



ETF.com BRIEFING BOOK



Key Issues & Supporting Data

10/18/2011

ETFs IN CONTEXT

ETFs ARE AT A CROSSROADS

While experiencing tremendous growth and providing enormous benefits for investors, exchange-traded funds have come under scrutiny—some warranted, some not—for a host of alleged sins: causing the May 2010 flash crash, fomenting market volatility, driving correlations up among asset classes, endangering the global financial system.

IndexUniverse has been following the ETF industry for over a decade, and its leadership has been involved with ETFs since the launch of the very first products in the early 1990s. With a full-time staff of 50, some 15 dedicated full time to ETF analysis, we're firm believers in rational, facts-based analysis.

The purpose of this ETF Briefing Book is to provide independent third-party data and commentary on the current state of ETFs, and answer some of the most common questions in the ETF debate, particularly among regulators. Specifically, we hope this document will provide both facts and context to frame the following questions:

- How do ETFs really work?
- What makes them unique?
- Are ETFs driving the market?
- Do ETFs pose special risks to investors—and the market?
- Are leveraged and inverse ETFs responsible for market volatility?
- Why is such a large percentage of the ETF float sold short?
- Do ETFs “fail to settle?”
- Do different kinds of ETFs pose different risks?
- What's the appropriate regulatory environment for ETFs?

Behind this brief document are years of research, gigabytes of data and a dedicated team of analysts who welcome the opportunity to answer your questions. Please don't hesitate to contact us for additional information.

ABOUT US

IndexUniverse is the world's leading independent authority on exchange-traded funds, index funds and indexes. Our suite of publications, including the Journal of Indexes, ETFR and IndexUniverse.com, are the books of record for their industries. Our conferences, including Inside ETFs, Inside Commodities and Inside ETFs Europe, are the largest in their fields. In 2012, we will be launching a new ETF Analytics service that aims to help investors and advisors evaluate, compare and contrast ETFs. With a razor-sharp focus on the financial advisor and institutional investor communities, IndexUniverse has built an unmatched reputation for analytical expertise and rigorous independence in the ETF and index market over the past 10 years.

ETF OVERVIEW

Exchange-traded funds have changed the way people invest, allowing investors large and small to build institutional-caliber portfolios with lower costs, better transparency and greater tax efficiency than ever before.

But what is an ETF?

It all started with the birth of indexing.

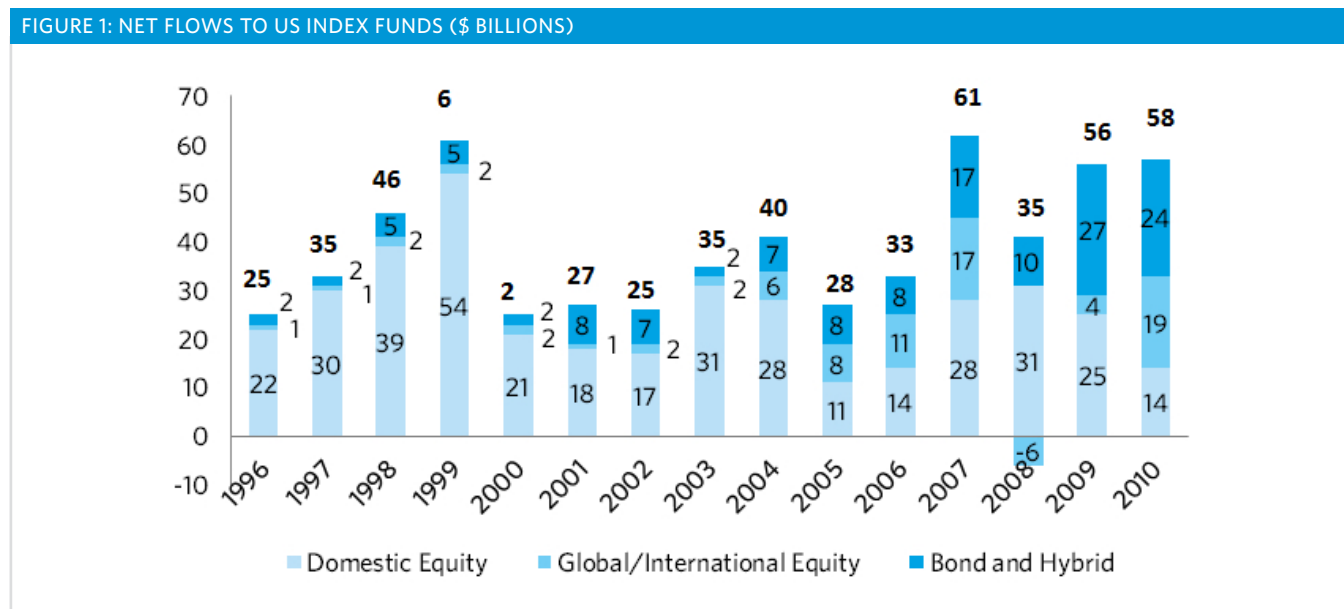
THE RISE OF INDEXING

When mutual funds were first launched in the 1940s, they were inherently active. Wise men sat around tables and picked investments and put them in pools. The pools were sliced up into shares, and the modern mutual fund was born.

The next major revolution came in the late '70s, with the development of modern portfolio theory, perhaps best epitomized by Burton Malkiel's *A Random Walk Down Wall Street*, the seminal 1973 book that dared to suggest investors might be better off just buying the whole market rather than trying to pick stocks. Institutions followed that advice, and major institutional asset pools such as the Federal Employee Retirement System, pension plans and endowments began investing in private portfolios that simply mimicked the S&P 500.

John Bogle of the Vanguard Group built his company on the back of indexing, starting the first index mutual fund in 1975. By the time John Bogle published *Common Sense on Mutual Funds: New Imperatives for the Intelligent Investor*, in 2000, the Vanguard S&P 500 index fund had surpassed the Fidelity Magellan fund, long considered the gold standard of mutual funds, in assets.

Since then, U.S. equity index funds as a percentage of U.S. mutual fund assets have grown more than 70%.

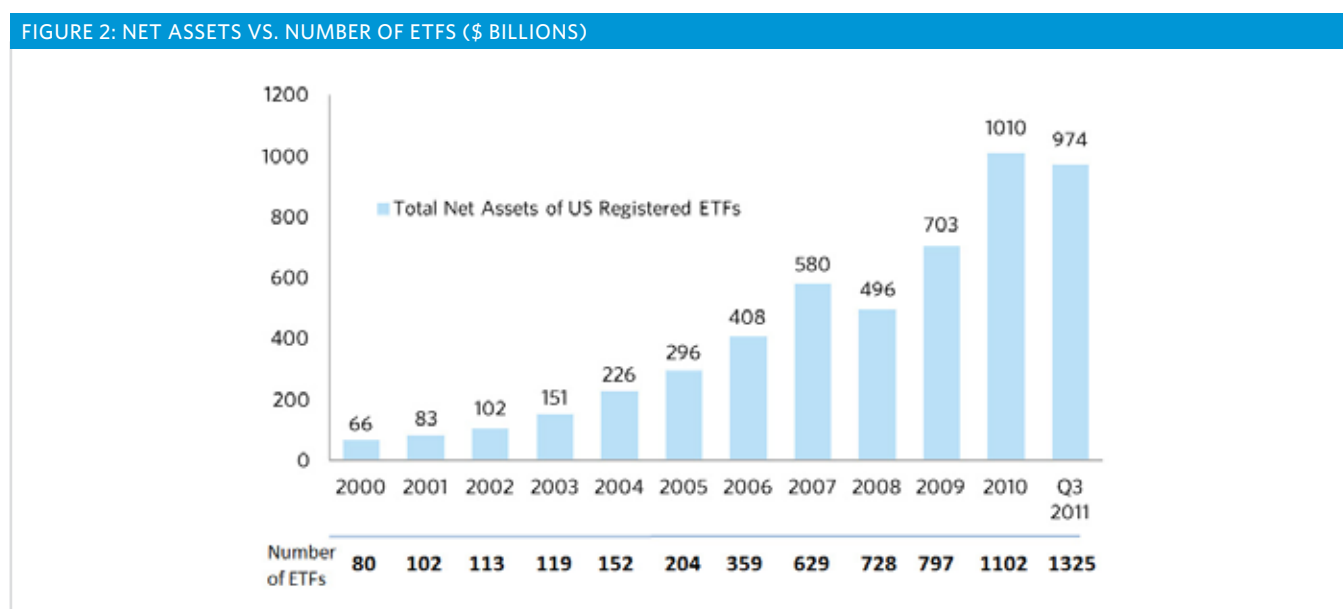


Source: ICI 2011 Factbook.

Note: Throughout this document, figures may not add due to rounding.

The net impact is large: Out of the \$53.7 trillion in global corporate market capitalization, over \$10 trillion is invested in equity index funds worldwide. Publicly traded index funds in the U.S. account for nearly \$6 trillion alone, making them a massive force in both U.S. and global equity markets. And where once, a major hedge fund or international endowment might contract with State Street Global Advisors or BlackRock to manage a private pool targeted to an index, increasingly these institutions are using ETFs as their vehicles of choice.

U.S. ETF assets have increased 14-fold in the past 12 years, growing from a “mere” \$66 billion in 1999 to \$1 trillion today.



Source: 2011 ICI Factbook, IndexUniverse

So where do ETFs fit in? And how are they different than index mutual funds? For the most part, they are mutual funds, with a twist.

A NEW SPIN ON MUTUAL FUNDS

Mutual funds are pooled investment structures. Multiple investors pool their money in a single pot and hire a manager or managers to invest that money. Each investor receives “shares” in the fund in direct proportion to the size of their investment. The fund itself can buy dozens or hundreds or thousands of securities.

ETFs are just like mutual funds and, for the most part, are structured, managed and regulated the same way.

There’s one critical difference: an ETF is exchange-traded, meaning it can be bought and sold on an exchange, just like common stock. That means you can buy or sell ETF shares from any traditional brokerage account, and trade them just as you would shares of IBM or Cisco. What’s more, while buy and sell orders for mutual funds can be processed only once per day (after the close of trading), ETF trades take place immediately. You can purchase or sell shares at any time throughout the trading day—you can even buy shares in the morning, and sell them in the afternoon.

That's just the start. You can perform all sorts of stock-like strategies with ETFs that you can't with mutual funds: selling short, placing stop-loss or limit orders, even buying on margin.

But the greatest advantages of ETFs are their low fees, transparency and tax efficiency. Low-Cost Investments

LOW-COST INVESTMENTS

The first thing people talk about when they talk about ETFs is their low fees. And it's true: While the average U.S. equity mutual fund charges 1.42 percent in annual expenses, the average equity ETF charges just 0.53 percent. The S&P 500 SPDR (SPY), currently the largest ETF available, charges just 0.09 percent in annual fees. How do ETFs keep expenses so low?

For starters, most ETFs are index funds, and index tracking is inherently less expensive than active management. But index-based ETFs are even cheaper than index-based mutual funds, because of how they relate to their investors.

When a mutual fund receives a "buy" order from a new investor, it must process the order internally, recording who and how much money was deposited with the firm. It must then send out confirmation documents and handle any compliance issues. Then, the fund's portfolio manager must go into the market and invest the money, buying and selling securities and paying all the necessary trading fees. And when investors sell, the process goes in reverse.

That's a lot of hands-on management, and it translates into higher fees and expenses.

With ETFs, it's easier. When investors want to buy shares of an ETF, they simply enter an order with their brokerage. That's it. For most investors, ETF trades take place with other investors, and not with the fund company itself. That means less paperwork, and that means lower costs.

But how do ETFs actually invest money in the market if they have limited interactions with individual investors? The key to understanding how ETFs work is the "creation/redemption" mechanism. It's how ETFs gain exposure to the market, and is the "secret sauce" that allows ETFs to be less expensive, more transparent and more tax efficient than traditional mutual funds.

THE ROLE OF AUTHORIZED PARTICIPANTS

When an ETF issues new shares of its fund, it turns to an authorized participant (AP). This may be a market maker, a specialist or any other large financial institution, but it's someone with a lot of buying power.

It is typically the AP's job to acquire the securities the ETF will hold. If an ETF is designed to track the S&P 500 Index, the AP will buy shares in all the S&P 500 constituents in the exact same weights as the index, and then deliver those shares to the ETF provider. In exchange, the provider gives the AP a block of equally valued ETF shares, called a creation unit. These blocks are usually formed in 50,000-share chunks. The exchange takes place on a one-for-one, fair value basis, with the ETF creation unit price based on its net asset value (NAV) of the shares.

Both parties benefit from the transaction: The ETF provider gets the stocks it needs to track the index, and the AP gets plenty of ETF shares to resell.

