S. HRG. 112–400

MARKET MICROSTRUCTURE: EXAMINATION OF EXCHANGE-TRADED FUNDS (ETFs)

HEARING

BEFORE THE

SUBCOMMITTEE ON
SECURITIES, INSURANCE, AND INVESTMENT

OF THE

COMMITTEE ON
BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE

ONE HUNDRED TWELFTH CONGRESS

FIRST SESSION

ON

EXAMINING EXCHANGE-TRADED FUNDS (ETFs)

OCTOBER 19, 2011

Printed for the use of the Committee on Banking, Housing, and Urban Affairs

Available at: http://www.fdsys.gov/

U.S. GOVERNMENT PRINTING OFFICE

74–309 PDF WASHINGTON : 2012

For sale by the Superintendent of Documents, U.S. Government Printing Office
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WEDNESDAY, OCTOBER 19, 2011

U.S. SENATE,
SUBCOMMITTEE ON SECURITIES, INSURANCE, AND INVESTMENT,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Subcommittee convened at 9:32 a.m., in room SD–538, Dirksen Senate Office Building, Hon. Jack Reed, Chairman of the Subcommittee, presiding.

OPENING STATEMENT OF CHAIRMAN JACK REED

Chairman REED. Let me call the hearing to order, and as a first point, let me express Senator Crapo's disappointment that he could not join us here today. He and his staff have been very actively engaged in this hearing. In fact, his suggestion and advice about looking at some of these issues was absolutely critical in organizing this hearing. He has been summoned before the Joint Committee as a member of the so-called Gang of Six, and I think you can recognize that as a place he must be. I hope he can get back here in time, but I just wanted to make it clear that we worked very closely together on this hearing and I value his cooperation, his participation, and his insights.

Let me welcome everyone here to the hearing entitled "Market Microstructure: Examination of Exchange-Traded Funds."

Over the last 10 years, exchange-traded funds, or ETFs, have grown considerably in number and in size. The *New York Times* recently noted that ETFs are, quote, "perhaps the hottest rage in investing, with some $1 trillion invested." ETFs are particularly attractive to some investors because you can bet long or short and you can leverage your bet, and you can hop in and out with the trading day to lock in gains just as with stocks.

While these products were initially marketed to institutional investors, more and more mainstream investors are purchasing them. Currently, approximately 50 percent of ETF assets in the United States are held by retail investors.

Critics of ETFs have labeled them as, quote, "new weapons of mass destruction that are turning the market into a casino on steroids." Others believe they are a more efficient, modern, and tax advantaged method of investing.

So what are ETFs? In many ways, ETFs appear to be a cross between a mutual fund and an equity security. ETFs allow investors to invest in a certain basket of stocks or commodities or track an index. The first ETFs in the early 1990s offered an investor a portion of a basket of equity securities found in a certain index. For example, an early ETF gave an investor a slice of a pool of stocks in the S&P 500.

Additional innovation in ETFs has resulted in products that can magnify returns of various indexes by embedding derivatives and other forms of leverage. Theoretically, a leveraged ETF with one dollar from investors and one dollar from leverage would return 2 percent for each 1 percent movement in the underlying index. Other ETFs, called inverse ETFs, seek to return the inverse of an index, such as providing a 1-percent return for every 1 percent decline in the S&P 500. ETFs are also popular trading products. According to Morningstar, trading in ETFs currently generates 35 to 40 percent of exchange trading volume. Clearly, trading in these products is impacting the capital markets.

The structure and regulation of ETFs in the United States differ from ETFs in Europe. European products generally are marketed to institutional investors and involve more derivatives.

Regulators are focusing more and more attention on these ETFs. The role of ETFs during the May 5, 2010, Flash Crash, when market indices declined significantly in a matter of minutes, has also focused attention on these products. In Europe, the Financial Stability Board raised alerts in April of this year about the increasing complexity, opacity, and interconnectedness of the ETF market. In the United States, the Financial Stability Oversight Council recently cautioned both the United States investors and regulators regarding the possibility of liquidity and counterparty exposure emanating for foreign domiciled ETFs. In addition, the Securities and Exchange Commission, the Financial Industry Regulatory Authority, and the North American Securities Administrators Association have issued alerts to mainstream investors who are increasingly purchasing ETFs as an alternative to mutual funds. They are also cautioning investors to ask questions about these complex products and to understand how they relate to an individual's investment objectives.

Recently, financial commentators have been debating the degree to which ETFs may be adding to market volatility. One noted columnist has described leveraged ETFs as the new derivative and, in his words, the culprit behind late day market swings.

Do ETFs put our economy at risk by representing significant systemic risk concerns? Are they the new weapons of mass destruction as some have suggested? How do these products affect trading practices? Are these products increasing market volatility? Are market regulators dealing effectively with the growth and risk of ETFs? Are these products affecting price discovery on traditional equities? What implications do ETFs have on Main Street businesses and small business capital formation? And are there adequate controls in the marketplace to deal with these increasingly popular financial products, especially for mainstream investors?

ETFs are complex products and these are complex questions. We are attempting to tackle many of these questions today. I certainly look forward to the testimony of our witnesses as we proceed.

Now let me introduce our panel of witnesses, and let me also, before I do that, indicate that all of your statements have been made part of the record, so feel free, in fact, feel extraordinarily free to summarize your testimony.

[Laughter.]

Chairman REED. We will try to give you all 5 minutes, but the record will be full of your detailed statement and I think the best way to proceed is to give us sort of your summarized insights.

Our first witness is Eileen Rominger. Ms. Rominger is the Director of the Division of Investment Management at the U.S. Securities and Exchange Commission. Ms. Rominger was sworn in by Chairman Mary Schapiro on February 16, 2011, and is responsible for developing regulatory policy, administering the Federal securities laws applicable to investment advisors, mutual funds, ETFs closed end funds, variable insurance products, and unit investment trusts.

Prior to becoming the Investment Management Director, Ms. Rominger was with Goldman Sachs Asset Management as the Chief Investment Officer, responsible for managing core portfolio teams, including fixed income, equity, and quantitative strategies. She previously worked for 18 years at Oppenheimer Capital, where she was a Portfolio Manager, Managing Director, and a member of the Executive Committee. Thank you very much.

Eric Noll is Executive Vice President Transaction Services for the NASDAQ OMX Group, Inc. Mr. Noll oversees the trading operations of all of the U.S. transactions services businesses. Mr. Noll joined NASDAQ OMX from Susquehanna International Group LLP, where he served as Associate Director and Global Head of Strategic Relationships and as Managing Director of Susquehanna Financial Group. During his time at Susquehanna, Mr. Noll oversaw all the exchange relationships, created the Investment Banking Department, developed an Institutional Equity Research Department, and was responsible for all options and equity order flows for the order maker operation. And prior to his time at Susquehanna, Mr. Noll held a positions at the former Philadelphia Stock Exchange and the Chicago Board Options Exchange. Thank you, Mr. Noll.

Noel Archard is a Managing Director at BlackRock and currently heads the I–Shares product function in North America, which is responsible for product research and development, product management, the management of I–Shares in capital markets, and product services and analytics. Mr. Archard joined I–Shares in 2006, then part of Barkley's Global Investors, which merged with BlackRock in December of 2009. He also spent over 10 years at the Vanguard Group, first working with their brokerage service unit and then moving into their exchange-traded funds group.

Our final witness, Mr. Harold Bradley, serves as Chief Investment Officer for the Ewing Marion Kauffman Foundation, managing a $1.8 billion global investment portfolio that uses hedge funds, alternative investments, swaps, ETFs, and other derivative instruments. Mr. Bradley serves today on the Pension Managers Advisory Committee of the New York Stock Exchange and on the Financial Analysts Seminar Board of Regents for the CFA Institute. He formerly served on the board of Archipelago Holdings LLC, one of the largest traders of ETF securities, prior to its acquisition by the New York Stock Exchange. Mr. Bradley has traded common stocks, managed small capitalized stock portfolios for American Century Mutual Funds, and worked on a committee there to understand how to structure actively managed exchange-traded funds.

As you can see, we have a very impressive panel and thank you all for joining us today. Ms. Rominger, would you please begin.

STATEMENT OF EILEEN ROMINGER, DIRECTOR, DIVISION OF INVESTMENT MANAGEMENT, SECURITIES AND EXCHANGE COMMISSION

Ms. ROMINGER. Thank you. Chairman Reed, Ranking Member Crapo, Members of the Subcommittee, my name is Eileen Rominger and I am Director of the Division of Investment Management at the Securities and Exchange Commission. I am pleased to testify on behalf of the Commission on the topic of exchange-traded funds, or ETFs, as they are commonly known.

ETFs are a type of exchange-traded product, or ETP, that must register as investment companies. Since their inception in the 1990s, there has been a proliferation of these funds in the marketplace. As ETFs have gained in popularity, ETPs have expanded from ETFs tracking equity indexes into the development of a variety of exchange-traded products, including those based on fixed income instruments, commodities, currencies, and foreign securities. This product development has generated increasingly complex structures, such as leveraged, inverse and inverse leveraged ETFs. ETFs in the U.S. have grown to account for approximately $1 trillion in assets, or about 10 percent of the total long-term U.S. open end investment company industry, with U.S. domiciled ETFs making up about two-thirds of global ETFs.

ETFs combine features of a mutual fund, which can be purchased or redeemed at the end of each trading day at its net asset value, with the intraday trading feature of a closed-end fund whose shares trade throughout the trading day at market prices that may be more or less than its net asset value. Apart from the fact that ETFs trade intraday, most ETFs are similar to mutual funds in that they both translate investor purchases and sales in the fund—and changes in investor sentiment—into purchases and sales of the underlying holdings. Some ETFs, however, are structured in a way that require the purchase or sale of underlying holdings based on movements in the market, even absent investors' purchases or sales of the ETF. This is the case for leveraged, inverse, and inverse leveraged ETFs.

Like operating companies or closed-end funds, the offerings of the shares of ETFs are registered under the Securities Act and a national securities exchange lists the ETF shares for trading. As with other listed securities, investors may trade ETF shares in off-exchange transactions. In either case, ETF shares trade at negotiated prices.

An ETF, as an investment company, must file a registration statement with the Commission under the 1940 Act and register the offering of its shares under the Securities Act. In addition to registering under the 1940 Act, under existing regulations, the ETF must rely on an order, typically issued to the ETF's sponsor, giving relief from certain provisions of the 1940 Act that would not otherwise allow the ETF structure.

While ETFs are typically registered with the SEC as investment companies, there are other exchange-traded products that do not hold securities but instead hold commodity or currency-based assets and therefore, are not subject to the provisions of the 1940 Act. The issuers of these exchange-traded products register the public offerings of their securities with the Commission under the Securities Act and become subject to the periodic reporting requirements of the Securities Exchange Act of 1934.

Prior to listing and trading ETP shares on a national securities exchange, the exchange must file a proposed rule change with the SEC that, if approved, would permit such a listing and trading. To approve such a proposal, the Commission must determine that the proposal is, among other requirements under the Exchange Act, designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to remove impediments to, and perfect the mechanism of a free and open market, and, in general, to protect investors and the public interest.

In addition to the Commission's oversight of ETFs as investment companies and the public offering of ETP shares and issues relating to their listing on exchanges, the SEC staff also periodically inspects and examines SEC registered investment advisers, broker-dealers, and exchanges in connection with issues related to ETFs, and, as appropriate, ETPs. In addition, staff investigates allegations of misconduct concerning ETPs by market participants. Such misconduct could include inadequate or misleading disclosures in offering documents and marketing materials as well as insider trading or improper sales practices.

Because of the growth and development in such ETFs and ETPs, the Commission has been actively following, and continues to engage in the analysis of, these products. SEC staff is continuing to examine the dynamics of ETF trading, the arbitrage mechanism designed to keep the prices of ETFs close to the value of the underlying securities, and linkages, both intended and unintended, between ETFs and the markets as a whole.

In March 2010, Commission staff determined to defer consideration of exemptive requests for ETFs seeking to register under the 1940 Act and make significant investment in derivatives. This action was taken in light of concerns raised generally about the use of derivatives by all 1940 Act investment companies, including ETFs. While staff recognized that the use of derivatives is not a new phenomenon, the staff determined that increasing complexity of derivatives and their growing use by funds made it the right time to reevaluate the Commission's regulatory protections.

