I would recommend reading Part Three first, and commiting it to memory, before moving on to the rest of this book.

Incredible growth and change is occurring in the universe of exchange-traded products every day. In the final part of the book, I provide some appendices that will lead you to the most current information available. The industry is well covered by a very knowledgeable media force. Journalists utilizing many different media chronicle the daily happenings in the ETF world. I provide a list of Web sites with information on the products. I also provide a list of issuers and their Web page addresses. In addition, I provide a list of products in registration that will give you a taste of what the future could bring to bear and also exposes the holes that could someday be filled with burgeoning products. In an effort to tie this book to the age of technology in which we live, I have provided several of the spreadsheets that I use for demonstrating the models, specifically calculating NAV and IIV and evaluating currency funds. In addition, Wiley has organized a link to my webinar, which is focused exclusively on valuing and trading ETFs. The webinar gives a brief summary of the concepts detailed throughout this book.

TRADING TIP

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

WHAT YOU WILL FIND ON THE COMPANION WEB SITE

The companion Web site for this book (located at www.wiley.com/go/abner—the password is abneretf) contains five spreadsheets:

1. The Creation Unit Seed Example
2. The Domestic ETF NAV_IIV Model
3. The International ETF NAV_IIV Model
4. ETF Currency Product
5. Grantor Trust Currency Product

EXCEL EXAMPLE

The Excel spreadsheets on the companion Web site include the actual formulas used for specific calculations. Throughout the book you will see this sidebar indicating that there is an accompanying spreadsheet on the Web site (www.wiley.com/go/abner).

The Web site also contains my webinar, The ETF Handbook Webinar: How to value and trade Exchange-Traded Funds. Throughout the text you will also see an icon that indicates the concepts in the text are presented in the webinar. There I verbally go over the point and describe it with an accompanying slide.

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 products work. The trading community will need 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 enjoy 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 there is no tax guidance presented in this book.

Acknowledgments

Over the last decade, I have made and lost more money in exchange-traded funds than many people. I am grateful for the many nights I have been allowed to remain on the trading desk long past the market close, puzzling over the results of my most recent trades. While my friends were out enjoying life and my family ate dinner without me, I sought the counsel of the nighttime cleaning crew. The mice, feasting on lunch crumbs and wires in the metal floors beneath my feet, joined me in my late hours on the desk and attempted to answer my queries. I thank my bosses for their diligence in not giving me enough risk capital to trap myself and the firm in one of my market-induced trading endeavors. And I especially thank my clients for continuing to believe in me and trust my intentions. My search for the answers has led to this ETF handbook. I hope it enables you time outside the office to view many sunsets with your family and friends.

For certain parts of the book, I was able to tap people with particular specialties. Ben Slavin was extremely instrumental in ensuring I had correctly presented the structural issues. His universal knowledge of product structure and development was invaluable. Rick Harper was the guiding hand in the section regarding his specialties of fixed income and currencies as well as a frequent late-night office companion. Although this book is a completely separate and distinct endeavor from my WisdomTree employment, daily interaction with the most knowledgeable and aggressive ETF team in the world was extremely helpful in bringing this book to fruition. I have never met a more dedicated and hardworking group than the team at WisdomTree.

Three people read every word of the unedited text: Doug Loveland, Anita Rausch, and Lynne Cohen. Doug, during his several hours a day on the train, was able to read, cross out, and rewrite large swaths of the text. Anita, an incredibly talented and experienced ETF trader, helped to clarify many of the concepts and edit the original text. Once they were done, Lynne helped to turn the text into words that would actually make sense to readers.

Various other bits and pieces of the book were reviewed and edited by Rick Rosenthal, James Chen, Evan Cohen, Andy McOrmond, and Imseok Yang. These individuals have been involved with me, or the ETF world, for many years, and their collective pool of knowledge is unmatched. Beyond our various business relationships, we are all truly friends.

I have recently learned that a Wiley book does not get printed without the close guidance of editors and others. Pamela van Giessen had the foresight to see that this book would bring something to the market that is very different from every other ETF book Wiley has published; I cannot thank her enough. Emilie Herman suffered through my many changes, corrections, and writing inexperience to help make this book worthy of the great Wiley name. None of this would have been possible without James Altucher introducing me to Pamela in the first place.

Most important, nothing in my life happens without the love and support of my beautiful wife, Denise. I check to make sure she is sleeping next to me every day when I awake, fearful that my wife and family are all just an incredibly detailed and wonderful dream. Luckily, as I write this, my children are still young enough to go to bed early and start every day as if the world is new, so I hope they have not missed me too much.

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