The process can also work in reverse. APs can remove ETF shares from the market by purchasing enough of those shares to form a creation unit and then delivering those shares to the ETF issuer. In exchange, APs receive the same value in the underlying securities of the fund.

PRICE REGULATION

The creation/redemption process is important for ETFs in a number of ways. For one, it's what keeps ETF share prices trading in line with the fund's underlying net asset value (NAV).

Because an ETF trades like a stock, its price will fluctuate during the trading day. If an ETF becomes more expensive than the sum of its underlying securities, an AP can buy up the underlying shares, form a creation unit and exchange it, and sell the ETF shares on the market. This process brings the ETF's price back to its NAV.

Likewise, if the underlying securities become more expensive than the ETF shares, then the AP can purchase a creation unit's worth of ETF shares and redeem them for their underlying securities, which can (again) be resold.

This arbitrage helps to keep an ETF's price in line with the value of its underlying portfolio. Over time, these buying and selling pressures balance out, and the ETF's market price typically stays in line with the value of its underlying securities.

This is one of the critical ways in which ETFs differ from closed-end funds. With closed-end funds, no one can typically create or redeem shares past the initial offering. That's why you often see closed-end funds trading at massive premiums or discounts to their NAV; there is no arbitrage mechanism available to keep supply and demand pressures in check.

EFFICIENT ACCESS TO THE MARKETS

The other key benefit of the creation/redemption mechanism is that it's an extraordinarily efficient and fair way for funds to acquire new securities.

When investors buy into mutual funds, the fund companies must go into the market to buy securities, paying all trading fees and passing them on to shareholders.

With ETFs, authorized participants do most of the buying and selling. When APs sense demand for additional shares of an ETF—which manifests itself when the ETF share price trades at a premium to its NAV—they go into the market and create new shares. When they sense demand from investors looking to redeem—usually when an ETF trades at a discount—they process redemptions.

The AP pays all the trading costs and fees, and even pays an additional fee to the ETF provider to cover the paperwork involved in processing all the creation/redemption activity.

The beauty of the system is that the fund—and thus investors—are shielded from these costs. Funds may still pay trading fees if the fund changes its strategy or a security goes in or out of an index, but the fee for putting new money to work (or redeeming money from the fund) is typically paid by the AP.

TRANSPARENCY AND TAX EFFICIENCY

The creation/redemption mechanism drives other benefits than just lower fees; it helps to make ETFs more transparent and more tax efficient than virtually any other investment vehicle.

Behind The Curtain

By law and by custom, mutual funds are only required to disclose their portfolios on a quarterly basis—and then only with a 30-day lag. Between reporting periods, investors have no idea if the mutual fund is invested according to its prospectus, or if the manager has taken on unwanted risks.

ETFs are far more transparent. By custom, most ETFs disclose their full portfolios on public, free websites every single day of the year. Some ETF issuers, such as Vanguard, fall short of this ideal. With the exception of a small handful of actively managed ETFs that do not track an index, there is no law requiring ETFs to disclose their full portfolios every day.

There is, however, a rule that requires ETFs to disclose their creation/redemption baskets, which hold the securities that APs must purchase to create new shares of the ETF. This—combined with the ability to see the full holdings of the index an ETF is aiming to track—provides an extremely high level of disclosure even for those few ETFs that fall short of the daily-disclosure ideal.

Fewer Tax Events

Both mutual funds and ETFs are required by law to pass through any capital gains they accrue. Capital gains usually result either when the fund has sold securities for a tactical move, or when investors ask for redemptions, and the fund must sell some securities to raise the necessary cash.

ETFs sidestep both scenarios. For starters, because they're index funds, most ETFs have very little turnover and thus amass far fewer capital gains than an actively managed mutual fund would.

But also, when an AP redeems shares, the ETF provider doesn't have to sell stocks on the open market. It simply pays the AP by delivering the underlying holdings of the ETF itself. In fact, the ETF provider can even pick and choose which shares to give to the AP—meaning it can hand off the shares with the lowest possible tax basis. This leaves the ETF provider with only shares purchased at or even above the current market price, thus reducing the fund's tax burden and ultimately resulting in higher after-tax returns for investors.

Lower costs, better transparency and greater tax efficiency. These three benefits are why ETFs are growing at an exponential rate. And that explosive growth has some worried about their impact on the markets.

ARE ETFS DRIVING THE MARKET?

ETFs have grown tremendously in the past decade, from \$66 billion in total AUM in 1999 to around \$1 trillion today. But it's important to put that growth in context. The current U.S. mutual fund market, with \$12 trillion in assets (inclusive of ETFs), is still the dominant form of retail investing for millions of Americans, whether through their retirement accounts or with after-tax dollars.

The current ETF market is large, however, and growing quickly. As of September 30, 2011, some 45 issuers managed \$973 billion across 1,323 products:

FIGURE 3: SEPTEMBER 2011 YTD BY ISSUER

	NET FLOWS	AUM (\$M)		NET FLOWS	AUM (\$M)
BlackRock	13,818	410,204	Emerging Global Shares	165	477
SSgA	4,645	239,554	RevenueShares	(62)	403
Vanguard	28,090	152,682	IndexIQ	163	401
Invesco PowerShares	3,113	52,455	AdvisorShares	258	390
ProShares	7,036	26,023	Credit Suisse	175	348
Van Eck	6,876	21,654	FlexShares	262	262
WisdomTree	3,160	11,184	Fidelity	–	153
Rydex	685	7,390	Russell	170	151
Barclays Capital	(711)	6,925	Deutsche Bank	21	146
Direxion	2,554	6,679	Precidian	155	142
First Trust	1,126	5,293	Jefferies	16	114
Merrill Lynch	(63)	5,109	Teucrium	75	111
Charles Schwab	1,964	4,100	RBS Securities	95	92
ETF Securities	306	3,705	Goldman Sachs	–	69
PIMCO	1,404	3,656	FocusShares	81	69
US Commodity Funds	(1,054)	3,215	FFCM	38	37
Guggenheim	113	2,907	FactorShares	36	30
JPMorgan Chase	775	2,842	Morgan Stanley	20	26
ALPS	838	1,459	Columbia	3	23
Global X	486	1,188	CitiGroup	8	23
UBS	208	825	Pax World	5	7
GreenHaven	145	618	Javelin	(7)	4
VelocityShares	607	514			

Source: IndexUniverse

The industry remains tremendously concentrated, with the top three providers—BlackRock, State Street and Vanguard—managing well over \$800 billion, or more than 80% of assets.

Despite turbulent market conditions, assets have continued to flow into ETFs. While daily flows are quite volatile, ETFs have gathered nearly \$78 billion in new assets in 2011 through the third quarter, across a broad range of asset classes (See Figure 4).

While roughly two-thirds of ETF assets are concentrated in U.S. and international equities, perhaps the most important and controversial growth in ETFs has come in asset classes previously unavailable to individual investors without substantial means: commodities, derivatives like volatility, leveraged and inverse strategies, and the like. (These asset classes are discussed in more detail in the ETF Structure section of this report.)

With all these flows and assets, it's fair to ask: Are ETF investors driving the market? Unlike mutual fund flows, which have a history of being fairly predictable (in part due to the stability of monthly retirement plan contributions), ETF fund flows can be quite capricious. Consider the asset flows by segment over the last 12 months (See Figure 5).

Far from a predictable trend, ETF investors seem to ping-pong between asset classes, moving into U.S. equities one month, only to redeem the following month in favor of international equities or U.S. fixed income. This highlights the hybrid nature of ETFs, as both trading tools and long-term pooled investment vehicle.

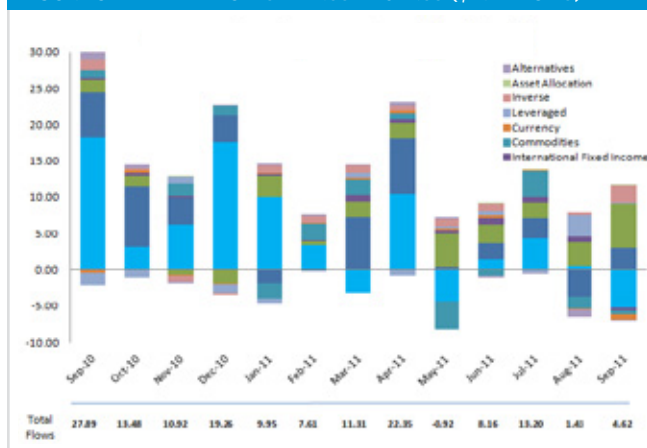
The trading aspect of ETFs cannot be overlooked. ETFs have become the tool of choice for many professional traders, whether hedge funds or high-frequency trading shops collocated with exchanges. And during times of heightened market volatility, the value traded in ETFs climbs (See Figure 6).

FIGURE 4: YTD 2011 ETF FLOWS BY ASSET CLASS

	NET FLOWS (\$, MM)	AUM (\$, MM)	% OF AUM
U.S. Equity	17,453	414,351	4.21%
International Equity	17,920	234,510	7.64%
U.S. Fixed Income	26,166	160,113	16.34%
International Fixed Income	4,515	11,610	38.89%
Commodities	(159)	107,549	-0.15%
Currency	764	4,494	16.99%
Leveraged	2,617	11,357	23.04%
Inverse	8,537	25,273	33.78%
Asset Allocation	230	866	26.58%
Alternatives	(246)	3,382	-7.28%
Total:	77,795	973,505	7.99%

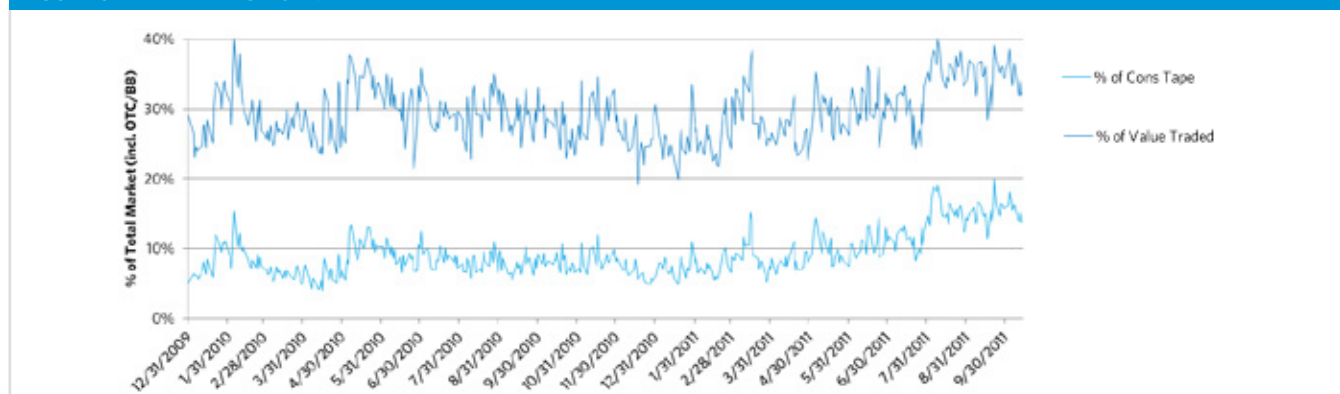
Source: IndexUniverse

FIGURE 5: ETF NET FLOWS BY ASSET CLASS (\$ MILLIONS)



Source: IndexUniverse

FIGURE 6: ETF TRADING ACTIVITY



Source: IndexUniverse

This increase in ETF trading has led many to question whether ETFs are now in fact driving the prices of the underlying securities they hold. While the assets inside ETFs are actually quite small compared to the market cap of their securities, trading is what drives daily prices. After all, if 90% of the float of a company is tied up with long-term investors, it's the daily trading activity that determines the stock's value—at least until long-term investors decide that stock is over- or underpriced.

And indeed, there is cause for concern. Consider the average and median correlations between individual stocks in the S&P 500 20 and 10 years ago, vs. today (See Figure 7).

Rising correlations over the past decade are, without question, at least partially driven by the growth of S&P 500 and related ETFs. It is nearly axiomatic that rising interest in broadly indexed assets will contribute, in some measure, to rising correlations.