As part of this review, in August 2011, the Commission issued a concept release seeking broad public comment on funds' use of derivatives and on the current regulatory regime for derivatives under the 1940 Act as it applies to funds' use of derivatives. The comment period for this concept release expires on November 7 and the staff looks forward to reviewing the comments that we receive on that concept release and we will carefully assess those comments in determining how to proceed.

Thank you very much for the opportunity to testify today.

Chairman REED. Thank you very much.
Mr. Noll, please.

STATEMENT OF ERIC NOLL, EXECUTIVE VICE PRESIDENT TRANSACTION SERVICES, NASDAQ OMX

Mr. NOLL. Thank you, Chairman Reed.

As we examine issues around ETFs, we should recall that these products have done a lot of good for investors since they were developed 20 years ago. They have reduced the cost of investing. They have reduced the risk of equity investment and have broadened the tools to hedge risk. They are a key way many Americans invest.

These are volatile times in our markets, and in such difficult times, it is natural to look for a cause. ETPs, or exchange-traded products, are a tempting product, but restricting ETPs will not solve the debt crisis in Europe, will not balance the U.S. budget, will not restore bank balance sheets, and will not add jobs. There are very large, very real uncertainties driving global market volatility. In fact, ETPs provide investors with very valuable diversification, hedging, and risk management opportunities in these difficult times.

These products provide critical benefits to publicly listed companies. By included in a single diversified security, companies gain access to a greater audience of investors who may not have bought the individual stock, meaning the markets are deeper and more liquid, benefiting all investors and the economy as a whole.

The QQQ is one of the most widely and traded securities in the world, and I can tell you from personal experience that the companies that make up the QQQ consider it a very real achievement to be included in it.

It is really hard to overuse the word "transparent" when talking about ETPs. That is why some investors prefer them over similar products, like mutual funds. Mutual funds and ETPs play different roles in investors' portfolios, but ETPs' low cost and transparency make them an important category that should remain widely available.

Since these products were first introduced, innovations have propelled them from simple indices on baskets of stocks to a host of other complex financial strategies for investors. I believe the proliferation of ETPs and asset growth in ETPs has happened perhaps a little more quickly than the needed broader education about the products and their structures to investors, regulators, academics, and policy makers, allowing for the formation of some incorrect assumptions about the products.

The common flawed assumption is that all ETPs are constructed the same and are based on and tracked in an underlying index. That is not always the case, but that does not infer that the product category is not beneficial to the marketplace and to investors.

Innovation has allowed ETPs to adapt from ETFs tracking baskets of domestic securities to more sophisticated products, in some cases holding derivatives and/or using leverage as a tool for the product's investment objective. These new products add value in that they offer new and unique exposure to the markets. Investor education and disciplined application of suitability requirements for any prospective holder of a product will continue to be paramount as ETP numbers grow.

We believe that ETPs are of limited concern when evaluating them in the context of financial systematic risk. While activity in ETPs can generate corresponding transactions in the underlying securities, ETPs pale in comparison with other financial instruments. Some have tried to use the extraordinary trading environment experienced over the last year to connect ETP activity with chaotic trading days. These analyses ignore the unparalleled uncertainties that the market must process during the fast pace news and information cycle of the modern trading day.

From flirtations with failure in Europe to potential Government debt payment interruptions in the U.S., our markets are simply trying to rationalize and apply metrics across far too many unknowns. ETPs do not cause this. They are just trying to move within this turbulent environment.

We looked at trading in ETFs on a normal and volatile day, and it varies roughly in proportion with the overall trading in the marketplace. When news breaks and market prices move, trading volumes increase in both the ETFs and the underlying stock. The largest ETFs track the S&P 500 Index. As a group, they trade about $40 billion worth of volume each day. The large, that is relatively small compared to the underlying stocks, which trade $125 billion in the stocks that make up the index.

On very volatile trading days, such as those in early August, trading in both ETFs and the underlying stocks increased, but many investors managed the market risks using the ETFs. Trading in ETFs rose slightly more on a percentage basis than trading in the underlying.

Within those early days in August, ETF volume fluctuated along with the volume of underlying stocks. Late in day trading of the stocks underlying the index actually increased disproportionately, as many investors and traders adjusted their exposure near the end of the day. Trading in the ETF was relatively less active late in the day. That is not uncommon, as many firms and mutual funds and institutional investors use the closing cross process at the exchanges to balance their books and to gain their positions.

The trading patterns we observe in ETFs are what you would expect from a popular and useful investment vehicle. It is not surprising to see increased volume near the close and when volatility is high. The amount of the increase is consistent with the value that these securities provide investors and traders in managing their exposure to very real macroeconomic and political events that have driven markets recently.

A quick moment on regulation. NASDAQ, Market Watch, FINRA, and the SEC monitor activity in all the securities traded and listed on NASDAQ, including ETPs. The SEC and exchanges partnered to refine trading rules for all assets, including ETPs. Trading of the ETPs is protected by the same volatility protection provided equities.

Following the 2008 financial crisis and the 2010 Flash Crash, we implemented two market-wide changes to impact the volatility on stock prices. First, we implemented new short selling restrictions triggered whenever a securities price falls more than 10 percent on a day. Second, all markets have adopted single stock trading pauses that occur when a securities price moves rapidly over a 5-minute period. The exchanges and the SEC are working to potentially upgrade the single stock trading pause to a market-wide limit up/limit down rule.

Finally, comparing the U.S. ETPs with foreign-based ETPs, like in Europe, clearly, the U.S. product design is superior. Under the Investment Act of 1940, it is not permitted to have vertical silos of both the issuers, custodians, index calculators, and other providers of services to ETFs. In addition, collateral must be what is issued by the ETF here, which is different than it is in Europe.

In closing, we feel that ETPs have grown in popularity because of their proven usefulness in helping investors diversify and manage risk in today's complicated markets. We believe that regulatory community is well positioned to monitor and discipline the growth and innovation within the important category of financial products.

I am happy to answer any questions you may have.

Chairman REED. Thank you very much, Mr. Noll.

Mr. Archard, please.

STATEMENT OF NOEL ARCHARD, MANAGING DIRECTOR, BLACKROCK I-SHARES

Mr. ARCHARD. Thank you, Chairman Reed. My name is Noel Archard and I am a Managing Director at BlackRock, where my responsibilities include product development and our ETF business, which operates under the I-Shares brand. As a global leader in exchange-traded funds, BlackRock welcomes the focus of this Subcommittee on ETFs and related products.

ETFs offer both individual and institutional investors a low-cost, flexible way to invest in stocks and other asset classes that track indexes, and they allow investors to diversify their risk easily and efficiently by accessing different areas of the global markets within one investment portfolio.

Investment in ETFs by both institutional and retail investors has grown steadily over the past two decades. Global ETF assets are now estimated to be $1.4 trillion. Nearly $1 trillion of that is in the U.S. market. This growth has come because investors value the transparency, efficiency, and simplicity of ETFs. However, it is incumbent on our industry and our regulators to ensure that investors who purchase ETFs know what they are buying and appreciate the risks and costs associated with these products.

The first ETFs were relatively straightforward products. They tracked broad benchmarks, such as the S&P 500 or individual country indexes. In the past few years, however, ETF sponsors have introduced more complex exchange-traded products. As the complexity of these products has grown, some products have not met investors' expectations and in other cases they have failed to maintain appropriate standards of transparency and simplicity. This has introduced new risks to investors that may not be fully understood, or importantly, may not be important for long-term investors. Products which raise such concerns include so-called leverage and inverse funds as well as products that are backed principally by derivatives rather than physical holdings.

BlackRock believes that these products should not be called ETFs. To increase understanding and avoid confusion among investors, they require a different label. It is important to note that these products currently make up less than 10 percent of the ETF assets in the U.S., but they have created concerns about the role of all ETFs in the marketplace, including the more than 90 percent of ETF assets that are straightforward ETFs backed by physical holdings.

One of these concerns is the relationship between the growth of ETFs and current market dynamics. Our analysis of the data does not suggest that ETFs increase market volatility. Indeed, the evidence available to us shows that the broad dynamics of market volatility are reflective of overall economic uncertainty. As discussed in our written testimony, increased market volatility leads to increased investment in ETFs, not the other way around. This is because ETFs allow investors to diversify their risk efficiently.

Nevertheless, these concerns must be addressed by the industry and our regulators in order to ensure that the benefits to investors provided by the majority of ETFs continue to be realized. With this goal in mind, BlackRock has called for new standards for ETFs and exchange-traded products more broadly to enhance transparency and investor protection.

For the U.S. marketplace specifically, BlackRock recommends a package of important steps. First, investors should know what they are buying and what our products' investment objectives are. As spelled out in our written testimony, this can be achieved by establishing a standard classification system with clear labels to clarify the differences between products. The ETF industry today, both in the U.S. and globally, is not doing a sufficient job in explaining those differences consistently. The label ETF should refer only to a specific subcategory that meets certain agreed standards. That subcategory should exclude any leveraged and inverse products and any primarily derivatives based products currently described as ETFs.

Second, investors should understand what the product they are buying holds. Ideally, the goal should be daily disclosure of holdings and exposures, though we recognize the practical, technical, and legal constraints may currently prevent full disclosure of all portfolio holdings.

Third, investors should have complete clarity regarding all the costs and revenues associated with any fund they buy so they can clearly establish the total cost of ownership. In addition to clearly stating the management fee paid by the fund sponsor, the disclosure should include the total costs that affect investors' holdings and returns.

Finally, we believe the SEC should convene a public working group of market participants to develop clear, consistent regulations for U.S. ETFs. The SEC should then adopt a rule that provides uniform treatment of ETFs and enhances disclosures, particularly for complex and higher risk products.

In conclusion, we at BlackRock believe that all participants in this growing marketplace should be guided by transparency in all aspects of the product structure. BlackRock is committed to working with regulators, other market participants, this Subcommittee, and other policy makers to help ensure that this package of important reforms is adopted on a timely basis.

Thank you, and I will be pleased to answer your questions.

Chairman REED. Thank you very much.

Mr. Bradley, please.

STATEMENT OF HAROLD BRADLEY, CHIEF INVESTMENT OFFICER, EWING MARION KAUFFMAN FOUNDATION

Mr. BRADLEY. Thank you, Chairman Reed. First, I would like to say the reason I am here is I am not in this business. The reason I am here is that Kauffman Foundation in Kansas City focuses specifically on entrepreneurship in our country and how we can foster the growth of our capital markets and economy. And so my concerns expressly reside in what we are doing to capital formation, especially smaller companies.

The charts in front of you go along with the comments I will make from our much more extensive commentary.

We are here because ETFs, in our opinion, in concert with other derivative products, have radically altered equity markets. Chart 1 that you have in front of you shows that over the past dozen years, while more than 30 percent of publicly—of U.S. domiciled publicly traded companies disappeared, no longer trade—that is a crisis in itself—the number of ETFs grew exponentially.

About half of all U.S. stock trading now involves ETFs based on some analysis in the book that came from J.P. Morgan, and in Chart 9, you can see—that is in the second chart that you have in front of you—Chart 9 shows that trading in ETFs and futures now exceeds the value traded in underlying common stocks. So this is not just an ETF product. It is an arbitrage between ETFs and futures that creates the jurisdictional problems and, I think, the regulatory issues.

Second, recent data shows large redemptions from mutual funds offset in part by increasing assets in ETFs, a trend driven largely by the very favorable tax treatment accorded to ETFs that is not accorded to those who invest in mutual funds.

Third, ETFs are like many financial innovations that carry big risks when they are taken too far. We believe that is where we are today. One problem is with ETFs made up of small capitalization stocks, and while BlackRock is a great firm, I am going to spend my time talking about the IWM, in particular, because that is the one I have studied as a former trader and portfolio manager.

ETFs geared to small companies, like the IWM, own stocks that are inherently difficult to trade. Heavy trading in such ETFs immediately cascades into the prices of the underlying stocks, which then follow the index, not a possibility envisioned by the original ETF theorists who intended only to track common stock prices.