FIGURE 7: CORRELATION BETWEEN S&P 500 STOCKS & THE S&P 500

	9/30/1991	9/30/2001	9/30/2011
Average	0.43	0.36	0.70
Median	0.44	0.38	0.74
High	0.77	0.79	0.90
Low	0.05	(0.13)	(0.02)

Based on trailing 12 months daily returns

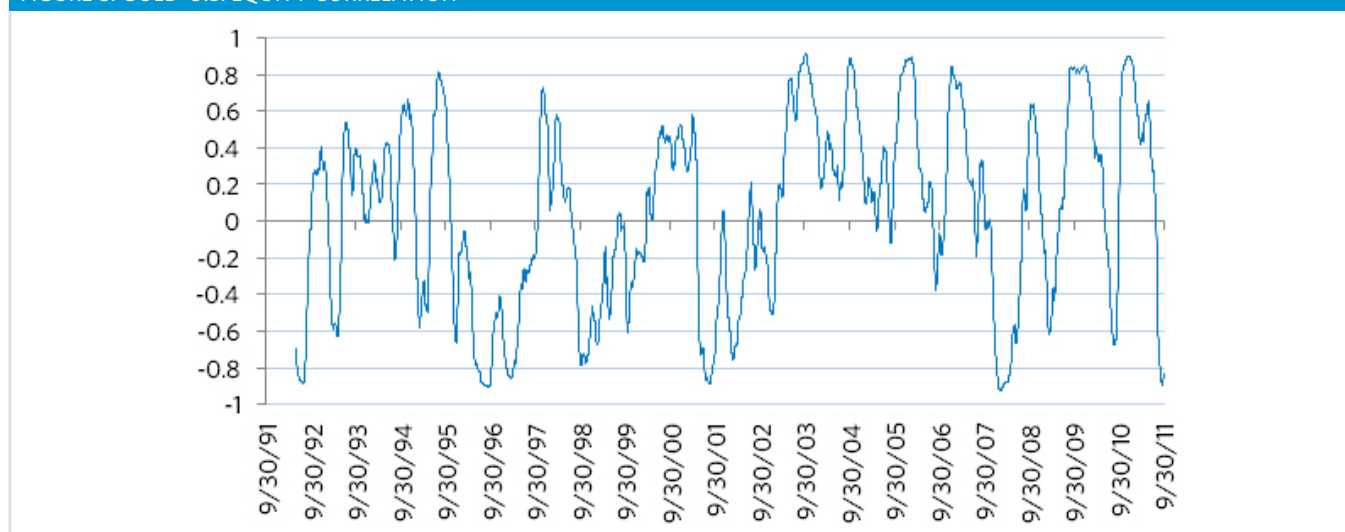
Source: IndexUniverse

The question, of course, is the degree. And here, it is critical to note that ETFs represent a fairly small percentage of assets actually indexed to the S&P 500. Standard & Poor's estimates some \$1.1 trillion is directly indexed in the S&P 500, which itself has a market cap of over \$11 trillion. Of that \$1.1 trillion, only \$126 billion is ETFs—roughly 1% of S&P 500 market cap. That number seems very small in comparison to the overall market.

What's less clear is the accusation that ETFs could be targeted for increasing correlations between asset classes, or indeed, whether such an increase in correlations is actually happening. That's especially true as you examine correlations across asset classes, where many have bemoaned the disappearance of traditional diversification tools.

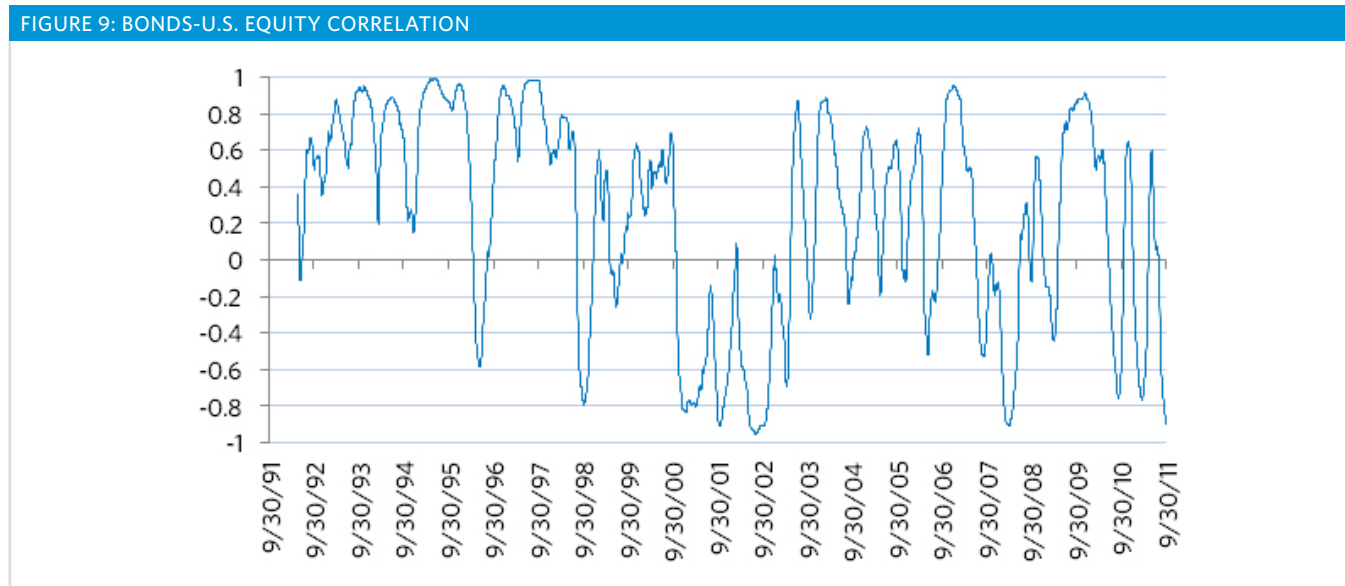
Consider the much discussed correlation of gold and the Russell 3000. Far from suggesting rising correlations, the data show that the natural variability of that relationship has persisted to the current day.

FIGURE 8: GOLD-U.S. EQUITY CORRELATION



Source: IndexUniverse

You get a similar picture if you examine the relationship between the classic portfolio diversifier, the Barclays Capital Aggregate Bond Index, and the Russell 3000.



Source: IndexUniverse

Certainly, ETFs—or any other vehicle—seem to have had little pro-correlation effect on these markets.

What effects can be documented—such as the increasing correlation amongst S&P 500 stocks—are more likely due to the “indexing effect” than any “ETF effect.” While ETFs are growing in importance on the global stage, they are still stepchildren compared to the global indexing and mutual fund industries.

DO ETFS BREAK SETTLEMENT & SHORTING?

A common ETF headline (and the subject of several critical reports) centers on the “failure” of ETFs to settle in a timely fashion, and the linked overwhelming short positions outstanding in some ETFs. While both statements are true—some ETFs do “fail,” and some remain consistently heavily shorted—these factors are almost entirely driven by technicalities, and not by any nefarious action or potential misdeeds.

SETTLEMENT “FAILURE”

The first technicality involves the Securities and Exchange Commission’s Regulation SHO “threshold security” list. The list is composed of securities that repeatedly fail to “settle” within a targeted three-day window after trading. After being marked as “threshold,” these securities are subject to a number of specific requirements aimed at preventing naked shorting.

ETFs feature prominently in SHO lists; indeed, they often account for the entire list. As of 9/30/11, the following securities were considered “threshold,” all of them ETFs:

TICKER	NAME	TICKER	NAME
AGQ	ProShares Ultra Silver	EZU	iShares MSCI EMU
AOK	iShares S&P Conservative Allocation	FAS	Direxion Daily Financial Bull 3x
AOM	iShares S&P Moderate Allocation	FAZ	Direxion Daily Financial Bear 3x
BDCS	ETRACS Wells Fargo Business Company Index ETN	FXE	CurrencyShares Euro
BGU	Direxion Daily Large Cap Bull 3x	FXF	CurrencyShares Japanese Yen
BGZ	Direxion Daily Large Cap Bear 3x	GLJ	iShares 10+ Year Government/Credit Bond
BOS	PowerShares DB Base Metals Short ETN	HDGE	Active Bear
BRAQ	Global X Brazil Consumer	HILO	EGShares Emerging Markets High Income Low Beta
BSCG	Guggenheim BulletShares 2016 Corporate Bond	IWO	iShares Russell 2000 Growth
DEM	WisdomTree Emerging Markets Equity Income	IYM	iShares Dow Jones U.S. Basic Materials
DIA	SPDR Dow Jones Industrial Average Trust	IYT	iShares Dow Jones Transportation Average
DNO	United States Short Oil	KBE	SPDR KBW Bank
DOG	ProShares Short Dow30	KRE	SPDR KBW Regional Banking
DOL	WisdomTree International LargeCap Dividend	KWT	Market Vectors Solar Energy
DOO	WisdomTree International Dividend ex-Financials	LBJ	Direxion Daily Latin America Bull 3X
DRN	Direxion Daily Real Estate Bull 3x	MWJ	Direxion Daily Mid Cap Bull 3x
DRV	Direxion Daily Real Estate Bear 3x	MZZ	ProShares UltraShort MidCap 400
DUG	ProShares UltraShort Oil & Gas	NASI	ESG Shares North American Sustainability
DUST	Direxion Daily Gold Miners Bear 2X	PZA	PowerShares Insured National Municipal Bond
DWX	SPDR S&P International Dividend	RBL	SPDR S&P Russia
DXD	ProShares UltraShort Dow 30	SCC	ProShares UltraShort Consumer Services
EDZ	Direxion Daily Emerging Markets Bear 3x	SCHZ	Schwab U.S. Aggregate Bond
EEV	ProShares UltraShort MSCI Emerging Markets	SCO	ProShares UltraShort DJ-UBS Crude Oil
EPV	ProShares UltraShort MSCI Europe	SDS	ProShares UltraShort S&P 500
ERX	Direxion Daily Energy Bull 3x	SEA	Guggenheim Shipping
ERY	Direxion Daily Energy Bear 3x	SEF	ProShares Short Financials

TICKER	NAME	TICKER	NAME
SKF	ProShares UltraShort Financials	TZE	iShares S&P Target Date 2015
SMN	ProShares UltraShort Basic Materials	UBT	ProShares Ultra 20+ Year Treasury
SOXL	Direxion Daily Semiconductor Bull 3X	UCO	ProShares Ultra DJ-UBS Crude Oil
SOXS	Direxion Daily Semiconductor Bear 3X	UDN	PowerShares DB US Dollar Index Bearish
SPXU	ProShares UltraPro Short S&P 500	URTY	ProShares UltraPro Russell 2000
SRTY	ProShares UltraPro Short Russell 2000	USO	United States Oil
TLO	SPDR Barclays Capital Long Term Treasury	XLB	Materials Select SPDR
TMF	Direxion Daily 30-Year Treasury Bull 3x	XLF	Financial Select SPDR
TMV	Direxion Daily 30-Year Treasury Bear 3x	XOP	SPDR S&P Oil & Gas Exploration & Production
TNA	Direxion Daily Small Cap Bull 3x	XPP	ProShares Ultra FTSE/Xinhua China 25
TVIX	VelocityShares Daily 2X VIX Short Term ETN	XXV	iPath Inverse S&P 500 VIX Short-Term Futures ETN
TWM	ProShares UltraShort Russell 2000	YXI	ProShares Short FTSE/Xinhua China 25
TYH	Direxion Daily Technology Bull 3x	ZIV	VelocityShares Daily Inverse VIX Mid Term ETN
TYP	Direxion Daily Technology Bear 3x	ZSL	ProShares UltraShort Silver
TZA	Direxion Daily Small Cap Bear 3x		

While that may look disturbing, it's important to understand how ETF settlement works in the context of the creation/redemption mechanism.

Let's say you put in an order at Schwab to buy 500 shares of the S&P 500 SPDR (SPY). That trade gets executed through an exchange like NYSE, with some counterparty you'll never know. We'll call this institution "Bob Inc."

At the end of the day, Schwab and Bob submit their list of trades to the National Securities Clearing Corporation (NSCC), the entity responsible for matching up and clearing most of the trades in stocks and ETFs.

The NSCC serves several key purposes in this regard. Most critically, as long as both transaction parties agree that Bob sold me (at Schwab) 500 shares of SPY, the NSCC becomes the guarantor of that transaction. At this point, regardless of whether Bob goes bankrupt or not, you're guaranteed my beneficial ownership in SPY as of the moment your trade was marked "executed."

The NSCC also runs the book of accounts: the Depository Trust Company, the home of the actual list of who-owns-what. The NSCC pays attention to who-owns-what at the member-firm level—in other words, they look at Schwab's position in SPY, not your personal account. Schwab may be due 500 shares from Bob, but perhaps it also owes 500 shares to Alice Inc. From the NSCC's perspective, Schwab is whole, and nothing will go in or out of Schwab's account. Bob's account will be debited 500 shares and Alice is credited 500 shares inside Schwab's system. This all takes place through what's called the "continuous net settlement" process.

Three Extra Days

For the vast majority of transactions, this process cleanly clears up all trades and does all of the cross-firm netting on the third day after any given trade. NSCC has three days to match up all the trades, have each firm review its own version of events and correct any discrepancies. This is called “T+3 settlement.”