Chart 6 shows that the IWM is one of the largest owners of more than 1,700 small company stocks. The IWM is but one of dozens of small cap and narrowly constructed ETFs that increasingly trade such exotica as lithium-related stocks and call that an index, stretching the idea of an index far beyond what my experience would tell me represents an index. If you are a growing, privately held company, you will think long and hard about becoming one of the tiny boats on giant ETF ocean waves before deciding to go public.

Moreover, small cap stock ETFs may catalyze market instability. In Chart 2, you can see how IWM prices led the sell-off during the May 2010 Flash Crash. That was not referenced at all in the SEC report with other regulatory overseers that focused mostly on what happened in large cap securities.

You can see the opposite in Chart 3. When IWM prices just 2 weeks ago rallied 7 percentage points in the last 20 minutes, it was remarkable, and yet there was no wide reporting of this in the news. In our view, volatility up is as bad as volatility down. These are symptoms of the same disease and terrify stock market investors but not the day traders and market makers who thrive on volatility as traders in ETF products and futures.

The problems are not limited only to small company stocks. Chart 4 shows that arbitrage trading between large cap ETFs and futures contracts has resulted in the comovement between stocks of the biggest U.S. companies and indexes that is unprecedented. During the parts of the last year, Ned Davis Research shows that the S&P 500 moved in lockstep with its stocks more than 86 percent of the time. The idea is the index should move differently than the component stocks individually. This is remarkable and also unprecedented, reminding us only in the data you are looking at of the 1987 crash, when the Dow Jones Index dropped 23 percent, a casualty of portfolio insurance. When stocks move together like this, especially when there is no investor panic, then our stock markets are broken and failing to perform crucial price discovery functions for public companies.

Finally, the third problem relates to our concern about ETF settlement failures. This is again in the plumbing of the system. Nobody likes the plumbing. Chart 12 shows that traders in the two largest ETFs accounted for one-fifth of all settlement fails in the U.S. stock market last year. When a buyer has sent the money but the securities do not show up at the custody bank on time, this creates potential problems for the financial system, in our opinion. We fear that custody bank oversight of settlement is lax and could contribute to a systemic crisis when hedge funds, commercial banks, and ETF traders withdraw collateral or otherwise fail to honor trading obligations, as has happened before. The best anecdote to system liquidity disease is on-time settlement of all outstanding trades effectively enforced.

Thank you for your time.

Chairman REED. Well, thank you very much, Mr. Bradley. Just for my information, IWM represents——

Mr. BRADLEY. The Russell 2000 Small Cap Index, so it is geared specifically to match that index's returns over time.

Chairman REED. Thank you very much.

Well, this has been an extraordinarily, I think, helpful set of statements, and I am in the very enviable position of being the only one here, so I can ask lots of questions and I intend to do so.

I must say, one of the things that prompted the hearing is this sense, perhaps, and again, we want to get the experts here to see if it is sense or just sort of an overreaction, that this sort of déjà vu of a product, very useful product, coming online, but then growing substantially in terms of volume, growing substantially in terms of complexity. And I know the European markets have much more derivatives backed ETFs. And then some of the market issues we have seen with respect to volatility, with respect to pricing underlying stocks, *et cetera*. So this is, I think, a very appropriate time, and I commend the SEC, frankly, for beginning to look very closely at this, to start asking, I think, very difficult questions about ETFs, and so let me begin that process.

One is suggested by the testimony of Mr. Archard—Ar-shard, am I pronouncing that correctly?

Mr. ARCHARD. Archard.

Chairman REED. Ar-chard, OK. I am from Rhode Island. Forgive me.

[Laughter.]

Chairman REED. If there are two "a"s in a word, you are just—I will never get it right. I will say it five different ways. Forgive me up front.

But the notion of, really, what is an ETF these days. It started out as pretty vanilla, as you suggest, and now they are inverse. Sometimes they are supported not by the underlying stock that they are tracking but by derivatives in another stock that may have no correlation. The issues of transparency, *et cetera*.

And you bring up the point, and I would like the whole panel to comment, but let you begin, sir, about how we might be able to start distinguishing true ETFs from the other instruments, so please.

Mr. ARCHARD. Sure. Thank you. This has really stemmed from the fact that BlackRock, and with I–Shares being a global provider, we do see all flavors of exchange-traded products around the globe, and as we have done work over the last months, a lot of what we have thought about is—this is not to pass judgment on one product is better than another. In the U.S. regulatory scheme, we tend to see more, you know, what is the disclosure base around a product rather than does it have merit for everyone that might possibly use it.

The important part was to say, put in some classification systems to essentially create speed bumps, something that will flag for investors, I should stop and see, do I understand it? If something is called an ETF in the U.S., I think that would mean it would be regulated by the '40 Act and all the good stuff that comes out of that as far as diversification of holdings, physical holdings, limits on derivatives that might be in the product. If it is labeled an ETN, exchange-traded note, it means something else. If it is exchange-traded commodity, that means something else with maybe different tax ramifications for the investor. And everything else would become an ETI, exchange-traded instrument.

We have put this in our written testimony and put out some viewpoints on this in the last week, again, the idea being FINRA actually did some work since 2009, along with the SEC, to raise the awareness around some of these products, which are pretty much less than 10 percent of the ETF market today. But we think, take it a step further. You can never have enough disclosure, enough education to the investing public. Something as simple as changing the naming classification will be another plea to investors to pause a moment, understand what they are buying.

Chairman REED. Let me just follow up with a quick question, since—if you are a retail investor in the United States, how easy is it to buy these European ETFs that are not regulated by the SEC?

Mr. ARCHARD. Pretty difficult. I mean, I would say that what we observe is that investors outside the U.S. have a much easier time, or a bias toward buying anywhere. For U.S. investors, the overwhelming majority, especially for retail in particular, they are buying U.S. listed products. As you get maybe into the ultra-high net worth sphere, you might have access to other types of products. But for the majority of retail ownership, it is U.S. domiciled.

Chairman REED. OK. Let me go, Ms. Rominger, to your comments on this whole issue of the different classifications, and also, I think, following up on my last question, to the extent that you are seeing it easier for people through intermediaries to get, like the European, for want of a better term, style retail.

Ms. ROMINGER. From the standpoint of investor protection, which is one of our most important missions, along with facilitating capital formation at the SEC, I think that transparency is incredibly important. I think that increasing investor knowledge of the features of ETFs is very important. The SEC and FINRA put out an investor alert some months ago regarding leveraged and inverse ETFs. I think that the classification system that Mr. Archard described is very interesting and deserves serious consideration.

Chairman REED. Let me follow up with a question of how transparent are the portfolios and the positions of the ETFs that you regulate? Can a retail investor sort of see in real time what the portfolio is and what they are underlying?

Ms. ROMINGER. For the vast majority of funds, there is a high degree of transparency. There may be a couple of exceptions to that, but for the vast majority, we put a very high value on that transparency. We think it is really quite critical to the arbitrage mechanism that makes ETFs work, and further, that transparency is one of the key benefits that the ETF portfolio offers to investors.

Chairman REED. Mr. Noll, your comments, and then I will ask Mr. Bradley.

Mr. NOLL. Thank you. First of all, I would like to say we are not an apologist for any type of ETF, but we do believe that innovation in financial markets and in these products is incredibly important and that we should not unnecessarily restrict their development.

That being said, NASDAQ is in favor of increased transparency around these products, what they are, how they work. We also think that disclosure will solve many of these problems. And I also would like to stress the suitability requirements that broker-dealers currently have for all of their investors. So every broker-dealer has a responsibility to make sure that their customers are only investing in products that are suitable for their financial condition and their experience.

Last—this is more of an observation—these products are not new. What is new with these products is that they are packaged and listed on exchanges. These products have existed for quite a long period of time in the United States markets. Traditionally, they have been traded in the dark. They have been packaged for high net worth individuals and institutions as very specialized products. The benefit of these kind of products for today's financial markets is, in fact, they go through a transparent registration process at the SEC. They are listed on exchanges with transparent prices that can be tracked and followed. So to a large extent, this creates the democratization of a product that was exclusively in the bailiwick of high net worth individuals and other institutions.

And last, I would like to point out differences between our markets and the European markets here in that our SEC rules have a very unique separation of roles and how these products were brought to market, so that individual firms cannot be all things to all people in the creation, redemption, custody, pricing, and underlying index calculation as they can be in Europe, and that separation of powers and that very explicit understanding of each role's duties actually are important safeguards on how these products differ.

Chairman REED. Mr. Bradley.

Mr. BRADLEY. Senator Reed, I think your first question was what is an ETF, and that is increasingly difficult to answer. I think there is a false dichotomy between what happens in European markets and U.S. markets because they are the same global sponsors and the same trading firms.

My big concerns about ETFs are not about the sponsors, it is about who trades these instruments, who is providing the IOUs that we call swaps. A swap is nothing more than an IOU. So in 2008 when the collapse happened in our capital markets, big contracts were underwritten and guaranteed by AIG in London and they ceased trading. Well, we bailed them out, so the AIG contracts were good, but I think that that reverberates around our entire capital market system and that to say, well, the collateral is different or derivatives are different, MiFID II will probably take care of some of that.

But I think there are some real concerns about short interest that is reported in these big ETFs that represent more than 100 percent of outstanding units. The sponsors say, not my worry. They are all registered with us. We know who they belong to. If they are lending them to each other, not our concern. Well, then you must have a huge daisy chain of people lending and collateralizing and securitizing, and they are trading and doing various trades. Who is watching that? Who is watching what happens to these hedge funds?

And so my real worry is that we have a '40 Act exemption creating the products, sponsors acting as fund advisors, as I used to for a mutual fund, but not watching who is trading or doing what because they do not have to worry about it. The shares are just delivered into them every evening or redeemed away. And so it is somebody else's worry, and that is my worry.

Chairman REED. And the market maker is the concern, the person you are concerned about.

Mr. BRADLEY. Yes, sir.

Chairman REED. That is the intermediary between the trading platform and the sponsor of the fund.

Mr. BRADLEY. And I would point out, in the last year, the SEC has reported doing—they filed an action probably 6 months ago for stripping, which would probably have come out of the Division of Enforcement, where they basically accused a hedge fund manager of going long on insider information, buying a stock on insider information, hiding it through a series of ETF transactions in a very narrowly constructed ETF basket.

Chairman REED. Again, I think we are at a point where we want to ask the challenging questions, because we have in the past seen situations where innovation looked very attractive to us until it exploded, and then it looked very dangerous to us. So I think the question is vitally important at this juncture.

One of the other aspects here is the issue of price discovery, and I think, Mr. Bradley, you alluded to it, on the underlying stocks, because as you suggested, and I think the common sense or the convention view was these indexes, ETFs, started tracking the stocks. The stocks moved, the index moved. The stocks moved, the index moved. And now there is at least some evidence suggesting that as the ETFs become more powerful, they move and they push the stocks around.

And again, I want the whole panel to be able to comment on this very important issue, but this price discovery issue and the effect on the underlying equity, and as you suggest, on capital formation, on participation. Your comments, please.

Mr. BRADLEY. Well, I think you have summarized my views pretty well, that in small cap and especially in these very narrow industry strategies—and I will say, again, none of this is really very public. I was able to sit down at a meeting in New York City with five very—they were known hedge fund managers where I wanted to walk through these theories, and they basically said, yes, we believe that the trading of these industry baskets are driving what is happening in the individual securities. And there are many interesting strategies that are set up, because if you make an index move, the components of an index, depending on their characteristic, have very different trading characteristics. So traders exploit weaknesses in systems to make profits, and I think that that is my concern.

Chairman REED. Let me just go to Ms. Rominger, because this seems to be directly within your review of these products, the underlying effect on capital markets, on the prices of the underlying equities. Have you formed a conclusion, or is that a topic of your analysis?

Ms. ROMINGER. This, among other aspects of ETFs and their trading, is a part of the review that is occurring across the SEC in several different divisions, including Investment Management, the division I am responsible for, Trading and Markets, our Division of Risk Strategy and Financial Innovation, and Corporation Finance. So we are working together to study these issues.

You know, I would say that with respect to any types of portfolios, index funds that are in regular mutual fund form, ETFs, or even actively managed portfolios, when more investor capital pours into those portfolios, it causes the prices of the underlying securities to rise, and when money goes out of those portfolios across the board—index funds and actively managed funds and ETFs—it is money moving out of the markets. So it is not altogether surprising that that would be the effect on ETFs.

Chairman REED. No, I guess it just strikes me—and again, the old fashioned notion that you have got an equity in a market that should respond to the price and earnings of the company, the potential of the company, the new patent that they have just announced, *et cetera,* and all of that gets overwhelmed because they are part of a big ETF that is bouncing all around——

Ms. ROMINGER. Part of an index, yes.

Chairman REED. ——index, and so the old fashioned, gee, if we run a really good company, our stock will reflect that, it just—maybe I am a traditionalist, but that strikes me as at least a slightly different phenomenon than we saw in the past.

Ms. ROMINGER. A number of analysts and academics have noted that feature of index-driven investing for quite some time.

Chairman REED. Again, Mr. Noll and Mr. Archard, please.

Mr. NOLL. So a couple observations. One is that in volatile times—and there has been a lot of academic studies that suggest this and look at this very carefully—in volatile times, correlations of assets tend to collapse to one, as they say. So we have gone through an extraordinary 3- or 4-year period of high volatility. It is no surprise to me as a market observer that assets through that period of time tend to track one another more closely than they would at less volatile times, because as investors look out at the marketplace in those high volatile times, they are looking to protect themselves more directly than they are in individual stocks.

So the collapse or the correlation between assets in those kind of environments is not a surprise to me. I do not think it is a function necessarily of indexing. I think it is a function of the overall economy and investors' perception of that.

A further observation. Apple Securities, while not a small cap stock by any means, is probably one of the more widely held stocks in ETFs. If you look at the return of Apple compared to the S&P 500 or any other index that Apple is in, you would see that Apple stock has radically out-performed the indexes. As a matter of fact, if you stripped out the beta return of Apple over that period of time, you would see that its return, holding the market returns constant, is probably a return in the 80s, 80 percent, which suggests that individual stock performance, when it does appear, actually does continue to exist and is not obviated by its inclusion in indices.

Chairman REED. I just want to follow up on that point, Mr. Noll. I think Mr. Bradley made the point—and if I have misstated, please state it correctly—that—and this might be coincidental, but as ETFs and other products like this have proliferated, sort of the listings of individual stocks in the markets have tended to decline. Is that——

Mr. BRADLEY. Well, I would not say that they are causal——

Chairman REED. No, I——

Mr. BRADLEY. ——but I am saying that we have far more packages for far fewer gifts, or far more gift wrapping for far fewer gifts.

Chairman REED. But it is the implication that not wanting to be caught up in this kind of a basket so that your own individual behavior is not measured is dissuading people from going——

Mr. BRADLEY. So, Senator Reed, this is one that is anecdotal that we would come across this in our work, and I have no statistics to back it, but we have reports from people that say the market scares them——

Chairman REED. Right.

Mr. BRADLEY. ——and with the other costs and other parts of our regulation, including 404, that these issues are dissuading investors.

Chairman REED. We have lots of reasons why people are telling us that they do not want to go and do IPOs, *et cetera,* and again, that goes back to this whole health of small business, of growing in this environment. But I guess this is an issue at least we should have on the table, and I will just—either Mr. Noll or Mr. Archard, if you want to comment.

Mr. NOLL. If you do not mind, Noel, I will go first.

Mr. ARCHARD. Please.

Mr. NOLL. So, yes, capital formation matters a great deal to us. NASDAQ is particularly a growth market. We look to list new stocks. We hope to see new companies grow. We think it is important for job creation. We think it is important for capital formation.

I have to be honest, though. We have never heard of a company not going public because they were concerned about ETFs or the way indexes work or having any impact on that.

The issues they do raise for us about capital formation are 404 and Sarbanes-Oxley reform, the current economic environment, and the difficulty of taking a company public in that kind of an environment, tax policy, and the fact that many of our marketplaces have gotten away from what I would say supporting venture markets. So we look at Canada, for example, who has a very vibrant venture capital market based in Vancouver, has over 6,000 companies listed on it and those companies go public on that market and then graduate to the main Toronto Stock Exchange. We have no such functionality here in the United States.

So I think the support of those kind of ventures, of which NASDAQ has started one called the BX Venture Market, are more important to helping us fix how do we create capital formation than worrying about whether indexes are impeding capital formation.

Chairman REED. Good. Let me—Mr. Archard, you should be able to comment on these. Please.

Mr. ARCHARD. Much of it has been touched on. I will just very quickly say that, to the point of inclusion in an index, I think Eric summarized this in a nice way, but every stock has an element of market risk in it and it has stock specific risk in it or returns built into it.

The majority of the largest funds out in the ETF industry today are market cap weighted stocks, which means that the largest stocks, most liquid stocks, make up a heavier weighting in the index that they are represented. And there are very simple rules that have to be passed for an ETF to be created to ensure that there is liquidity in the marketplace so that you do not have complete cause and effect impacts.

Investors move into asset classes based on what they think the returns will be and the risks commensurate with it. If they think small cap is going to do well this year, we see investors move into small cap. If they think emerging markets are too scary, they move out of emerging markets, and we see this both in retail and institutional.

And I think it is important to recognize that the ETFs are just another way of accessing this. ETFs are essentially, as you pointed out, mutual funds that trade like stocks. These are investment pools that have to be tradable, and investors have taken money from individual security trading and moved in some cases to ETFs, in others from mutual funds and into ETFs, but it is a zero sum game. If people are going into small caps, they would be going into small caps.

One final point that I would like to just respond to the comment that sponsors are not worried about what is going on once these products are on the marketplace, as a large sponsor, I do not agree with that assertion. As I said, the one common element for all of the clients that use ETFs is they have to do the trade. The functioning of the market structure, the health of that ecosystem is very important to us, and most of the sponsors actually spend a lot of time every day monitoring what is going on within their individual securities, within the market system, to ensure that they are trading the way that we anticipate they should be trading.

Chairman REED. Let me ask another question, because I want to be fair in terms of giving people a chance to respond first. Mr. Archard, going back to you, to what extent is this tax benefit a real inducement to using ETFs versus mutual funds versus buying the equity?

Mr. ARCHARD. I would say there is, in those three examples, there are obviously different ways. Every client, whether they are taxable, nontaxable, is going to make a decision across products as to what is more interesting. The tax efficiency of ETFs comes through the fashion that they are brought in and out of the marketplace. It is an in kind creation redemption, meaning securities passed back and forth rather than trades going off within the portfolio as you would see within traditional mutual funds.

However, just to clarify, mutual funds do have the ability to redeem in kind, as well. This is done at times for institutional level types of mutual funds. So while this is used to greater extent within ETFs and, I think, has been a feature that clients appreciate, that they are not going to be paying someone else's tax bill for activity that is going on within the portfolio, that has been an incentive. But it is not something that is exclusive to ETFs. But I would absolutely say the fact that ETFs are far more fair from the sense of an investor paying their own freight has been something that has resonated with a lot of investors. It is part of that transparency. I am getting what I think that I am getting.

Chairman REED. Mr. Bradley, do you have a comment?

Mr. BRADLEY. Well, I think that I would agree with his point of view. I think that it is very hard to argue this. As a retail investor, I would not want to be in a mutual fund, and I used to manage billions of dollars effectively. But when markets go down like they did, 20 percent last year, and I sell one stock that I have had for 5 years to meet redemptions, they are hit immediately with a capital gains tax and any dividends that are paid out by the stocks in that mutual fund, even though the unit value of their investment is down 20 or 30 percent. And I know that there has been a quest for revenues and that has been an off-the-table debate for 20 years. So we create a tax end run in ETFs, which I think really legitimately serves the interest of retail investors and should enhance capital formation. But it is a major driver from the financial advisers I have talked to for the very reasons that Mr. Archard stated.

Chairman REED. But you do not see it distorting—you do not see products being created just to have a tax effect. Many times, there are transactions in business that have no economic value, but they have a really great tax value. But your view is, so today, at least, that these ETFs are not being structured as sort of a—simply as a tax vehicle, not as a valuable economic investment?

Mr. BRADLEY. Senator, if you are thinking it, somebody out there is doing it.

Chairman REED. That is—OK. Well, if I am thinking it, and I am not the smartest guy, then I guess somebody is doing it, but——

Mr. BRADLEY. I will tell you that I have had friends of mine call and report—that give a lot of speeches on this kind of topicality on the West Coast—that they have said, you know, this is a strategy I would love to see, and I would say the bigger funds do not do it, but there is a rugby scrum for who is going to sponsor ETFs right now, and they will create for their customers what the customers would like.

Chairman REED. So we should all be aware of particularly the construction of new funds, if they have generally more of a tax avoidance purpose than an economic investment purpose, is that fair?

Mr. BRADLEY. Well, I think that would be very unique, though, to the individual. I mean, I do not know how you would do that in a generic way.

Chairman REED. Again, I am just raising the question. I do not have an answer.

One of the issues that I think is critical to talk about, which has been, again, alluded to by several comments in the testimony, is the volatility issue. Are ETFs contributing to volatility? Mr. Bradley, one of his concluding charts suggests that the IWM sort of was leading the way down in May of 2010 and leading the way up in October of 2011. Ms. Rominger, your comments about volatility. What are you doing at the SEC to sort of analyze this issue?

Ms. ROMINGER. We are analyzing it. Those who have made comments about ETFs contributing to market volatility are generally referring to the fact that leveraged and inverse ETFs typically rebalance toward the end of the day and, therefore, same direction volatility in the market at the end of the day would tend to support the thesis that ETFs might contribute to that. So it is something we are doing more work on and we hope to reach some conclusions on that in due course.

Chairman REED. When you mention leverage, that sort of raises the specter of some of the products that we found to be most disruptive in 2008 and 2009, particularly in an environment as we have today, when the effective rates are 1 percent or less in terms of the Fed. Are these leveraged ETFs, which are sold to retail customers in the United States, are they posing a special problem? I mean, that is—I guess one of the lessons of 2008 and 2009 is we over-leveraged, and now we are looking at a product that looks like it is more and more attracted to leverage, leverage, leverage, leverage. What are your comments?

Ms. ROMINGER. Well, that leverage and the use of derivatives in leverage and inverse ETFs and concerns about those funds with respect to our investor protection mission at the SEC caused us to pause in our issuance of exemptive orders for new ETFs that wanted to use derivatives. And so in March of 2010, we put out a press release indicating that we would not issue any further exemptive relief for those types of ETFs that made large use of derivatives.

We also indicated at that time that we were doing a study more broadly on derivative use across all funds. In August of this year, we put out a concept release regarding the use of derivatives in mutual funds. The comment period is over in a couple of weeks and we really hope to get some good observations and data and thoughts in response to that.

Chairman REED. Mr. Archard—and again, I will pronounce it five different times differently, forgive me—but Noel——

[Laughter.]

Mr. ARCHARD. Much easier.

Chairman REED. Actually, in Rhode Island, it is pronounced Noell, but——

[Laughter.]

Chairman REED. But these are the type of funds you were referring to as it might not be properly characterized as ETFs, these highly leveraged or derivative-based——

Mr. ARCHARD. Correct——

Chairman REED. ——so that BlackRock's position would be, one of the things we might do is, so there is a clear sort of line of demarcation between ETFs tracking a traditional index, the basket composed of the same components as the index, is that a fair point?

Mr. ARCHARD. That is correct. That is the point of the classification system. That is a separate issue from is there volatility present because of that, but we said, just as a marker, as a simple way for investors to understand what they are buying and know, is this something that I want to utilize in my portfolio or not, it is another mechanism to do that.

Chairman REED. And the volatility issue, so that you could respond, and then I will ask Mr. Noll to respond.