But what happens if Bob, who’s scheduled to be debited 500 shares of SPY on settlement, doesn’t actually have any SPY sitting in the Depository Trust Company for the NSCC to debit? Technically, if Bob is empty-handed on the opening of T+4, the NSCC is supposed to immediately buy-in Bob on the open—regardless of price—to balance out the net-short position. If it doesn’t, it’s prohibited from getting any shorter.

In reality, Bob has several ways around the net-short problem. First of all, the NSCC runs its own securities lending program on behalf of all the participants in the clearing process, called the “stock borrow program.” If Bob is short 500 shares, the NSCC will automatically borrow it from someone who has a giant pile of SPY available to lend. Bob will owe a fee to the program, and someone (maybe even Schwab) will be credited that fee for having been nice enough to solve Bob’s problem.

The second out for Bob Inc. is that it might be a market maker. This is where things get interesting for ETFs.

Market makers are given more time to settle their accounts than everyone else: While most investors’ trades must settle in T+3, market makers have up to T+6.

Market makers often have reason to delay settlement for as long as they can, particularly for ETFs. If Bob is a market maker trading ETFs, it might deliberately sell more and more shares of SPY short until it’s sold enough to warrant creating a basket with the ETF issuer, thus making good on its sales. The longer Bob delays basket creation, the longer it can avoid paying the creation fee (often \$500 or \$1,000) and related execution costs. Moreover, it can delay the time it takes before taking on responsibility for a full creation basket of ETF shares (often 50,000 shares).

Of course, none of this applies to single stocks. There are no creation baskets for single stocks, and so no reason to amass shares until you have 50,000 share positions to settle.

The third thing that Bob can do in a net-short scenario is to simply buy or borrow 500 shares from another entity—say, another market maker. This is the only real loophole in the system: That market maker might not actually have any SPY of its own either, and may in turn fail to deliver within three days, thus shuffling the “fail” around the market and leaving a consistent net-short position in the security.

Regardless of Bob Inc.’s motives or how it eventually makes good on its 500-share debt, once T+3 has come and gone, its transaction will be reported to the SEC as a “fail” on SPY, and that ETF could end up on the dreaded threshold list.

But “fail” doesn’t mean the trade fails. Nothing is reversed. Nothing blows up. If your counterparty in an ETF trade “fails,” you wouldn’t even notice. The threshold list is simply that: a list of securities that the SEC wants to keep an eye on.

In the end, the reason that ETFs dominate the list of threshold securities in Regulation SHO is largely due to a timing mismatch. Market makers have an extra three days to settle trades, and they take advantage of that extra time with

ETFs to avoid paying creation fees and the related transaction costs to balance their positions through the creation process. The same calculations do not apply for individual stocks.

That's it. No grand conspiracy, no "financial Molotov cocktail" aimed at the investors of America. Just a simple mismatch of T+3 vs. T+6 settlements, and possibly some "fail shuffling" designed to avoid creating new shares of an ETF.

The latter should be cleared up, but the preponderance of ETFs on the list is a natural outcome of their design and the rules around settlement, not a failure in the settlement process itself.

Shares Short

Tied to the issue of failures is the often large percentage of some ETFs that shows up on the biweekly shorted securities reports. For example, as of 9/30/2011, some \$131 billion was reported as short by investors through the short reporting system, among the largest and most frequently traded ETFs (See Figure 10).

In aggregate, reported short interest represents some 13% of the total assets in ETFs. However, that short position is hugely concentrated. The median ETF is less than 1% short. For comparison, in the broad U.S. equity market (as represented by the Russell 3000 index), some \$391 billion was reported short on 9/30/11, or 2.94% of market cap. The median short position was 4.58% (See Figure 11).

Considering that ETFs are currently more than 30% of the traded value in the U.S. equity market, it's not shocking that roughly 25% of the value of securities short in the U.S. equity markets are ETFs.

FIGURE 10: LARGEST ETF SHORT POSITIONS 09/30/2011

TICKER	NAME	% FLOAT SHORT	SHORT (\$, M)
SPY	SPDR S&P 500	61.00	49,566.25
IWM	iShares Russell 2000	143.07	17,819.61
QQQ	PowerShares QQQ	25.42	5,404.82
XLE	Energy Select SPDR	63.08	3,950.24
EEM	iShares MSCI Emerging Markets	12.19	3,230.52
GLD	SPDR Gold	4.82	3,096.53
XRT	SPDR S&P Retail	475.87	2,870.31
XLF	Financial Select SPDR	60.25	2,601.92
EFA	iShares MSCI EAFE	6.75	2,331.44
IYR	iShares Dow Jones U.S. Real Estate	80.95	2,294.61

Source: IndexUniverse

FIGURE 11: AGGREGATE ASSETS & SHORT POSITIONS 9/30/2011

Total ETF assets	\$1,010,597,924,300.00
Total ETF assets short	\$131,838,314,778.59
% short	13.05
Median % short	0.82
Max % Short	475.87
Total Russell 3000 Market Cap	\$13,341,236,409,822.70
Market Cap Short	\$391,929,023,302.43
% short	2.94
Median % Short	4.58
Max % Short	43.26

Source: IndexUniverse

EXPLAINING MEGA-SHORT PERCENTAGES

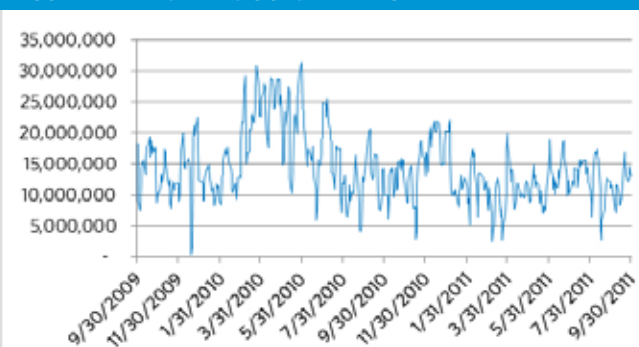
More troubling for many, however, is the seemingly paradoxical notion that more shares of an ETF can be sold short than there are shares outstanding.

The archetype of this "problem" is the SPDR Retail ETF (XRT). As of September 30, for instance, XRT had just \$603 million in assets under management, but had nearly \$2.9 billion in shares sold short.

The idea that 480% of an ETF can be reported as short seems absurd, and dangerous, but there are several ways in which this is rationally explained.

First and foremost, it's important to remember that new shares of an ETF can be created effectively "on demand." In the case of XRT, which tracks the highly liquid and volatile retail sector of the S&P 500, this daily creation/redemption activity can often result in massive swings in assets under management (See Figure 12).

FIGURE 12: XRT SHARES OUTSTANDING



Source: IndexUniverse

Actual shares in existence for XRT can fluctuate from 3-18 million and back over the course of days, each creation or redemption the result of a market imbalance passing through the hands of authorized participants. So while there might be 13 million shares reported short, that number does not necessarily mean "imaginary" shares exist in the market. In fact, due to the notoriously buggy process of short-reporting, it's entirely possible that data is actually lagged from actual held shares by days or weeks, and in this case, a day's or a week's lag will exaggerate the inconsistencies.

Second, it's quite possible for there to be "cascading shorts." Imagine that an authorized participant (let's call him AP1) sells shares to an Institutional Investor (II1). AP1 doesn't actually have the shares, so he borrows them from a market maker (MM1). Now II1 loans his shares out to another Institutional Investor (II2) to short. Those shares, now delivered, could theoretically be sold again to a retail investor (RI1). When September 30 comes around and it's time to report short positions, both AP1 and II2 will show as "short" the same shares of the ETF.

Should the original lender (MM1) want his shares back, the AP can simply create them, simultaneously wiping out one of the short positions in the chain and increasing the shares outstanding.

Because there are market makers and authorized participants in this transaction, the rules for being short, and finding shares to borrow, are different than they are for most market participants; still, their activity is reported as "short."

It's also worth noting that, in the above chain, only one person has an unencumbered claim on the shares—RI1, the investor at the end of the chain who took the other side of II2's short sale. Only RI1 can go to the ETF issuer and present shares for redemption. Everyone else knows they have lent out the shares, and to tender them for a redemption, the shares would need to be recalled (likely forcing new shares to be created).

Is the above scenario complex? Absolutely. And increased transparency from the NSCC would go a long way towards clearing up misconceptions about the settlement and shorting process. Unfortunately, short of a continuous barrage of (expensive) Freedom of Information Act requests, the NSCC isn't particularly forthcoming with detailed data on the topic. Still, we believe the systemic risks presented by ETF shorting and settlement failures to be de minimis and well understood.

DO LEVERAGED AND INVERSE ETFs INCREASE VOLATILITY?



The accusation that leveraged and inverse ETFs drive increased market volatility is built on a different thesis than the one leveled at ETFs as a whole. While some worry that so-called “geared ETFs” provide naive investors with access to margin, thereby destabilizing the market, the small size of the leveraged/inverse market suggests the net impact is tiny. As of September 30, 2011, there was \$36.6 billion invested in geared ETFs: \$11.4 billion in leveraged products, and \$25.3 billion in inverse funds. The net exposure of—\$13.9 billion is vanishingly small compared to the total global market capitalization (\$51.6 trillion).

There is, however, a separate, technical reason why these funds could contribute to market volatility, and it bears exploring.

PROCYCLICAL REBALANCING

Leveraged and inverse ETFs are designed to provide some multiple of the return of a given market over a single day. There are currently funds that deliver 3X, 2X, -1X, -2X and -3X the return of various markets.¹

All leveraged and inverse funds gain exposure to the market through swaps: privately negotiated agreements with large investment banks that provide the geared daily exposure to the market of choice. Because of the nature of compounding, these swap agreements must be adjusted on a daily basis to maintain their desired exposure to the market. One of the accusations leveled against leveraged/inverse ETFs is that this daily rebalancing is a key driver of market volatility.

To evaluate that claim, it is critical to understand that the daily rebalancing trade for all ETFs—regardless of whether they are leveraged or inverse—is “procyclical.” That is, if the market is up, all geared ETFs must buy extra exposure at the end of the day; if the market is down, they all have to sell.²

This is counterintuitive and often misreported. Most people assume that leveraged and inverse funds balance each other out on a daily basis, but in fact the opposite is true.

REBALANCING EXAMPLE: S&P 500 UP 10%							
LEVERAGE FACTOR	STARTING NAV	STARTING EXPOSURE	LEVERAGE/ INVERSE RETURN	CLOSING NAV	END OF DAY EXPOSURE	NEEDED EXPOSURE	NET MARKET ON CLOSE TRADE
-3	\$100.00	-\$300.00	-30.00%	\$70.00	-\$330.00	-\$210.00	\$120.00
-2	\$100.00	-\$200.00	-20.00%	\$80.00	-\$220.00	-\$160.00	\$60.00
-1	\$100.00	-\$100.00	-10.00%	\$90.00	-\$110.00	-\$90.00	\$20.00
2	\$100.00	\$200.00	20.00%	\$120.00	\$220.00	\$240.00	\$20.00
3	\$100.00	\$300.00	30.00%	\$130.00	\$330.00	\$390.00	\$60.00

REBALANCING EXAMPLE: S&P 500 DOWN 10%							
LEVERAGE FACTOR	STARTING NAV	STARTING EXPOSURE	LEVERAGE/ INVERSE RETURN	CLOSING NAV	END OF DAY EXPOSURE	NEEDED EXPOSURE	NET MARKET ON CLOSE TRADE
-3	\$100.00	-\$300.00	30.00%	\$130.00	-\$270.00	-\$390.00	-\$120.00
-2	\$100.00	-\$200.00	20.00%	\$120.00	-\$180.00	-\$240.00	-\$60.00
-1	\$100.00	-\$100.00	10.00%	\$110.00	-\$90.00	-\$110.00	-\$20.00
2	\$100.00	\$200.00	-20.00%	\$80.00	\$180.00	\$160.00	-\$20.00
3	\$100.00	\$300.00	-30.00%	\$70.00	\$270.00	\$210.00	-\$60.00

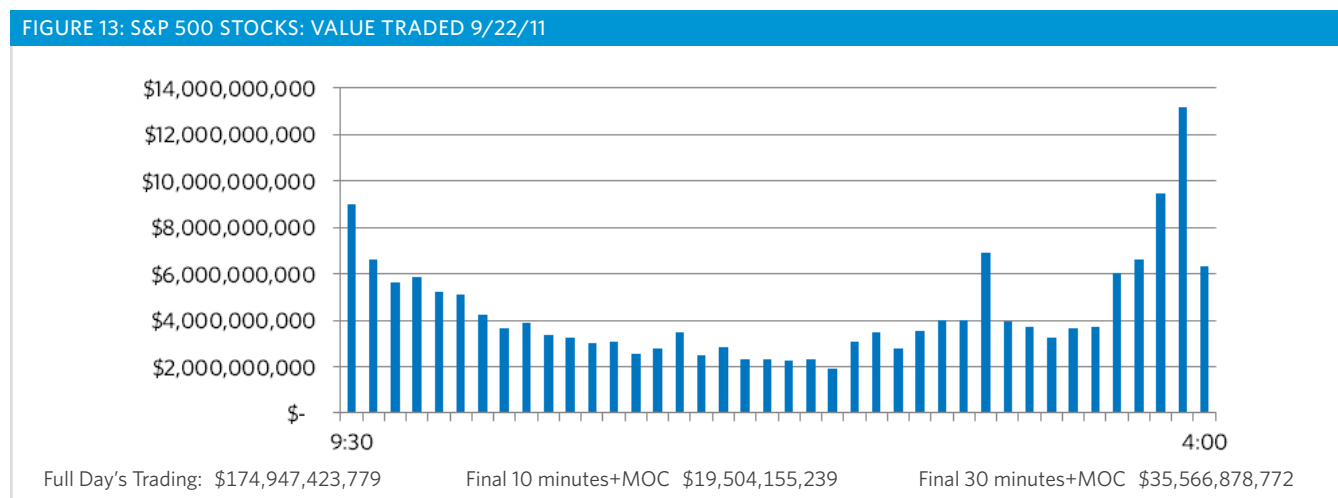
To understand why, imagine you're dealing with a single share of a \$100 fund, at one of 5 different leverage factors. When the market rises 10%, all of these funds must buy extra exposure at the end of the day to maintain their gearing to the market; when the market falls, all of them must sell.