Mr. ARCHARD. Sure. On the volatility issue, again, I think these are studies in progress. As I said earlier in my testimony, and we have described in a little more detail in the written, the inverse leveraged are less than 4 percent of the ETF market. It is a very small number when you look in the context of the trading day. The importance, obviously, is to look at the end of the trading day, what is happening in the last 15 minutes or so to try and assess the impact there. By any measure, given the fact that the majority of these products are trading in some cases using products that are not the underlying securities, meaning that they might use underlying derivatives to achieve that position, that dollar impact could be further diluted. So I think the studies still need to be done in a robust manner across the industry to get to the data to see it.

I think one point of confusion—I have seen both points argued and I think it is a little silly—is the sense that it is either causing directional volatility, and over the last few weeks now people think that the whippiness at the end of the day is being caused by inverse leverage, that, we clearly feel cannot be the case because of the way the products are structured. Directionally, the end-of-day whippiness does not make any sense.

Chairman REED. Mr. Noll.

Mr. NOLL. We have not seen any signs that either leveraged ETFs or ETFs in general add volatility to the marketplace, either during the day or at the close. We run a fairly robust closing cross process that publishes in balances as we come into the close. We have seen no disruptions in that process as we have gone through the day. As a matter of fact, we have seen very high active participation in those closing crosses by both sides. A closing crossing auction only works when you have both buyers and sellers participating. Our closing crosses have only gotten stronger over the last couple of months in terms of the volume that we have done in them as opposed to weaker, and that suggests that there are ample buyers and sellers participating in those closing cross processes, actually probably reducing volatility as we come into the close as opposed to increasing it.

I think Noel made an interesting point, as well, which I think is important here, is if the focus is on leveraged ETFs, they tend not to hold the underlying equities. They tend to hold the derivative and then Treasury notes or money market funds. And so their rebalancing tends to be in either the futures market or a total return-like swap, and yes, those have equities underlying them that eventually filter back into the marketplace, but not necessarily at the close and not necessarily on that day.

Chairman REED. Mm-hmm.

Mr. NOLL. So there are lots of other reasons why there may be volatility in the marketplace that I think far overwhelm any effect that the ETFs might have.

Chairman REED. There is another aspect here, and I might not get the technical terms correct, but in this whole issue of the Flash Crash, there were a number of trades that were initiated but were never settled. They were—I do not know if that is the—there were lots of orders that were placed but never fulfilled, *et cetera.* Is that a problem in terms of—and I think Mr. Bradley—I know Mr. Bradley in his testimony talked about the lax enforcement of commercial banks in terms of the, basically, settlement of some of these transactions. That is the back end.

You see the volatility up front in terms of the number of sell orders or buy orders, *et cetera*, but when they do not settle a day later or 2 days or 3 days later, some of that—there is a suggestion in the report that the SEC did was trying to sort of run up prices or run down prices in the market by order activity with no real intention of closing the deal. That is the other part of the volatility. Are you seeing any of that in the context of——

Mr. NOLL. I think there are two issues that you are raising, and I think it is important to separate them. So one issue is whether there are lots of orders placed in the marketplace that go unexecuted, and that is a market structure issue that we and the SEC and other market participants have spent a lot of time working on, particularly post-May 6, and we will continue to work on that and how can we enhance or otherwise make our markets more secure for users and more stable for users, and I think we have made some good progress in those.

I think that is different than the other problem that Mr. Bradley is raising, which is what I have called the fail problem, when ETFs are transacted and not delivered.

Chairman REED. Yes. You are absolutely right.

Mr. NOLL. So if we separate those two for a minute, if that would be OK——

Chairman REED. Yes, please.

Mr. NOLL. On the fail side, I think the—well, we have seen, and we are not in the back office business, so my observations are as a market observer, not a participant, but what we have seen there is that we have not had any customer issues with getting deliveries of ETFs. We have not heard of anybody raising those issues. I think the fails are really a function of cost efficiencies provided by both sponsors, prime brokers, and other lenders into the marketplace about the way ETFs are settled and securities are created and redeemed as a way to minimize cost. But we have not seen anything that suggests that there is an impending or difficult problem with customers not receiving their trades as transacted in the marketplace and we have seen no issues with that.

Chairman REED. Let me go to Mr. Bradley and ask you to deal with those two issues, one, the settlement issue, and I think you defined it very precisely and I appreciate that, and the issue of initiating trades.

Mr. BRADLEY. So we have raised the issue of the settlements, which we think is an issue, and the answers that I get from talking to exchange officials and others change. It is all because somebody out there somewhere is taking care of this and nobody is complaining. Well, our view is that capital that should be going into the creation units that would then go into the stocks, if it happened in a more timely fashion, you remove the daisy chain effect I talked earlier when you have enormous short positions which are units of a, say, a BlackRock sponsored ETF lent to A, who then lends to B, then lends to C, then lends to D, and that is where the issues come in a systemic problem. Now, people say we are well collateralized. I have heard these arguments my entire career. That is where we think there needs to be focus.

The other issue you raised that was raised extensively in the report on the Flash Crash is called high-frequency trading. The order cancels there, I do not think, and I have a very—I am not a traditionalist in this thinking—it is actually beneficial because these people are making markets all the time in all these securities, and as soon as their electronic books are balanced, so if I buy something in GM, I might cancel my Ford order, and so they are constantly using algorithmic activities to balance these.

The trading costs for investors in mutual funds as tracked by ITG have dropped significantly in the last 5 years. They have dropped significantly. And so the retail investor is a huge winner in the transaction of individual common stocks.

Now, without high-frequency trading, we could not do ETFs, so the problem now somewhere is going to be a speed bump between ETFs and common stocks, or, I would say more broadly, ETFs, futures, and common stocks, to break down these correlations.

The last point I would make on that question is I do have a chart in here, Chart 8, that goes back to your volatility question. This is in my written testimony. In Chart 8, J.P. Morgan did a chart in their Delta One Derivatives Desk—of course, Delta One now has new notoriety after UBS in London—but the Delta One Desk called this a correlation bubble, and the reason that they were worried was not that ETFs—and they did not mention ETFs as the problem, that is my analysis and inference—that typically Mr. Noll is right. Correlations increase during times of great stress, like when we were in the volatility index at a reading of 80. Over the last few years in between the last crash and now this bout of market turbulence recently, we had very low volatility times when the comovement of stocks stayed at unprecedented levels. So that is that little red dot hanging up there by itself. Something has changed in the way markets act.

Chairman REED. Let me just ask a final question to follow up. With regard to the settlement issue, who is responsible—if it is a problem, who is responsible for sorting it out? Is it the SEC? Is it other regulatory agencies? Is it the markets? Is it the trading platforms?

Mr. BRADLEY. Well, when I was trading and managing money, I would ask the custody bank when I was worried about naked short selling of common stocks. Penalties that I believe the SEC put on did away with that problem. The question is, do we need similar remedies for ETFs.

Chairman REED. So it would be within the purview—Ms. Rominger, this would be in the purview of the SEC in terms of this whole issue of settlement?

Ms. ROMINGER. The issue of fails to deliver is definitely in the purview of the SEC. Late in 2008, the SEC did put in place rules that required close-outs early on the fourth trading day following settlement, and a bit longer for *bona fide* market makers. There was a study done by a group within the SEC that was in a memo on the SEC Web site published this April that indicates in the period of time since late 2008 when that Rule 204 was passed until April, during that time period, fails to deliver had declined quite substantially across all equity securities, including ETFs. The decline in fails to deliver was about 76 percent. So that was quite a substantial decrease. So it was taken very seriously. We continue to take it seriously, but that rule did seem to have some desired effect.

Chairman REED. Well, let me follow up, Ms. Rominger, with this. The Financial Stability Oversight Council indicated that liquidity to counterpart exposure risk emanating for foreign domiciled ETFs could spill over to domestic institutions or markets, and how are you dealing with that potential spillover?

Ms. ROMINGER. Well, I noted that the Financial Stability Oversight Council devoted two pages of their annual report this year to the issue of ETFs and to the need to study further potential systemic risks posed by ETFs. So it is something that we are studying very closely. As you know, our Chairman is a member of the Council, and so it is part of our study.

Chairman REED. Let me ask just a final question, and this goes to—perhaps touches on a lot of what we have discussed today, and that is sort of the role of the market and the participants in the markets. I think we all started out, at least, I say I started with the simple notion that the markets were created to allow companies to raise capital and investors to be able to make investments in these companies and see the benefits both to the company and the investor. There is always the possibility, suspicion, whatever, that the markets have changed and now they are operated to benefit not the companies or for the investors, but for the traders and for the platforms, and there are conflicts—I do not want to say that is a conflict of interest, but certainly there are issues in which a certain decision will favor the trading operations and the platforms, maybe without any detriment to the investor, maybe with a detriment.

So just your perception with respect to these ETFs, and I will start with the SEC. Are the markets favoring one party over the other, or are they balanced and doing what traditionally we wanted them to do, effectively raise capital for business growth and protect investors?

Ms. ROMINGER. I think both can go hand in hand. I think that if we have markets that offer—if products are offered that are transparent, that can trade in markets that earn the confidence of investors, I think that the principle of investor protection, which, of course, is paramount and very, very important, but I think it goes hand in hand with facilitating capital formation, because I think that to the extent that investors can feel confident in the markets in which they are going to invest, they will be much more willing to commit their capital to companies and to new businesses.

Chairman REED. Mr. Noll.

Mr. NOLL. Yes. We think capital formation is critical. I mentioned in one of my answers to your earlier questions about the issues that I thought surrounded capital formation. I think those things need to be addressed and I think it is incumbent on us as market operators and regulators to work on fixing those. I do not think that ETFs are the problem there. I think other things are the problem there.

I also think that markets operate best when we do not try to figure out what our investors want to do, but when we make a fair, transparent marketplace where all investors can achieve their goals or attempt to achieve their goals by making their investment decisions. I am not smart enough to figure out what Investor A, B, C, what is the right way for him to own a stock or what is the right exposure for him to happen. What I hope I am smart enough to do is to operate a platform where he can achieve those ends by making his own investment decision.

So I think when we talk about reforming the marketplace or worrying about a particular product, I think we have to be very careful that we are not trying to pick a style of investment that says, this is the right way and this is the wrong way. I think that individuals, institutions, other investors have unique ways that they approach the marketplace and it is up to us to operate a marketplace that is fair and open and transparent for those decisions to be executed in but not to decide how the customer should do those.

Chairman REED. Noel.

Mr. ARCHARD. Yes, I would agree. I mean, fair and efficient marketplaces is what leads to capital formation. It is what leads to investments and the ability to grow your wealth over time.

I think it is very important—you know, a lot of the great questions that have been thrown to this panel and in some cases answered over this last hour, we need to get past some of the anecdotes and into the real data. When I think about fair and efficient markets, I will go back to even the settlement question, and Eric made the good point that we are not hearing this from clients. We do not hear it from our clients. We have not heard from FINRA or the SEC that the settlement issue is a problem.

But I think what is a problem is we had a reference to Reg NMS and Rule 204. Market makers get to settle T-plus-six for a closeout versus T-plus-three. That is not reflected in the reporting. We have no way to know if the fail to deliver is part of normalized market making activity, meaning that markets are efficient and working the way that they should within the regulatory constructs, or if there is some other issue at play. We need to get to the heart of that and eliminate the anecdotes, because the worst thing we could do, in my view, is take selection out of the marketplace for products that have produced cost efficiencies and transparency for investors.

Chairman REED. Mr. Bradley.

Mr. BRADLEY. So, Senator Reed, I would think your analysis leading into this question, I would very much concur with. There was a point of view that I think I heard. For 20 years, though, I have been involved in sponsoring many changes to the capital markets, and I have testified on Capitol Hill four times in relation to the mutualization of stock exchanges, electronic trading and its effectiveness for institutional traders and for retail and major changes there. All of those things have led to outcomes that I expected in terms of lower costs for investors.

But whenever we replace transparency and things like exchange ownership and alignment of interests, we spin up something new that is gray and cloudy over to the side that it is really hard to figure out, no matter how much experience you have.

Trading and settlement and market maker exemptions, to me, market maker exemptions are an old time, when stocks used to go around on paper, on bicycles on Wall Street, and pneumatic tubes that went from the tenth floor to the sixth floor. Those days are gone, and yet we still give market makers exemptions for what purpose? To me, that is where you start to tilt the balance in some of these activities.

Our view at Kauffman, my view personally, is these products are creating markets that are increasingly hostile to companies that would choose to list. The economy is—you know, it is not the only thing, but I do believe we need to do something, as Mr. Noll suggested, to allow for small companies to come public without all of the obligations attached that an Enron should have had attached.

So with that, I think that would be my—oh, the last comment. They are talking about improvements. Seven percent of all ETF value traded fails. Point-six percent of all common stocks traded fail. That, to me, suggests a pretty big market maker exemption.

Chairman REED. Well, thank you very much. I want to thank you all for what is a very insightful and informative hearing on an issue that is not only timely, but rather complex.

This will not be the last that we talk about ETFs or other products, but it is, I think, a very good way to begin our consideration, or continue our consideration. We have highlighted a number of issues about ETFs, their structure. We suggested some of the complicating issues as they become more sophisticated with leverage or with derivatives support rather than with the basket of the stocks that they are supposedly tracking. Frankly, I think, if we—and I will put a plug in for my favorite organization-to-be, the Office of Financial Research—if we had such an organization looking analytically, as you said, Noel, about some of these issues, I think we would be better served.

My colleagues may have written statements or questions, which I will ask them to submit no later than next Wednesday, October 26, and then we would ask you, if there are questions, to respond as quickly as possible, I would hope within a week if you could do that.

Again, your written testimony is completely made part of the record and we thank you very much for an informative discussion and I am sure we will continue the discussion going forward.

With that, I will adjourn the hearing. Thank you.

[Whereupon, at 10:56 a.m., the hearing was adjourned.]

[Prepared statements and responses to written questions supplied for the record follow:]

PREPARED STATEMENT OF EILEEN ROMINGER

DIRECTOR, DIVISION OF INVESTMENT MANAGEMENT, SECURITIES AND EXCHANGE COMMISSION

OCTOBER 19, 2011

Chairman Reed, Ranking Member Crapo, Members of the Subcommittee:

My name is Eileen Rominger, and I am the Director of the Division of Investment Management at the Securities and Exchange Commission. I am pleased to testify on behalf of the Commission on the topic of exchange-traded funds, or "ETFs," as they are commonly known.

ETFs are a type of exchange-traded product or "ETP" that must register as investment companies. The SPDR or "spider" ETF, which tracks the S&P 500 stock index, was the first ETF and is still one of the largest on the market. Since their inception in the 1990s, ETFs have become increasingly popular as a type of investment vehicle. With investors ranging from institutional to retail, there has been a proliferation of these types of funds in the marketplace.

ETFs in the United States have grown to account for approximately $1 trillion in assets, or approximately 10 percent of the long-term U.S. open-end investment company industry, with U.S.-domiciled ETFs making up approximately two-thirds of global offerings. [1] As ETFs gained in popularity, ETPs expanded from ETFs tracking equity indexes into the development of a variety of ETPs, including those based on fixed-income instruments, commodities, currencies, and foreign securities. This product development also has generated increasingly complex structures, such as leveraged, inverse, and inverse leveraged ETFs. Because of the growth and development in such ETFs and ETPs, the Commission has been actively following, and continues to engage in the analysis of, these products.

My testimony will provide a general overview of ETPs and the SEC's roles with respect to these products. It also will discuss recent developments in the markets regarding ETFs, including their market impact. The testimony will conclude with a summary of the SEC's current efforts in this ever growing and evolving market.

Overview of Exchange-Traded Products

ETPs, of which ETFs are one type, seek to provide investors exposure to a specific benchmark or investment strategy by investing in securities and other assets. ETPs are issued by entities organized in a variety of different legal forms, including as ETFs registered as investment companies under the Investment Company Act of 1940 (1940 Act) which register their securities for the offer and sale to the public. ETPs also can be offered and sold publicly as interests in trusts and commodity pools, or exchange-traded notes issued by public companies, which are not registered as investment companies. However, all offerings of ETP securities, whether or not the ETP entity is registered under the 1940 Act, are registered under the Securities Act of 1933 (Securities Act), and the securities are listed for trading on a national securities exchange. Some of the more popular types of ETP securities trading in the marketplace include the following:

1. ETFs that are registered under the 1940 Act as open-end management investment companies or as unit investment trusts. ETFs offer investors an undivided interest in a pool of securities and other assets. There are two basic types of ETFs: (1) index-based ETFs; and (2) actively managed ETFs.

Index-Based ETFs. Most ETFs trading in the marketplace are index-based ETFs, which seek to track an underlying securities index by achieving returns that closely correspond to the returns of that index, before fees. This type of ETF primarily invests in equity or fixed-income securities issued by the companies that are included in the index or a representative sample of those securities. For example, the SPDR fund invests in equity securities of all of the companies contained in the S&P 500 stock index.

Today, there are approximately 984 index-based ETFs registered under the 1940 Act with about $900 billion in assets. There are approximately 24 providers or advisers who sponsor index-based ETF shares. The shares of these ETFs are primarily listed on NYSE Arca and NASDAQ. Leveraged, inverse and inverse leveraged ETFs, which are discussed below, generally are considered index-based ETFs because they track a securities index.

Actively Managed ETFs. The first actively managed ETF was approved in 2008. While there are fewer actively managed ETFs than index-based ETFs trading in the

[1] *See,* Financial Stability Oversight Council Annual Report 2011 at 66, available at *http://www.treasury.gov/initiatives/fsoc/Documents/Financial%20Developments.pdf.*

marketplace today, there has been an increase in new actively managed ETFs over the past few years. Actively managed ETFs are not based on an index. Rather, they seek to achieve a stated investment objective by investing in a portfolio of securities and other assets. This type of ETF is actively managed because, unlike an index-based ETF where the components of an index are relatively static, an actively managed fund adviser may buy or sell components in the portfolio on a daily basis, provided such trades are consistent with the overall investment objective of the fund. To address transparency concerns, actively managed ETFs are currently required to publish their holdings daily. Because there is no underlying index that can serve as a point of reference for investors and other market participants as to the fund's holdings, disclosing the specific fund holdings ensures that market participants have sufficient information to engage in the arbitrage, described below, that works to keep the market price of ETF shares close to the net asset value (NAV) of the fund or portfolio.

Currently, there are approximately 35 actively managed ETFs with about $6 billion in assets. There are approximately five providers or advisers who sponsor these types of ETFs. The shares of these ETFs are also primarily listed on NYSE Arca and NASDAQ.

2. ETPs issued by entities such as trusts and other pooled vehicles, such as commodity pools. ETPs that are not based on securities and whose portfolios may consist of physical commodities, currencies, or futures are created, redeemed, and traded on a national securities exchange in a manner similar to ETFs, but the entities offering the ETPs are not registered or regulated as investment companies under the 1940 Act.

3. Exchange traded notes or "ETNs," which, unlike interests in ETFs, generally are unsecured debt securities issued by public companies, in most cases by bank holding companies or investment banks. ETNs also are exchange-traded securities that can provide the investor with investment exposure to certain market benchmarks or strategies. As ETNs are debt obligations of the issuer of the security, the ETN does not provide the investor with any ownership interest in the referenced security or securities in the referenced index. In addition, an investor in an ETN is exposed both to the market risk of the linked securities or index of securities and the credit risk of the issuer. ETNs do not share the same fund-like or trust-like structure as do other ETPs, and are not registered or regulated as investment companies under the 1940 Act.[2]

Although this testimony will focus primarily on ETFs, some of the structures, features, and trading characteristics of ETFs, as well as the issues and concerns discussed below also apply to other ETPs.

Structure and Features Unique to ETFs

ETFs combine features of a mutual fund, which can be purchased or redeemed at the end of each trading day at its NAV per share, with the intraday trading feature of a closed-end fund, whose shares trade throughout the trading day at market prices that may be more or less than its NAV. A fundamental difference between ETFs versus mutual funds is that ETFs do not sell individual shares directly to, or redeem their individual shares directly from, all investors. Instead, ETF sponsors enter into relationships with one or more financial institutions that become "Authorized Participants" for the ETF. Authorized Participants are typically large broker-dealers. Only Authorized Participants are permitted to purchase and redeem shares directly from the ETF, and they can only do so in large aggregations or blocks (such as 50,000 ETF shares) commonly called "Creation Units." The value of the Creation Unit could range from hundreds of thousands of dollars to several million dollars.

Creation Unit purchases and redemptions are typically in-kind, although cash transactions may be permitted for certain ETFs or under certain prescribed circumstances. To create ETF shares in-kind, an Authorized Participant assembles and deposits a designated basket of stocks with the fund, and in return, receives ETF shares from the fund. Once the Authorized Participant obtains the ETF shares, it is free to sell the ETF shares into the open secondary market, either to individual investors, institutions, or market makers in the ETF. The redemption process is simply the reverse. An Authorized Participant buys a large block of ETF shares on

[2] ETNs, which are debt securities that track the performance of an underlying benchmark index, asset, or strategy, are generally not redeemable by the holder, unless the terms of the particular series of ETNs permit the holder to do so. There are no Authorized Participants (as described herein) for ETNs, and because ETNs do not hold portfolios of securities or other assets, the same arbitrage opportunities available for ETFs are not applicable to ETNs.

the open market and delivers the shares to the fund; in return, the Authorized Participant receives a predefined basket of individual securities, or the cash equivalent.

Like operating companies or closed-end funds, the offerings of the shares of ETFs are registered under the Securities Act, and a national securities exchange lists the ETF shares for trading. As with other listed securities, investors also may trade ETF shares in off-exchange transactions. In either case, ETF shares trade at negotiated prices. The development of the secondary market in ETF shares depends upon the activities of market makers and interest from individual investors, traders, and institutional investors. Individual investors may dispose of ETF shares by selling them in the secondary market at the market price, which may be higher or lower than the NAV of the shares, and paying customary brokerage commissions on the sale.

However, ETFs are structured in a way that seeks to minimize the potential for their shares to trade in the secondary market at a significant premium or discount in relation to their intraday NAV. This is a result of the arbitrage opportunities inherent in the ETF structure. Depending on the liquidity of the underlying securities or assets, market volatility, supply and demand, and other factors, whenever the price of an ETF diverges from the NAV of its underlying components, market participants have an opportunity to buy the cheaper of the ETF or its underlying components, and sell the more expensive of the two. Market participants who are Authorized Participants, or who have agreements with Authorized Participants, can lock in this arbitrage profit by creating or redeeming ETF shares at the end of the day, thereby offsetting their exposure in the underlying components.

For example, with respect to a simple U.S. equity index-based ETF, if the price of the underlying stocks comprising the index is below the price of the ETF shares, a market maker who is an Authorized Participant can buy the underlying stocks and short the ETF. Then, at the end of the day, the Authorized Participant can buy shares of the ETF in-kind through the creation process using the underlying stocks purchased earlier in the day. In return, the Authorized Participant receives shares of the ETF that can be delivered against the short ETF position.

The creation/redemption process therefore serves as the basis for the arbitrage mechanism that provides market participants with an incentive to buy or sell shares of the ETF whenever sufficient divergence between the market price of the ETF and the NAV of the underlying components occurs. To further aid in the process, an estimated NAV, also referred to as the "intraday indicative value," is disseminated at least every 15 seconds throughout the trading day.

Differences Between ETFs and Mutual Funds

ETFs differ from mutual funds. For example, on average, operation and management fees for ETFs historically have been less than those for index mutual funds. ETFs generally disclose their holdings every day in addition to the quarterly disclosure required for all funds. ETF shares are listed and traded on exchanges and can be bought or sold at market prices at any time of the trading day. Mutual funds shares are available for purchase and redemption in transactions with the funds at their daily calculated closing NAV per share. Lastly, ETFs can be more tax efficient than mutual funds because ETF shares are generally redeemable "in-kind," which can limit the potential for incurring taxable gains. Not all ETFs have been more tax efficient, however.

Regulation of Exchange-Traded Products: Roles of SEC Divisions and Offices

An ETF, as an investment company, must file a registration statement with the Commission under the 1940 Act and register the offering of its shares under the Securities Act. In addition to registering under the 1940 Act, under existing regulations, the ETF must rely on an order, typically issued to the ETF's sponsor, giving relief from certain provisions of the 1940 Act that would not otherwise allow the ETF structure. The SEC issued the first order to an ETF organized as a unit investment trust in 1992, and began issuing orders to ETF sponsors for ETFs organized as open-end funds in 1996. The SEC now has issued more than 100 orders on which ETF sponsors rely to launch their ETFs.