That's exactly what happened, for instance, in the seven ETFs that provide leveraged and inverse exposure to the S&P 500 during the most recent big-swing day in the S&P 500, September 22, when the index lost 3.19%. Here's a look at the trade:

TICKER	NAME	LEVERAGE FACTOR	STARTING AUM ON 9/22	STARTING EXPOSURE ON 9/22	EXPOSURE ON CLOSE	EXPOSURE NEEDED ON CLOSE	NET MARKET ON CLOSE TRADE
SPXU	ProShares UltraPro Short S&P 500	-3	\$507.00	-\$1,520.99	-\$1,472.49	-\$1,666.47	-\$193.98
SDS	ProShares UltraShort S&P 500	-2	\$2,822.84	-\$5,645.68	-\$5,465.68	-\$6,005.69	-\$540.01
RSW	Rydex Inverse 2x S&P 500	-2	\$68.68	-\$137.35	-\$132.98	-\$146.11	-\$13.14
SH	ProShares Short S&P 500	-1	\$2,604.19	-\$2,604.19	-\$2,521.16	-\$2,687.22	-\$166.06
SSO	ProShares Ultra S&P 500	2	\$1,480.10	\$2,960.21	\$2,865.83	\$2,771.45	-\$94.38
RSU	Rydex 2x S&P 500	2	\$69.29	\$138.58	\$134.16	\$129.74	-\$4.42
UPRO	ProShares UltraPro S&P 500	3	\$285.38	\$856.14	\$828.85	\$774.25	-\$54.59
Net Rebalance of Inverse/Leveraged Funds:							-\$1,066.57

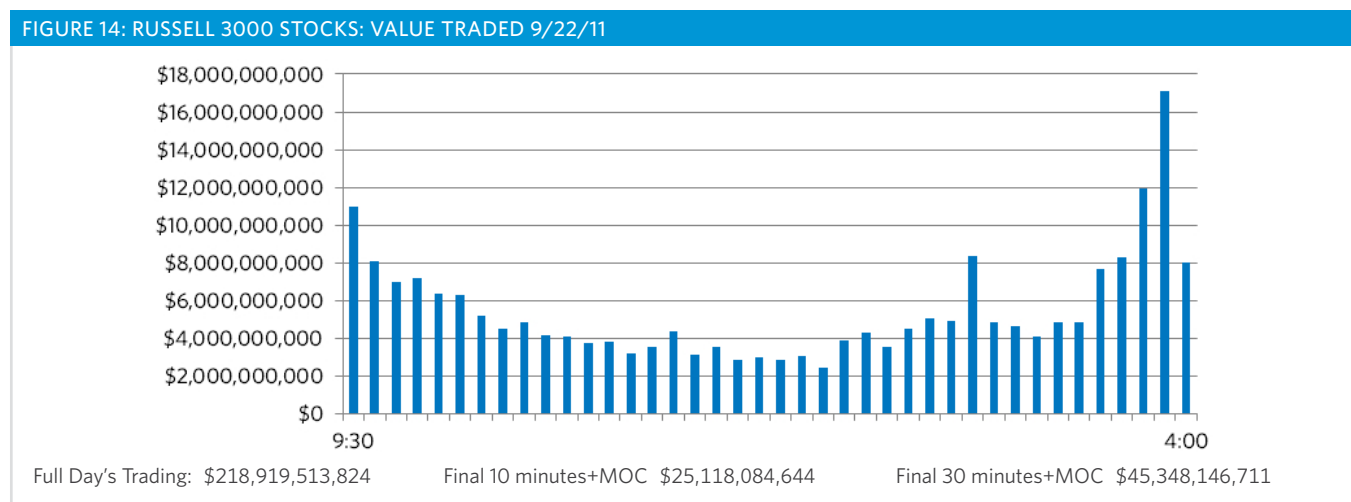
This looks bad for leveraged and inverse funds. On a day the market was already down, the daily rebalancing of geared ETFs contributed to a \$1 billion sell order near the close. But before we jump to conclusions, let's place that \$1 billion trade in context.

The aggregate traded value of S&P 500 securities in the 10 minutes leading up to and including the close that day was \$19.5 billion. From that context, the leveraged/inverse rebalancing trade accounted for just 5% of net volume.



Source: IndexUniverse

A valid criticism of this analysis would be that it undercounts the impact of leveraged and inverse funds as a whole, as it focuses only on S&P 500 funds. To answer that, we ran the same study against all leveraged and inverse ETFs investing in U.S. equities with static leverage factors. Using those 102 ETFs, the net end-of-day rebalance trade was roughly \$3.8 billion. By comparison, total volume in the Russell 3000 securities during the last 10 minutes of trading was \$25 billion, making the geared ETF trade less than 15% of total volume.



Source: IndexUniverse

DOES THAT MOVE THE MARKET?

We could argue theoretically about whether 5% or 15% of closing volume is enough to move the market, but fortunately, we don't have to: We can just look at the data.

Looking back to the beginning of this recent downturn (April 1), we looked at the momentum of the market from 3:00, 3:15, 3:30 and 3:45 to close. Because of the procyclical nature of the leveraged/inverse daily rebalance, if these trades were having a serious effect, we'd expect to see an acceleration of the day's trend. That is, on a day with the S&P down 1% at 3 p.m., we'd expect it to be down more than 1% by the end of the day.

We chose four "start times" for this study, as in our conversations with issuers, it's clear they all begin their swap coverage negotiations at different times following 3:00 p.m.³

Figure 15 shows the results for the S&P 500.

FIGURE 15: RESULTS FOR THE S&P 500

	3:00 CLOSE	3:15 CLOSE	3:30 CLOSE	3:45 CLOSE
Reversed Trend	67	68	58	67
Accelerated Trend	69	68	78	69

Far from a trend, the data suggests it's truly a coin flip at any time in the last hour of trading. It's even more obvious when looking at the momentum of the Russell 3000, where, if anything, the trend is for the market to reverse at the close (see Figure 16).

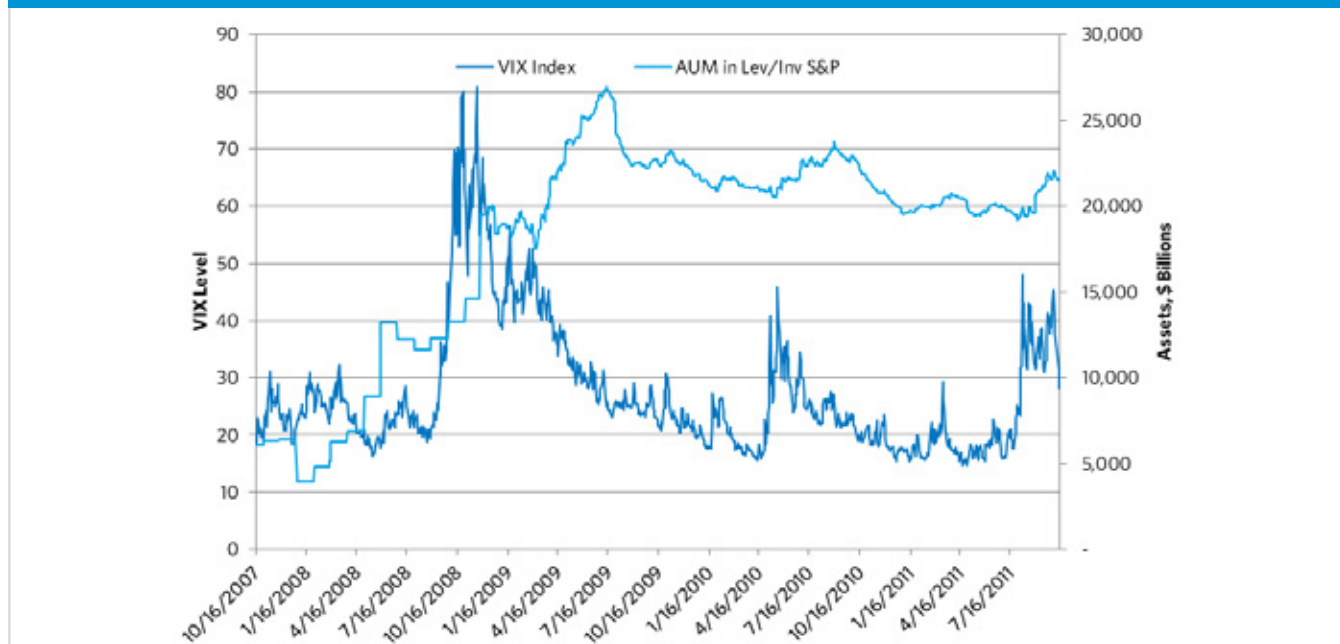
FIGURE 16: RESULTS FOR THE RUSSELL 3000

	3:00 CLOSE	3:15 CLOSE	3:30 CLOSE	3:45 CLOSE
Reversed Trend	75	64	64	119
Accelerated Trend	61	72	72	17

ADDITIONAL CONSIDERATIONS

One last area of concern in the media has been that the flows into leveraged and inverse funds themselves were to blame for market volatility. The argument typically goes that since fund flows into either leveraged or inverse funds are magnified, you would expect increases in assets to directly drive market volatility as those new positions were established.

FIGURE 17: LEVERAGED/INVERSE ASSETS & VOLATILITY



Source: IndexUniverse

Perhaps the most interesting thing here is how the assets in these products lag actual market volatility. The spike in assets in mid-2009 came during an environment of rapidly declining volatility in the S&P 500. Similarly, the rise in assets in the summer of 2010 came as volatility was on the wane. In the most recent volatility spike, assets in leveraged and inverse funds only increased after the VIX had spiked and stabilized over 35.

CONCLUSION

Leveraged and inverse funds aren't for everyone. In fact, they're not for most people. They're expensive, complex and require constant monitoring if held for more than a day. In this regard, they join a whole host of financial products that need to be used with extreme caution: options, futures, high-interest no-fee credit cards, adjustable rate mortgages, variable life insurance and car leases come to mind.

But these funds aren't driving the market. Their net exposure, assets under management and rebalance-driven trading are minor in the scheme of the U.S. equity markets. While their structure has the theoretical potential to drive momentum, the modern markets are so overwhelmed by the intraday trading of institutional index managers, hedge funds and high-frequency traders that the data shows no such impact at all.

Endnotes

- ¹ There are also funds that provide multiples of the monthly return of a given segment, as well as funds with variable leverage, but these products have insignificant assets and can be safely ignored for the purpose of this analysis.
- ² It is important to note that the funds themselves aren't buying or selling anything. All of the leveraged and inverse funds in the U.S. get their exposure through total return swaps. Their rebalancing trade is simply resetting the level of the swaps with counterparties—big banks—who in turn need to hedge their own risk. Whether they do that by buying and selling stocks at the close, or simply using the futures markets, eventually, someone in this chain of counterparties will be either making a naked bet on the market (unlikely) or hedging out their risk by putting trades into the actual securities in the market.
- ³ Another version of this analysis would look at the change in price from close to the next morning's open, testing the idea perhaps that closing prices were not reflective of market sentiment, and thus would revert the next morning. Excellent work on just this phenomenon was done by William Trainor of East Tennessee State University last year, so we have not duplicated his efforts. He found no predictive value in previous day's closing price movements.