As discussed above, while ETFs are typically registered with the SEC as investment companies, there are other ETPs that do not hold securities, but instead hold commodity- or currency-based assets and, therefore, are not subject to the provisions of the 1940 Act. The issuers of these ETPs register the public offerings of their securities with the Commission under the Securities Act and become subject to the periodic reporting requirements of the Securities Exchange Act of 1934 (Exchange Act).

In addition, the sponsor of a new ETP, including ETFs, generally must receive relief from certain provisions of the Exchange Act. Moreover, in order for an exchange to list and trade a new ETP, depending on the type of ETP, the SEC must review and approve the exchange's listing proposal pursuant to specific requirements under the Exchange Act. Further, the ETP must comply with the initial and continued listing requirements of its listing exchange.

Securities Act—Review of Registration Statements

The Commission staff's review of filed registration statements, including those involving public offerings of securities of trusts and commodity pools, is for the purpose of ensuring complete disclosure. The Securities Act registration provisions require "full and fair disclosure" afforded by registration with the Commission and delivery of a statutory prospectus containing information necessary to enable prospective purchasers to make an informed investment decision. Investors in these registered securities offerings have civil remedies to protect them from materially deficient disclosure (material misstatements and omissions) in registration statements and prospectuses as well as the protections of the antifraud provisions of the Federal securities laws, and the Commission's enforcement efforts.

As applied to ETPs generally, the Securities Act requirements relate primarily to disclosures made by the entity issuing the securities, including disclosures about the issuer, the securities being issued, and material risks affecting the investment.

Registration and Exemptions Under the 1940 Act

ETFs that meet the definition of "investment company" under the 1940 Act must register as investment companies under that Act and are subject to the Commission's examination authority. Typically, an ETF meets the definition of "investment company" because it primarily invests in securities, as opposed to physical commodities or currencies. ETFs, as investment companies, are subject to the regulatory requirements of the 1940 Act, as well as to the terms and conditions of the exemptive relief necessary to operate under the 1940 Act. Together, the requirements of the 1940 Act and the relevant exemptive relief apply regulatory requirements designed to protect investors from various risks and conflicts. For example, ETFs, like other investment companies, are required to follow strict limitations on their use of leverage and transactions with affiliates. In addition, they are subject to specific reporting requirements and disclosure obligations relating to investment objectives, risks, expenses, and other information in their registration statements and periodic reports. Further, with few exceptions, ETFs are subject to oversight by boards of directors and are operated by an investment adviser registered under the Investment Advisers Act of 1940.

Exchange Act Listing Requirements

The Federal securities laws also require a national securities exchange to have rules governing the listing and trading of securities on its markets. With respect to some types of ETPs, such as index-based ETFs, an exchange may list and trade their shares without separate Commission approval, provided the ETP satisfies each of the initial and continued listing criteria applicable to that category of product. Such listing criteria, which are generally referred to as "generic listing standards," must already have been approved by the Commission. Much of the specific quantitative and qualitative generic listing criteria pertain to the individual and collective components comprising the underlying index and include provisions relating to minimum market value (or principal amount outstanding), minimum trading volume, minimum diversification, minimum number of components, and net worth of the issuer. The exchange is required to file a form with the Commission to notify the Commission that the product is listed and trading and represent that such product complies with all of the applicable generic listing requirements.

To be able to list and trade an ETP for which the Commission has not approved "generic listing standards," such as actively managed ETFs, commodity-based trust-issued receipts and commodity pools, the exchange must file a proposed rule change with, and obtain approval from, the Commission prior to being able to list and trade the product. The Commission publishes such proposals for notice and public comment. To approve such a proposal, the Commission must determine that the proposed rules are, among other requirements under the Exchange Act, designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to remove impediments to, and perfect the mechanism of a free and open market and, in general, to protect investors and the public interest. In its analysis, Commission staff considers the structure and description of the product, its investment objective, investment methodology, permitted investments, and the availability of key information and values, including the NAV, intraday indicative value, and the disclosed portfolio of securities and other assets. In addition, Commission staff closely reviews the valuation methodology of the securities and other assets that would comprise the portfolio, the circumstances in which the exchange may, or will, institute a trading halt in the shares, representations regarding the adequacy of exchange surveillance procedures, and the dissemination of information circulars relating to the product.

An issuer of a new ETP must also obtain relief from certain provisions and rules of the Exchange Act before the shares can be traded on an exchange. The relief relates to provisions of the Exchange Act that pertain to, among others, lending on new issue securities, customer disclosure requirements, Regulation M, as well as certain notice and tender offer requirements.

Compliance and Enforcement of the Federal Securities Laws

The Commission's Office of Compliance Inspections and Examinations (OCIE) periodically inspects and examines SEC-registered investment advisers, broker-dealers, and exchanges in connection with issues related to ETFs and, as appropriate, ETPs, and examines issuers of ETPs that are also registered as investment companies. For registered ETFs and investment advisers, the staff examines the adequacy of internal controls and the effectiveness of the compliance structure. In addition, the staff may examine specific operations of registered ETFs and certain ETPs managed by registered investment advisers, such as the portfolio trading, execution, and investment decision-making processes. Furthermore, the staff reviews broker-dealers that sell ETPs to retail customers and that act as Authorized Participants. Broker-dealer examinations, conducted by OCIE and the Financial Industry Regulatory Authority (FINRA), typically review suitability, appropriate disclosure, and supervision of sales. Broker-dealers' trading practices are also reviewed to assess compliance with securities regulations. OCIE staff also conducts inspections of exchanges' initial and continued listing compliance programs and market surveillance that may include issues related to ETPs.

The Commission's Division of Enforcement investigates allegations of misconduct concerning ETPs by market participants. Such misconduct could include inadequate or misleading disclosures in ETP offering documents and marketing materials, as well as insider trading or improper sales practices involving ETPs. Within the Division of Enforcement, newly created specialized Units work closely with the Commission's other Divisions and Offices to evaluate existing and emerging risks to investors in the ETP marketplace. A continuing focus of the Units is whether ETPs—as they reflect new investment strategies and grow in popularity—are being marketed and sold to investors with appropriate disclosures and in accordance with the duties and responsibilities owed to investors by industry participants.

The Commission recently instituted enforcement proceedings against a former Goldman, Sachs & Co. employee and his father alleging insider trading on confidential information about Goldman's trading strategies and intentions that the employee learned while working on the firm's ETF desk. The SEC's Division of Enforcement alleges that Spencer D. Mindlin obtained nonpublic details about Goldman's plans to purchase and sell large amounts of securities underlying the SPDR S&P Retail ETF (XRT) and that he tipped his father Alfred C. Mindlin, a certified public accountant. According to the complaint, father and son then illegally traded in four different securities underlying the XRT with knowledge of market-moving trades in these securities that Goldman would later execute. The case marks the SEC's first insider trading enforcement action involving ETFs.

Developments in the Markets Regarding Exchange-Traded Products

ETPs have become increasingly popular as an investment vehicle among investors, resulting in a proliferation of these products in the marketplace. This proliferation has been accompanied by product innovation, giving rise to new and increasingly complex products. Below is a summary of recent developments in this regard, as they relate to the ever growing and evolving ETP landscape.

Leveraged, Inverse, and Inverse Leveraged ETFs

The Commission received the first application for leveraged ETFs in 2000. After consideration and review of the issues, the Commission approved this first leveraged ETF application in 2006. To date, three ETF providers operate leveraged, inverse, and inverse leveraged funds registered under the 1940 Act. There are approximately 152 such leveraged, inverse, and inverse leveraged ETFs in the market with approximately $48 billion in assets. [3]

Leveraged ETFs are funds that track an underlying index, but seek to deliver daily returns that are multiples of the performance of the index or benchmark they track. Strategies for long leveraged ETFs are employed by investing in securities or

[3] In addition, since 2006, sponsors have also introduced commodity- and currency-based leveraged, inverse, and inverse leveraged ETPs that are not registered under the 1940 Act.

other assets, as applicable, contained in underlying indices and leveraged derivative instruments, such as total return swaps, futures contracts and options. Inverse ETFs (also called "short" ETFs) seek to deliver the opposite of the performance of the index or benchmark they track. Like traditional ETFs, some leveraged and inverse ETFs track broad indices, some are sector specific, and other ETFs are linked to commodities, currencies, or some other benchmark. Inverse ETFs have been marketed as a way for investors to profit from, or at least hedge their exposure to, downward moving markets. Inverse leveraged ETFs seek to achieve a return that is a multiple of the inverse performance of the underlying index. An inverse ETF that tracks a particular index, for example, seeks to deliver the inverse of the performance of that index, while a 2x inverse leveraged ETF seeks to deliver double the opposite of that index's performance. Strategies for inverse leveraged ETFs are also accomplished by investing in the leveraged derivative instruments mentioned earlier, which enables the funds to pursue objectives without selling short each of the securities included in the underlying index. While the portfolio composition for long leveraged ETFs generally includes a mix of stock or other assets, as applicable, including total return swaps, cash, and futures contracts, inverse leveraged ETFs' portfolios are generally composed entirely of total return swaps, futures, and cash or cash equivalent securities.

Most leveraged, inverse, and inverse leveraged ETFs "reset" daily, meaning that they are designed to achieve their stated objectives on a daily basis. Their performance over longer periods of time—over weeks, months, or years—can differ significantly from the performance (or inverse of the performance) of their underlying index or benchmark during the same period of time. This effect can be magnified in volatile markets. An ETF that is set up to deliver twice the performance of a benchmark from the close of trading on Day 1 to the close of trading on Day 2 will not typically achieve twice the weekly, monthly, or annual return of that same benchmark.

Observations and feedback from market participants suggest that some investors may not fully understand the daily performance features of leveraged, inverse, and inverse leveraged ETFs, and the consequences of holding the shares of such ETFs over extended periods. To help address this issue, the Commission, together with FINRA, has issued guidance and other information to alert investors and other market participants of the risks of holding such ETF shares for a period of more than one day.

Separately, and for the reasons discussed further below, in March 2010 Commission staff determined to defer consideration of exemptive requests for those products that fall under the 1940 Act that would permit the launch of new ETFs making significant investments in derivatives. Because leveraged and inverse leveraged ETFs often make significant use of derivatives, deferring consideration of exemptive requests related to derivatives necessarily deferred the issuance of new orders permitting leveraged and inverse ETFs that would be subject to the 1940 Act.

Certain Complex ETPs and Actively Managed Fixed-Income ETFs

In recent years, the types of ETPs introduced to the marketplace have become increasingly complex. For example, some ETPs, in the form of commodity-based trust-issued receipts, seek to track an index of futures on volatility of a portfolio of stocks, such as the S&P 500. Futures on volatility have added another dimension to the calculation to express future or expected volatility. In addition, the Commission has witnessed an increase in the past few years in the variety of actively managed ETFs introduced by sponsors. For example, while an assortment of actively managed ETFs based on fixed-income portfolios is listed and trading in the marketplace, there have been an increasing number of actively managed ETFs that seek to primarily invest in instruments that raise concerns with respect to liquidity and transparency, including emerging market debt securities, high-yield debt securities, and other instruments. Commission staff is currently engaged in a review of these and other types of portfolios (such as those that hold illiquid, nontransparent or other types of investments) to determine whether the underlying instruments meet minimum liquidity and other thresholds, for purposes of transparency, fair valuation, and efficiency in the arbitrage process.