ETF STRUCTURE & ASSET CLASS ISSUES

DEFINING THE MARKET

One of the fundamental falsehoods in the exchange-traded fund market is the term “ETF” itself. In reality, when most people say “ETF,” they really mean “ETP,” which stands for exchange-traded product.

Many of the products that trade under the “ETF” banner are not funds at all, but rather notes, commodities pools, trusts or other structures. Indeed, the very first ETF in the United States—the SPDR S&P 500 (SPY)— is not a fund at all, but a grantor trust.

This may sound like minutiae, but understanding the various structures in the ETP space can help investors avoid unnecessary risks and unwelcome surprises.

Defining Exchange-Traded Product (ETP)

An exchange-traded product is a pooled securities vehicle that trades on a stock exchange and has a continuous creation/redemption mechanism, allowing the number of shares outstanding to fluctuate based on investor demand. ETPs can take on different legal structures.

The term ETP, used in this sense, explicitly excludes closed-end funds (CEF), which do not have a continuous creation/redemption mechanism. CEFs are an important and controversial investment vehicle, but they are excluded from this conversation.

What is an Exchange-Traded Fund?

A classic ETF is a variant on the traditional, 1940 Act open-end mutual fund. It is essentially structured like a mutual fund, functions like a mutual fund and carries the same general protections as a mutual fund.

The chief difference is that, before an ETF can launch, its issuer must first ask for “exemptive relief” from some of the strictures that the Securities and Exchange Commission puts on traditional mutual funds. These exemptions can vary from issuer to issuer, but generally include:

- The ability to trade individual shares on a stock exchange at prices other than NAV
- The ability to only redeem shares in creation units, rather than individual shares.
- Exemption from the requirement to deliver a prospectus to every shareholder.¹

Morgan, Lewis and Bockius² note that the ETFs require relief from the following statutes of the 1940 Act: ETFs need relief from various sections and rules under the Investment Company Act: 2(a)(32), 5(a)(1), 22(d), 22(e), 22c-1, 17(a)(1), 17(a)(2), 12(d)(1).

Funds must also receive specific exemptions from parts of the 1934 Act (11(d)(1), 10b-10, 10b-17, 14e-5, 15c1-5, 15c-6, Rule 101 and 102³), as well as relief from the listing exchange to work around certain primary listing rules. All ETFs must file a 19b-4 application to receive listing approval with an exchange.

The majority of ETPs are ETFs under the 1940 Act.

¹ <http://www.indexuniverse.com/publications/journalofindexes/joi-articles/2305.html?start=1>

² http://www.morganlewis.com/pubs/ETFs360_FormulationRegulationTrading_19april11.pdf

³ http://www.morganlewis.com/pubs/ETFs360_FormulationRegulationTrading_19april11.pdf

What is a Unit Investment Trust?

A unit investment trust, or UIT, is an alternate product structure allowed under and regulated by the 1940 Act. UITs share many features with ETFs, but come with a few restrictions. For one, UITs must have a termination date when the product will be redeemed or canceled, although that date may be decades out in the future.

More importantly, unit investment trusts are more passive than ETFs. A UIT, according to the SEC, “does not have a board of directors, corporate officers or an investment adviser to render advice during the life of the trust.”

In practice, there are two main differences between UITs and ETFs:

1. UITs typically engage in “full replication,” buying every security in the index they track, rather than “optimization,” whereby a fund may buy some but not all the securities in the index it aims to track with the hope of replicating the full index’s return.
2. UITs cannot reinvest the dividends they receive, but must hold them in cash between quarterly distributions.
3. UITs cannot engage in securities lending.

Some of the largest (and oldest) ETPs in the world are UITs, including SPY and the PowerShares Nasdaq-100 QQQs.

What Is A Commodities Pool?

Many commodity and currency funds that hold futures contracts are regulated by the Commodity Futures Trading Commission (CFTC) as commodities pools. These products are not regulated under the 1940 Act at all, but rather under the 1933 Act. Commodities pools differ from funds in important ways: There is no requirement to have independent boards or annual meetings, for instance. The biggest difference, however, comes with how these structures are taxed, a factor that is covered below.

What Is An Exchange-Traded Note?

An exchange-traded note (ETN) is not a fund at all, but a debt instrument issued by an investment bank whereby the bank promises to deliver a certain pattern of returns to the holder of the note. While an ETN trades like an ETF and may be redeemed or created on a continuous basis, the holder has no claim on the underlying assets that it claims to track. Should the issuer of an ETN go bankrupt, note holders will be left as creditors of the firm. Typically, ETNs are unsecured, unsubordinated debt.

COUNTERPARTY RISK

There is widespread discussion of counterparty risk in the ETP industry, but it is too often confused and unclear. For shareholders of the products, there are four major sources of counterparty risk in U.S. ETP structures. They are listed below from most-to-least significant.

Exchange-Traded Notes

ETN investors are subject to the largest potential counterparty risk. ETNs are unsecured, unsubordinated debt notes—the entire value of the note is based on the credit of the underwriting bank. If that bank goes under, investors join the line of creditors with other bond holders.

Lehman Brothers, for instance, had two ETNs outstanding when it filed for bankruptcy. Although the products had minimal assets, anyone left holding those notes on the day the firm went bankrupt lost nearly all of their money.

The counterparty risk in ETNs is limited by the fact that the notes may be redeemed back to the issuer, typically on a daily basis. This may be stretched during periods of market disruption, but there is still a relatively quick pathway to redeem securities at NAV on a creation unit basis.

Swaps

Some ETFs, in particular leveraged/inverse ETFs and certain commodity pools, use swaps to gain access to the market. A swap is a privately negotiated contract whereby two parties agree to exchange a certain pattern of returns; i.e., for a fee, a bank will agree to provide a fund with 2X the daily move of the S&P 500.

Many people overstate the level of counterparty risk in a swap agreement, assuming that the fund hands over the full value it is investing to its counterparty. Typically, the two counterparties in a swap do not exchange any cash at first; it is only after the market moves by a certain amount that the swap counterparty has to post cash to true-up the account. Therefore, the value at risk in a swap agreement is limited to the movement of the underlying securities between the posting of collateral.

Some swaps require daily settlement; others extend further out. Investors who are concerned should investigate the specific policy of the ETF issuer.

Derivatives

Many ETPs use derivative instruments to gain exposure to the market. These may include either listed derivatives (futures, options, etc.) or over-the-counter (OTC) agreements. Listed derivatives have limited counterparty risk, as any agreements are guaranteed by the exchange or clearinghouse that hosts the trade. OTC derivatives do not share any prewritten guarantees, and therefore are subject to the full value in counterparty risk.

Securities Lending

The final major source of counterparty risk comes from securities lending activity. Many true ETFs engage in securities lending as a means to improve returns.

In a securities lending practice, a fund will lend out securities it holds to investors who want to sell them short. For instance, the iShares S&P 500 ETF (IVV) knows that it owns a lot of Exxon-Mobil (XOM) stock, and will do so for the foreseeable future. If someone wants to short XOM, IVV may lend those shares to the short-seller. In exchange, IVV will receive a fee, as well as collateral (typically) equal to 102% of the value of the loan. It may invest this collateral in certain types of securities. The short-seller will be required to post additional collateral if the position moves against them, to maintain the 102% hedge.

A well-run securities lending program can earn significant returns for investors. It is not, however, without some risk.

The primary risk is not what you would expect: that the borrower will go bust and not return the shares. While that happens, the risk is mitigated by the collateral requirements. The trouble comes when the collateral is aggressively invested by the fund company itself; if that investment goes wrong, the fund can lose money.

While there are regulations around what types of securities are allowed as collateral, they are not airtight. Still, the risk is de minimis: IndexUniverse believes it is the case that no end-investor in an ETF has ever lost money due to a securities lending problem. Some companies encountered problems during the Lehman bankruptcy, but the losses were minimal and each firm made its shareholder whole.

TAX RISK

ETFs are famous for being tax-efficient vehicles, and they are: Compared to traditional mutual funds, for instance, ETFs rarely pay out capital gains distributions of any size.

However, investors can run afoul of unfortunate tax consequences if they do not know how different ETFs are taxed on an asset class basis. This is particularly true once you break from traditional equity and fixed-income buckets. Many investors are unfamiliar with the tax treatment of commodities, currencies and derivative-based instruments.

ETF TAX PRIMER

An exchange-traded product's tax treatment depends on both the asset class it covers and its particular structure. A fund's asset class can be classified in one of five categories: equities, fixed income, commodities, currencies and alternatives. For tax purposes, exchange-traded products come in one of five structures: open-end funds, unit investment trusts, grantor trusts, limited partnerships (LPs) and exchange-traded notes.

Note: These structures do not match the legal structures mentioned above, as two (grantor trust and LPs) are tax-only structures. Most grantor trusts are physical commodity ETFs, and most LPs are commodity ETFs that hold futures.

Equity and Fixed-Income ETFs

Equity and fixed-income ETFs are largely familiar. No matter what structure they hold, gains upon sale are taxed at ordinary income rates for short-term holdings (<12 months) and as long-term capital gains for long-term holding periods (>12 months). That makes the maximum tax rate for long-term gains 15%, under current law.

Commodity ETFs

Commodity ETFs are more complicated, as commodity ETFs may be structured in three different ways: grantor trusts, LPs or ETNs.

Grantor trust structures are used for "physically held" precious metals ETFs, such as the SPDR Gold Trust (GLD) and the iShares Silver Trust (SLV). These and related funds store the physical commodity in question in vaults, giving investors direct exposure to spot returns. Under current IRS rules, investments in these precious metals ETFs are considered collectibles. Collectibles never qualify for the 15% tax rate applied to traditional equity investments; instead, long-term gains are taxed at a maximum rate of 28%. If shares are held for one year or less, gains are taxed as ordinary income (max 35%).

Many ETFs hold futures contracts to gain exposure to commodities, and are structured as LPs. Some commodity funds structured as LPs include the PowerShares DB Commodity Fund (DBC) and the United States Natural Gas Fund (UNG). Futures-based funds have unique tax implications. Currently, 60% of any gains are taxed at the long-term

capital gains rate of 15%, and the remaining 40% is taxed at the investor's ordinary income rate, regardless of how long the shares are held. This comes out to a blended maximum capital gains rate of 23%.

Limited partnership ETFs are considered pass-through investments, so any gains made by the trust are "marked-to-market" at the end of each year and passed on to its investors, potentially creating a taxable event. This means that your cost basis adjusts at year-end and you can be subject to pay taxes on gains regardless of whether you sold your shares or not.

For tax reporting, limited partnership ETFs also generate a Schedule K-1 form. This can create uncertainty and annoyance for the average investor not familiar with K-1s when they receive these forms in the mail.

Commodity ETNs do not hold the physical commodity, nor do they hold futures contracts; they are, as mentioned earlier, simply debt notes. As a result, commodity ETNs are currently taxed like equity and/or bond funds. Long-term gains are taxed at 15%, while short-term gains are taxed as ordinary income (max 35%). Despite the fact that many of these products track futures-based indexes, they do not generate a K-1.

Currency ETFs

Currency ETPs come in one of four structures: open-end funds, grantor trusts, limited partnerships or ETNs.

WisdomTree is currently the only issuer to offer currency ETFs structured as open-end funds. Some of their funds include the WisdomTree Dreyfus Euro Fund (EU) and WisdomTree Dreyfus Japanese Yen Fund (JYF). These funds hold short-term money-market debt instruments denominated in local currencies; other products may hold collateralized repos. Tax implications for these funds are similar to equity funds. According to WisdomTree's prospectuses, gains are taxed as long-term capital gains (15%) if held for more than one year; if held for one year or less, gains are taxed as ordinary income (max 35%).

Rydex's CurrencyShares are structured as grantor trusts. Each CurrencyShares product gives investors exposure to spot exchange rates of the underlying currency by holding the foreign currency in bank accounts. The taxation of CurrencyShares is straightforward. All gains from the sale of shares are taxed as ordinary income (max 35%), regardless of how long they are held by the investor.

Similar to commodity LP funds, currency funds that hold futures contracts are structured as LPs. These funds include the PowerShares DB US Dollar Index Bearish and Bullish Funds (UDN and UUP, respectively) as well as leveraged currency funds such as the ProShares UltraShort Euro Fund (EUO) and ProShares UltraShort Yen Fund (YCS). The tax implications for currency limited partnership ETFs are the same as commodity limited partnership ETFs—gains are subject to the same 60/40 blend, regardless of how long the shares are held. They're also marked-to-market at year-end and are reported on K-1s.

Some uncertainty surrounds the taxation of currency ETNs. Due to an IRS ruling in late 2007—Revenue Ruling 2008-1—gains from currency ETNs are now generally taxed as ordinary income (max 35%), regardless of how long the shares are held by the investor. However, according to the prospectuses of some currency ETNs, investors might have an option to classify gains as long-term capital gains if a valid election under Section 988 is made before the end of the day that the ETN was purchased.

Alternatives

Alternative funds come in one of three structures: open-end funds, limited partnerships or ETNs. Alternative funds seek to provide diversification by combining asset classes or investing in nontraditional assets. The tax implications of alternative funds fall in line with the tax implications for equities and commodities with their respective structures. For example, alternative funds structured as open-end funds such as the WisdomTree Managed Futures Strategy Fund (WDTI) and PowerShares S&P 500 BuyWrite Fund (PBP) are taxed like equity funds. Long-term gains are taxed at 15% and short-term gains are taxed as ordinary income (max 35%).

Alternative funds that hold futures contracts like some volatility, commodity and currency funds are structured as LPs. Some examples include the PowerShares DB G10 Currency Harvest Fund (DBV), iShares Diversified Alternatives Trust (ALT) and ProShares VIX Short-Term Futures Fund (VIXY). All gains are taxed at the blended 60/40 rate, regardless of holding period, creating a maximum blended tax rate of 23%.

Alternative funds structured as ETNs currently have the same tax implications as equity ETNs, with the exception of the iPath Optimized Currency Carry ETN (ICI). ICI is considered a currency ETN for tax purposes, with gains that generally get taxed as ordinary income regardless of how long shares are held.

CAPITAL GAINS (MAX LT / MAX ST)				
STRUCTURE/ASSET CLASS	EQUITY/FIXED INCOME	COMMODITY	CURRENCY	ALTERNATIVE
Open End (40's Act)	15/35	N/A	15/35	15/35
UIT (40's Act)	15/35	N/A	N/A	N/A
Grantor Trust (33 Act)	15/35	28/35	35/35	N/A
*Limited Partnership (33 Act)	N/A	**23/23	**23/23	**23/23
ETN (33 Act)	15/35	15/35	35/35	***15/35

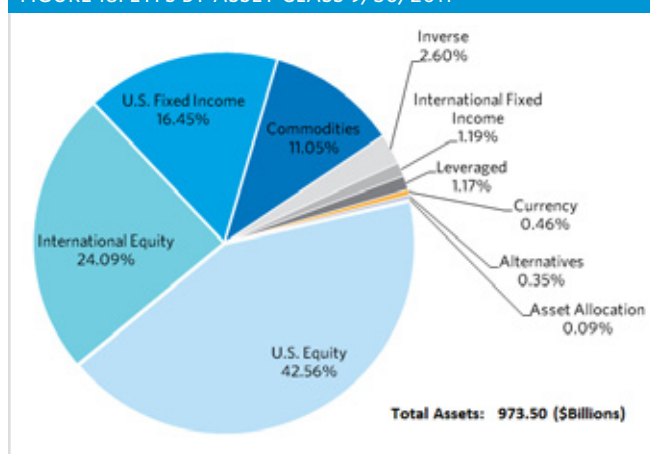
*Distributes K-1 **Max rate of blended 60 LT/40 ST ***Exception is ticker: ICI, which generally has a Max LT/ ST rate of 35/35

ASSET CLASS EXPOSURE AND EXPECTATIONS

One of the great things that ETFs have done is open up new areas of the market to investment, including international fixed income, commodities, currencies, alternatives and asset allocation strategies.

The vast majority of assets remains invested in the equity market. As of October 15, 2011 nearly 43% of all ETF assets in the U.S. was invested in U.S. equity funds, with another 24% in international equity and nearly 18% in bonds.

FIGURE 18: ETFs BY ASSET CLASS 9/30/2011



Source: IndexUniverse

That leaves just 15.72% of the pie invested in other areas of the market, most notably commodities (11.05%) and leveraged/inverse ETFs (3.77%). Nonetheless, it is these noncore asset classes that have presented the most challenges to investors, and where the calls for new regulation have been the strongest.

In addition to the tax risks highlighted above, there have been two areas of the market that have attracted significant investor concerns: leveraged/inverse funds and commodity products.

Leveraged/Inverse ETFs

Leveraged and inverse ETFs attracted significant investor attention—and significant regulatory concerns—since they launched in June 2006.

The goal of these funds is to deliver some multiple of an index's return: Generally 3X, 2X, -1X, -2X or -3X. They have found appeal with investors looking to make quick trades or to hedge exposure, without the risks and hassle of options, futures or margin accounts.

The mistake investors make is expecting the funds to deliver on their promised multiple of return over a long period of time. Most leveraged/inverse ETFs are designed to deliver a multiple of the index return on a daily basis; when this result is compounded over time, the ultimate return can vary widely from the expected multiple.

Consider this simple example (Figure 19). Suppose you have a 2X leveraged fund tracking an index, both of which have a starting value of 100. On day 1, the index rises 10%, moving from 100 to 110; the fund rises 20%, from \$100 to \$120. Everything is perfect.

But on day 2, the index falls 10%. That brings the index down from 110 to 99, while the 2X fund falls from 120 to 96. After two days, the index is down 1% while the 2X fund is down 4%.

The impact of compounding is path dependent: Generally speaking, funds will underperform in volatile markets, and outperform when markets are trending.

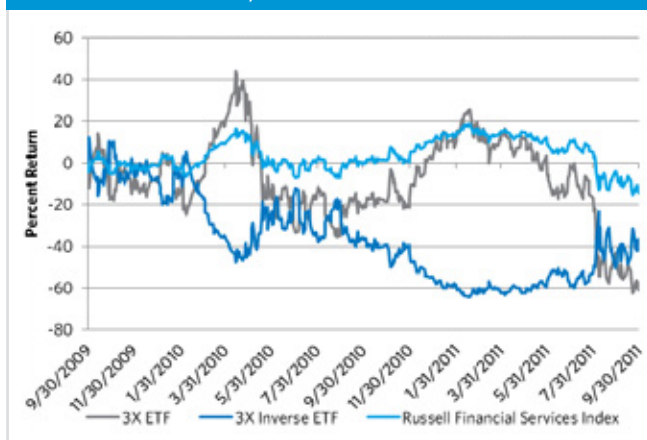
The impact can be significant. For instance, consider the Direxion Daily Financial Bull 3x Shares ETF (FAS) and the Direxion Daily Financial Bear 3X ETF (FAZ). Both provide geared exposure to the Russell 1000 Financial Services ETF.

For the two years ending September 30, 2009, the Russell index fell 14.16%. Investors who naively bought the 3X fund thinking it would deliver three times the return of the index over the long haul might have expected to lose 42.48%; instead, due to compounding, the fund actually dropped 61.09%.

FIGURE 19: COMPOUNDING EFFECTS EXAMPLE

	INDEX	2X FUND	DAILY RETURN
Start	100	\$100	
End Day 1	110	\$120	10%
End Day 2	99	\$96	-10%
Result	-1%	-4%	

FIGURE 20: LEVERAGED/INVERSE COMPOUNDING EFFECTS



Source: IndexUniverse

But the -3X fund did much worse. Investors could have bought this fund betting that financials would fall, and their market call would have been right. However, rather than deliver a positive 42.48% return, the fund actually ended the two-year period down 36.54%.

It's important to note that these funds did nothing wrong. They delivered on their core promise to investors, which is to provide 3X and -3X the daily return of the index. The word "daily" is right there in the name.

But some investors fail to read the fine print, and there has been a great deal of consternation about leveraged/inverse ETFs over the years. To this day, some major broker-dealers forbid their employees from purchasing these funds.

Contango And Commodities

The other major area of expectations error lies in the commodity space.

Individual investors and financial advisors have not historically had easy, direct access to the commodities markets. While some commodity mutual funds existed (notably, the PIMCO Commodity Real Return Fund), until the advent of ETFs, commodities were mostly something left to speculators and professional investors.

ETFs have done a wonderful job opening up the commodities market to average investors at low costs, but in so doing, they have exposed investors to an area of the market they are unfamiliar with, and about which they do not fully understand.

The chief problem in commodities lies with the way the futures market operates. While some ETFs provide direct exposure to physical commodities (most notably, precious metals bullion funds like GLD and SLV), most gain their exposure through the futures market. Investors who buy these funds anticipating spot returns have been disappointed, as commodity futures do not guarantee or deliver anything approaching spot returns over the long haul.

The return on any futures contract is actually composed of three different factors:

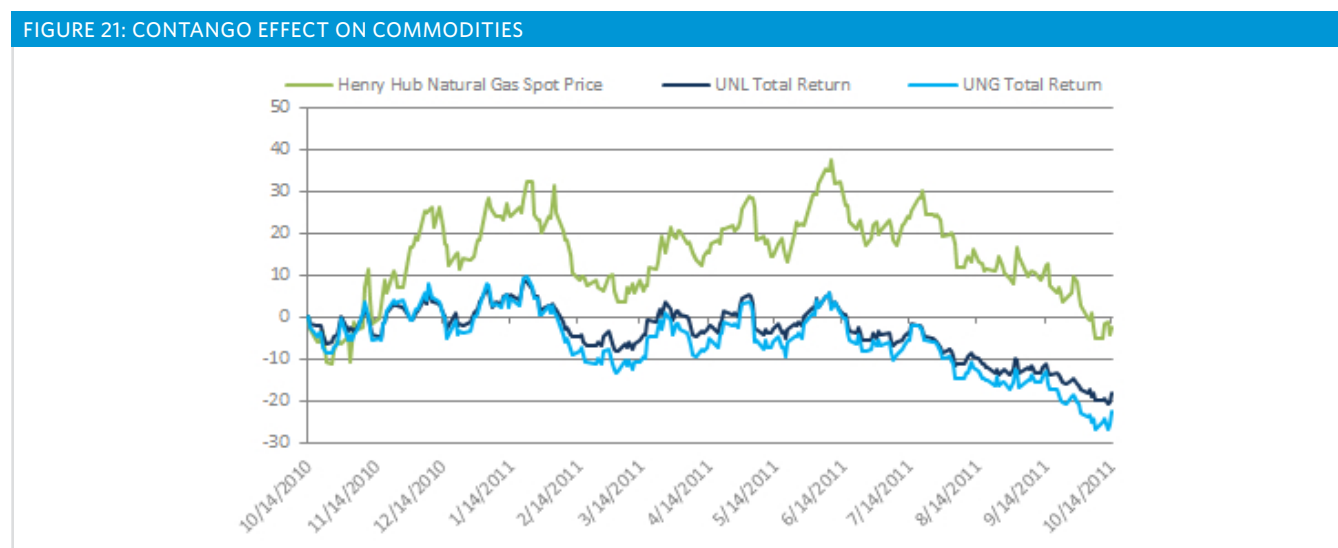
- Spot Return: Change in the value of the underlying commodity
- Interest Income: ETFs that use futures only put up a portion of the notional value of the exposure; the leftover money is typically invested in Treasuries, earning interest for the fund.
- Roll Yield: Futures contracts can be priced either higher or lower than the spot price of a commodity. When out-month futures contracts are priced higher than near-month contracts, this creates a drag on returns, a situation called "contango." When lower, it can enhance returns, a situation called "backwardation."

To understand the impact of contango, imagine that the current spot price of crude oil is \$80/barrel, but the front-month contract is trading for \$88/barrel. If a fund holds the front-month contract and carries it to expiration, if the spot price doesn't move, it will lose 10% of its value.

Unfortunately, many commodities have been trading in a harsh contango in recent years. The prime example is natural gas. For the year ending October 14, 2011, spot natural gas prices have declined a modest 2.5%. The largest natural gas ETF, however, the United States Natural Gas Fund (UNG), has declined 22.70%, as its returns have been ravaged by contango.

Understanding the potential, UNG’s sponsor—United States Commodity Funds—introduced a second ETF called the United States 12-Mo Natural Gas ETF (UNL). Unlike UNG, which rolls from the first to second month natural gas futures contracts, UNL spreads out its bets in equal portions over 12 futures contracts. Contango tends to concentrate in the front months of the curve, allowing UNL to mitigate some of the negative impact of contango, as shown in Figure 21.

None of this is guaranteed to continue. Natural gas could revert to backwardation at any time, in which case the futures contracts would begin to outperform spot. But in recent memory, contango has been king.



Source: IndexUniverse

In the end, as with many things in ETFs, the “fault” with commodity products does not lie with the products themselves, but with investors’ understanding of how those products work. The products have delivered well on their core promise to investors, providing the same pattern of returns as direct holdings of commodity futures would have done. But some investors didn’t fully understand the products before they bought them, and they therefore didn’t get the returns they expected.

Education is the key.

THE EUROPEAN ETF MARKET: DIFFERENT STRUCTURES, DIFFERENT ISSUES



The past six months have been troubling times for the European ETF industry. An alphabet soup of regulators has launched investigations into the fast-growing ETF market, warning investors of potential risks.

The trouble in Europe started in April, when the usually staid International Monetary Fund issued a Global Financial Stability Report warning of five key risks in the ETF market. These covered both U.S. and European ETFs alike, but the most damning concerns were about counterparty risks in the European synthetic ETF market.

From there, the European floodgates opened:

- The Bank of International Settlements issued a 15-page white paper titled “Market structures and systemic risks of exchange-traded funds.”
- The G20 Financial Stability Board subsequently published a report warning of the “potential financial stability issues arising from recent trends in Exchange-Traded Funds.”
- In June, Hector Sants, CEO of the Financial Services Authority, told a conference that “there are grounds for us to question whether synthetic ETFs are appropriate for retail investors.”
- In July, the European Securities and Markets Authority put forth an in-depth, comprehensive paper calling for a complete rewrite of the rules under which ETFs operate in Europe. It’s currently in the comment period.

FSB, ESMA, FSA, IMF, BIS ... suffice it to say that a lot of regulators are concerned.

KEY DIFFERENCE BETWEEN EUROPE AND THE UNITED STATES

Fortunately for U.S. investors, one factor driving these concerns deals with a specific kink in the way that some European ETFs—but not their U.S. counterparts—operate.

In the United States, most ETFs directly hold the assets they aim to track. In other words, an S&P 500 ETF will actually hold all 500 stocks (or nearly all 500 stocks) in roughly the same proportion as the underlying index. Most ETFs employ an age-old trust structure, whereby if the issuer of a given ETF were to go bankrupt, it would have no real impact on fund shareholders. Their assets would be safe and unimpeded, and the bankrupt issuer would have no way to tap into those assets to cover other costs.

About half the European ETF market works in a similar fashion. This style of creating an ETF is called “physical replication,” i.e., the ETF physically holds the securities that produce the fund’s returns.

The other half of the European ETF market uses what’s called “synthetic replication,” using collateralized swaps to gain exposure to a market. It’s an entirely different system with different risks.

When an authorized participant creates new shares of a physically replicated ETF, they will typically go out into the market and buy all the underlying securities that the ETF wants to hold. In a synthetic ETF in Europe, the AP will simply deliver cash to the ETF issuer.

You might expect the ETF issuer to take this cash and purchase the securities it wants to track, but it does not have to do so. Instead, it enters into a “swap” agreement with a bank (often, but not always, the same bank issuing the ETF). As with an ETN in the United States, the bank will then promise to provide the ETF with the exact return of the target index.

The difference is that ETNs leave investors 100% exposed to the credit risk of the underwriting bank. If JP Morgan underwrites an ETN in the United States and you buy it, you're 100% on the hook for the loss if JP Morgan goes broke.

By contrast, European swap-based ETFs are collateralized to a value of at least 90% of a fund's assets; in exchange for the ETF issuer's cash, the bank must provide the ETF with collateral equal to or greater than that 90% minimum. This collateral will typically be stocks, bonds and other liquid securities, but those securities do not necessarily have anything to do with the index the fund aims to track. Japanese small-cap stocks could theoretically be used to collateralize a Euro STOXX 50 ETF.

The collateral is a good thing, as it mitigates counterparty risk. Were the underlying bank to go bust, the ETF would be able to sell the collateral assets to help make investors whole. The amount of that collateral is periodically "trued up" to ensure that it stays above the 90% mark.

So what's the concern? For one, the 90% mark leaves 10% to be desired. While some collateralization requirements stretch to the full 100%, not all of them do.

Second, the quality of that collateral is variable. There are rules around what constitutes quality collateral for these swaps agreements, but they are much less precise than the rules in the United States. Banks are able to deposit relatively illiquid securities into these collateral baskets, including things like unrated corporate bonds, which may be difficult to sell in the event of a market downturn.

That is exactly regulators' concern. Many of the systemic concerns center on worries about what would happen in a falling market should a central counterparty collapse, leading to significant redemptions from ETFs. If a major ETF underwriter collapsed, would the ETFs—facing redemptions—be able to sell these illiquid assets for anything close to their true value? And, would those sales push down asset prices, causing further liquidity crunches, etc.?

Conversely, could the collapse of a European sovereign government like Italy—and the subsequent marking down of collateral baskets holding Italian bonds—force banks to cough up significant cash to meet collateral requirements at a difficult time for the capital markets? Could that itself force banks into insolvency?

Both may seem unlikely scenarios, but the variable nature of many collateral pools has given some investors and regulators pause.

WHAT WILL HAPPEN?

The level of panic among regulators in Europe seems to have subsided. The July discussion paper released by ESMA took a very sensible approach to actually improving the quality of transparency and safety in the regulatory market. ESMA suggested a variety of specific changes, including:

1. The use of clear language in product marketing materials to define what constitutes an ETF and to convey whether the fund uses synthetic replication, full replication or sampling to provide exposure to an index.
2. Transparent disclosure of the type of collateral that can be used in synthetic ETFs, so that investors can accurately assess the risk.
3. Annual disclosure of counterparties, full collateral lists, and more.

4. For physically replicating ETFs, more transparency around the risk of securities lending and details around how proceeds from that lending practice are distributed.

All of those are perfectly sensible changes, and would go a long way toward helping investors appropriately understand their risks.

ARE THERE COROLLARY RISKS IN THE U.S.?

For the most part, concerns about synthetic replication in Europe are only valid for the European market. There are no synthetic ETFs here, and fund assets are ring-fenced in one of several trust structures and should be protected from cascading failures in the market.

To the extent that there are concerns, they would focus on one of three things: exchange-traded notes, securities lending within funds, or leveraged and inverse ETFs.

Exchange-traded notes

Exchange-traded notes, or ETNs, are debt instruments that function similarly to ETFs. They trade on an exchange, and are designed to provide exposure to a particular market. Unlike an ETF, however, owners of ETNs do not have any claim on the underlying securities the product holds; indeed, ETNs do not hold underlying securities, but are simply debt notes issued by a bank. Were that bank to go bankrupt, investors would lose their money, just as they would if they held that bank's bonds.

While ostensibly riskier for investors than the collateralized synthetic structure in Europe, ETNs do not carry any systemic risk, as banks can simply default on their promise as they would on a bond.

Securities lending

Securities lending is the process of loaning out the securities held within a fund as a way of generating extra profits for the shareholders.

As in Europe, U.S. ETFs (along with many mutual funds and institutional pools of assets) actively engage in share lending activities, generally to the benefit of the fund. Unfortunately, there is currently very little disclosure around this process, from how much of a fund is lent out at any given time to how the collateral posted in the transaction is invested. Rules and regulations for securities lending are tougher in the U.S. than they are in Europe, leaving investors generally exposed to little more than overnight market-movement risk, but still, increased transparency would be beneficial.

Finally, certain ETFs in the United States (including most leveraged and inverse products) rely on swap agreements to gain exposure to the market. While these swap agreements (again) face tighter collateral requirements versus those in Europe, there is still limited information available to investors about what that collateral is, how it's invested, or who the counterparties in those arrangements are. Better disclosure of that information would improve things for all investors.

Still, the driving concern in Europe relates specifically to the synthetic replication method, which is not used by any U.S.-based ETF. It is a market worth watching, but the concerns aren't directly reflected in the U.S. environment.

ETFs have overwhelmingly been a pro-investor tool. They have lowered barriers and costs more than any other financial innovation, allowing the average investor to participate in the world's markets on an equal footing with some of the largest institutions in the world. They have brought transparency to previously opaque markets, and liquidity to asset classes that previously traded in private, "members-only" over-the-counter environments.

Despite these positive attributes, we recognize that the current system of financial regulation in the United States leaves ETFs in a precarious position. As covered in this document, there is no regulation that proactively covers ETFs—they live in a regulatory maze of loopholes, exemptive relief and no-action letters. ETFs are the platypus of financial services—neither stocks nor mutual funds, but somewhere in between. And like the platypus—one of the world's only venomous mammals—they are potentially lethal to the unwary.

Many investors are unwary. Because ETFs are bought (like a share of Microsoft) rather than sold (like a share of Fidelity Magellan), there is no opportunity to interpose a regulatory safety barrier between the investor and the product before a transaction can go through. There's no pathway to ensure that investors are educated about a particular ETF, asset class or legal structure before they trade.

And in the absence of good information, investors often make bad decisions.

The myriad legal structures—notes, open-ended investment companies, trusts, commodities pools—lead to further difficulties. It's simply not enough to delegate the regulation of ETFs to the SEC, or FINRA, or the CFTC, or exchanges. Nor is it enough to modify the 1940 act or the 1933 act. Too many loopholes would remain.

Finally, the increasing importance of ETFs with a broad range of investors, from pension funds to high-frequency traders to young people opening their first retirement accounts, means that increased access to data on how ETFs are actually traded and used is paramount.

To this end, we continue to recommend two primary actions by regulators:

1. Enact comprehensive and specific ETF regulation that would eliminate the need for loopholes, exemptions and other work-arounds. Such regulation should ...
 - Clearly define the acceptable legal structures for ETFs
 - Standardize portfolio, securities lending, conflict of interest and expense disclosures
 - Establish classes of acceptable securities, derivatives and practices
 - Provide for "gating" products that have special risks (commodities, leveraged and inverse funds, single counterparty ETNs) in a manner similar to how futures and options are gated before being available to individual investors
2. Instruct the NSCC to immediately increase the transparency of ETF trading, including ...
 - Public access to daily disclosure of settlement aging, highlighting how long shares of every security have been in settlement past T+3
 - Public access to direct information on shares held long and short in ETFs
 - Public access to information on the NSCC stock borrow program in ETFs

-
- Public and accurate reporting of all creation/redemption activity
 - Public access to create/redeem files on a daily basis

ETFs have been a boon to investors for over 20 years. With a modicum of attention and care from regulators, we believe they'll remain so in perpetuity.

GLOSSARY

Arbitrage

The simultaneous purchase and sale of an asset in order to profit from a difference in the price. Used by authorized participants during creations/redemptions to profit while keeping ETF prices close to net asset value (NAV).

Assets Under Management (AUM)

The total dollars invested in a fund.

Authorized Participants (AP)

APs are the only agents authorized to create or redeem baskets of shares in exchange for shares in the ETF.

Counterparty Risk

Counterparty Risk is the risk of default by the issuer of an ETN. Because ETNs are unsecured debt instruments, the probability of default by the issuer is the risk borne by the holder of an ETN.

Creation/Redemption

The process by which authorized participants generate or destroy shares of an ETF. An AP will buy securities and turn them into ETF issuers for ETF shares, or purchase ETF shares and trade them to issuers for underlying securities.

Creation Unit Size

A creation unit size is the smallest block of ETF shares that an Authorized Participant can either create or redeem at NAV with the fund company in exchange for the underlying shares of the ETF.

ETF

Exchange-traded fund, an investment vehicle like a mutual fund, but traded on an exchange like stocks.

Exchange-Traded Note (ETN)

An Exchange-Traded Note is an unsecured debt security backed by the credit of the issuer, promising to provide the return of a specific index.

Expense Ratio

The expense ratio is the annual fee a fund holder pays to the issuer.

Forwards

A Forward is a private futures contract with price, date and quality customized to suit the needs of the buyer and seller.

Futures

A Futures contract is a standardized contract to buy or sell a specific asset of a specific quality at a certain date and price in the future.

Grantor Trust

A Grantor Trust holds a fixed portfolio of assets and issues shares based on the value of those assets. Grantor trusts aren't securities, don't track an index and aren't rebalanced from time to time.

iNAV

An intraday assessment of an ETF's net asset value (NAV), calculated every 15 seconds.

Inverse ETF

Inverse ETFs provide opposite (and sometimes multiplied) exposure to the same segment as this fund over a specified time period.

Issuer

An issuer is a company that produces and operates ETFs.

Leveraged ETF

Leveraged ETFs provide leveraged (multiplied) exposure to the same segment as this fund over a specified time period.

Market Maker

A broker-dealer firm that accepts the risk of holding a certain number of shares of a particular security in order to facilitate trading in that security.

Net Asset Value

Net Asset Value is the total market value of the assets that an ETF holds.

Open-End Fund

An Open-End Fund is a regulated investment company. An Open-End fund can optimize a portfolio, hold derivatives and lend shares on behalf of shareholders.

Premium/Discount

The premium/discount is the amount by which the current market price differs from the net asset value of an ETF.

Shorting

The practice of selling securities that have been borrowed from a third party with the intention of buying identical assets back at a later date to return to that third party.

Swaps

A Swap is an agreement to trade one series of payments for another.

Unit Investment Trust

A Unit Investment Trust is an investment fund with certain restrictions. ETFs that are UITs must fully replicate the index they track, and must hold all dividends received in cash until paid to the shareholders.



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