Synthetic ETFs

Recent reports have revealed a growth of "synthetic" pools with traits similar to U.S. domiciled ETFs (European-domiciled ETFs) investing in derivative assets in Europe and Asia. While such reports indicate that nearly half of European-domiciled ETFs synthetically replicate the underlying index using swaps and other derivatives, only about 3 percent of total U.S.-domiciled ETF assets are synthetic, mostly through leveraged, inverse, and inverse leveraged ETFs.[4] Synthetic ETFs have experienced limited growth in the United States partly because regulatory standards under the 1940 Act limit the use of derivatives to replicate underlying indexes. In addition, as already mentioned, in March 2010, pending a review of current practices, Commission staff limited the ability of new ETF sponsors to introduce ETFs that would make significant investments in derivatives. Together, these standards and actions have limited the ability of 1940 Act-registered funds to engage in derivatives-based activity and create synthetic ETF structures. With respect to other types of ETPs that are not registered under the 1940 Act, for example, commodity pools, Commission staff is continuing to consider the ramifications of significant investments in derivatives for those products, and is evaluating whether their structures, investments, trading characteristics, risks, benefits, and other factors, invite closer analysis.

Impacts of Exchange-Traded Funds in the Markets

Recent evidence has indicated that, while the months of August and September of this year have seen some very volatile days, the securities markets have functioned in an orderly fashion, without the types of disorderly trading that were seen on May 6, 2010. Apart from the fact that ETFs trade intraday, most ETFs are similar to mutual funds in that they both translate investor purchases and sales in the fund (and changes in investor sentiment) into purchases and sales of underlying holdings. Some ETFs, however, are structured in a way that require the purchase or sale of underlying holdings based on movements in the market even absent investors' purchases or sales of the ETF. This is the case for leveraged, inverse, and inverse leveraged ETFs.

Regardless of whether or not leverage is employed, because ETFs trade throughout the day, their prices are dynamically linked to the prices of their underlying holdings, and the price fluctuations of individual holdings, such as stocks, creates associated price fluctuations in the ETF. Likewise, buying or selling an ETF affects each of the underlying holdings.

Staff studying ETF trading that occurred on May 6, 2010, observed that under disorderly market conditions, these linkages result in heightened volatility of the ETFs. On that day, a large number of ETFs traded for a short period of time with massive intraday price swings. The shares of more than 25 percent of all ETFs experienced temporary price declines of more than 50 percent from their 2:00 p.m. market prices. One large ETF sponsor reported that 14 of its domestic stock ETFs experienced executions of $0.15 or less per share (including five ETFs that had executions of one cent or less) while also observing that its domestic bond and international ETFs appeared to execute at reasonable prices. Staff is continuing to examine the dynamics of ETF trading, the arbitrage mechanisms designed to keep the prices of ETFs close to the value of their underlying assets, and linkages (both intended and unintended) between ETFs and the market as a whole.

For example, because ETF share prices are dynamically linked to the prices of their underlying holdings, the trading and other characteristics of the underlying portfolio investments, such as certain illiquid types of securities and particular over-the-counter or "OTC" derivatives, may impact the arbitrage process necessary to closely align the ETF share price with its NAV. In certain circumstances, temporary imbalances in supply and demand might result in the price of the ETF decoupling from the value of the ETF's underlying instruments as the ETF starts to behave more like a stand-alone product whose price responds solely to whatever liquidity is immediately available in that product, regardless of the value of the underlying investments. Under these circumstances, the ETF can begin to trade at a significant premium or discount to the NAV of its assets.

In addition, while index-based ETFs are designed to track the performance of their respective underlying indexes, an ETF may fail to meet this objective over a period of time, based on investment methodologies used and trading costs incurred. While tracking errors may be small, such deviations could lead to inefficiencies for institutional investors that are using ETFs to enter into large hedged positions. Tracking performance is particularly an issue with respect to leveraged and inverse leveraged ETFs, which promise daily returns equal to the multiple or inverse multiple of the performance of an underlying index or benchmark. Because leveraged and inverse leveraged ETFs only track daily returns, the performance of the fund and the underlying index will not correlate over extended periods of time.

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[4] *See,* Financial Stability Oversight Council Annual Report 2011 at 66–67, available at *http://www.treasury.gov/initiatives/fsoc/Documents/Financial%20Developments.pdf.*

SEC Initiatives

As noted earlier, in March 2010, Commission staff determined to defer consideration of exemptive requests for ETFs seeking to register under the 1940 Act and make significant investments in derivatives. This action was taken in light of concerns raised generally about the use of derivatives by all registered investment companies, including ETFs. While staff recognized that the use of derivatives is not a new phenomenon, the staff determined that the increasing complexity of derivatives and their growing use by funds made it the right time to reevaluate the Commission's regulatory protections. As part of this review, in August 2011, the Commission issued a concept release seeking broad public comment on funds' use of derivatives and on the current regulatory regime under the 1940 Act as it applies to funds' use of derivatives. Although the staff recognizes the competitive impact of the decision to defer the consideration of exemptive relief, the staff is committed to the Commission's mission to protect investors. Accordingly, the staff has determined not to issue any additional exemptive relief for ETFs seeking to make significant use of derivatives pending the broader review of the use of derivatives by all funds. The comment period for the concept release expires on November 7, 2011. The staff looks forward to reviewing the comments that the Commission receives and will carefully consider them in assessing how to proceed with respect to both the use of derivatives by funds generally and the staff's consideration of requests for exemptive relief for derivatives-based ETFs.

In addition, these initiatives with respect to ETFs have informed the staff with respect to ETPs more generally. As a result, Commission staff from across multiple Divisions and Offices is currently engaged in a general review of ETPs, which includes gathering and analyzing detailed information about specific products. For example, Commission staff is currently engaged in a general review of ETPs in connection with, among others, the adequacy of investor disclosure, liquidity levels and transparency of underlying instruments in which ETPs invest, fair valuations, efficiency in the arbitrage process and the relationship between market volatility and ETPs.

Conclusion

In conclusion, ETPs have grown significantly since the early 1990s as they have grown in popularity with both institutional and retail investors. As ETPs have proliferated, they also have grown in complexity. The SEC has a corresponding interest in making sure that investors receive information about these products that permit them to make informed decisions. Also, because of the growth and innovation in such products, the Commission has been actively following, and continues to engage in the analysis of, these products.

PREPARED STATEMENT OF ERIC NOLL

EXECUTIVE VICE PRESIDENT TRANSACTION SERVICES, NASDAQ OMX

OCTOBER 19, 2011

Thank you Chairman Reed and Ranking Member Crapo for the invitation to speak to you today about an important category of financial products—Exchange Traded Products (ETPs).[1] Nasdaq OMX lists and trades these products and partners with the Financial Industry Regulatory Authority (FINRA) to ensure quality regulation and protection of investors. We also applaud the important work by the Securities and Exchange Commission (SEC) to establish the listing and trading environment that has led to a competitive and innovative environment for these products.

As we examine these issues we should recall that these products have done a lot of good for a lot of investors since they were first developed almost 20 years ago: they have reduced the cost of investing in equities; they have reduced the risk of equity investment and broadened the tools to hedge risk; they have often been the way many Americans have begun successfully investing.

In fact, taken as a whole, ETPs are one of the greatest financial innovations of our time and offer great value to retail and institutional investment communities. ETPs offer transparency, liquidity, diversification, cost efficiency and investment flexibility to gain broad market exposure or to express a directional view as a core

[1] The majority of this testimony concerns the broad and diverse group of Exchange Traded Products (ETPs), including Exchange Traded Funds (ETFs). Sections on market activity and risk narrow the discussion to ETFs because they have the best available data and make up the vast majority of equity ETPs.

or satellite component to one's investment portfolio. ETPs do so while offering investment exposure to all asset classes—many of which would otherwise be inaccessible.

We at NASDAQ OMX are aware of the recent cautionary calls by some industry experts and regulatory groups about ETPs who are rightly applying a presumption of doubt and scrutiny to all financial matters that might harbor systemic risks for our post 2008 economy. Evaluation, understanding and debate about these issues is healthy and we welcome the chance to comment on systemic risks arising from ETPs, how we view their contribution to the markets/investors and some emerging international issues. At NASDAQ we aim to be the champion of ETP transparency as it relates to the underlying indices, listing and trading the products and the dissemination of ETP related data.

A word about our listing standards: they are developed in a completely transparent manner with full public comment and SEC approval; at NASDAQ we focus on the key issues for investors, like ensuring the financial strength of the issuers and specifying the components of the products. And, of course, we have the people and tools to monitor compliance with these rules on a continuous basis.

These are volatile times in our markets. In difficult times it is natural to look for a cause that can be easily identified and even fixed. ETPs are a tempting target. But restricting or eliminating the ETP business will not solve the sovereign debt crisis in Europe, will not balance the U.S. budget, will not restore bank balance sheets, will not add jobs, and will not repay consumer debt and get them spending again. There are very large, very real uncertainties that are driving global financial market volatility.

In fact, ETPs provide investors with very valuable diversification, hedging and risk management opportunities. For those reason ETPs have grown rapidly in popularity over recent years and it is not uncommon for trading in ETPs to increase on volatile days. What is interesting is that even for the largest ETPs, their proportion of overall trading is relatively stable in proportion to trading in the underlying stocks.

ETPs, particularly equity based ETFs, also benefit listed companies. By being included in a single, diversified security companies gain access to a greater audience of investors who may not have bought the individual stock. And, of course, this means that the markets are deeper and more liquid, benefiting not only investors but the economy as a whole.

Prices of ETFs fluctuate with changes in the value of the underlying stocks and with changes in supply and demand for the ETF itself. These two prices are kept in line by market makers who trade the ETF, the underlying stocks, and can create and redeem units of the ETFs as more or fewer are demanded by investors. All of these activities are rules based, entirely transparent, and mostly occurring on exchanges and other transparent institutions.

It is really hard to overuse the word "transparent" when talking about ETPs. That is why some investors prefer them over other similar products, like mutual funds. Mutual funds and ETPs play different roles in an investor's portfolio, but ETPs low cost and transparency make them an important category that should remain widely available.

As I mentioned at the outset, it is important to understand that ETPs already have an established history of functioning within the markets. The first modern ETF was introduced in 1993, and NASDAQ OMX launched its transformative QQQ equity index based ETF in 1999. Our flagship ETF, the QQQ has been the home for millions of investors who want to invest in the NASDAQ 100 index—the top 100 NASDAQ listed nonfinancial companies—a proprietary index of our category defining companies like Apple, Microsoft, Cisco, Staples, Dell, Qualcomm, and others. The QQQ is one of the most widely recognized and traded securities in the world. I can tell you from personal experience that the companies that make up QQQ consider it a real achievement, and certainly NASDAQ is proud of the excellence QQQ represents.

Since these products were first introduced, innovations have propelled them from simple indexes on a basket of stocks, ETFs, to a host of other ETPs that approach complex financial strategies for investors. Even some of the names of these ETPs suggest diversity or even complexity—commodity ETPs, currency ETPs, leveraged ETFs and even inverse leveraged ETFs.

As of September 30, 2011, according to BlackRock's most recent ETF Landscape Report, there were over 4,000 Exchange Traded Products listed globally, of which 1,335 were listed in the United States representing assets of $1.4 trillion and $969 billion respectively. Of the 1,335 products listed in the United States 83 are listed on NASDAQ OMX; however, all domestic ETPs are actively traded to varying degrees on the suite of NASDAQ OMX domestic exchanges—including PSX and NASDAQ BX.

Moreover, NASDAQ trades almost 23 percent of ETF dollar volume representing an average of over 350 million shares and $21 billion per day. Additionally, our Nordic exchange list and trade 69 ETPs in Europe.

The proliferation of ETPs as an investment vehicle and growth of the assets in ETPs has happened more quickly than the needed broader education about the products and their structures to investors, regulators, academics, and policy makers. This growth resulted from investors enthusiastically embracing exchange traded products for the aforementioned benefits; with a consequence that some have formed incorrect assumptions (in many cases even by those in the investment community). Among the most relevant of those assumption is that all ETPs are constructed the same and are based on and track an underlying index. This isn't the case, but that does not infer that the product category is not beneficial to the marketplace and investment community.

Innovation has allowed ETPs to adapt from ETFs tracking baskets of domestic equities to more sophisticated products, in some cases holding derivatives and/or using leverage as a tool of the product's investment objective. These new products add value in that they offer new and quite unique exposure to the markets. This, however, does not imply that all products are meant for all investors. Investor education and disciplined application of suitability standards for any prospective holder of a product will continue to be paramount as ETP numbers grow and the investment objectives continue to expand.

ETPs and Market Risk

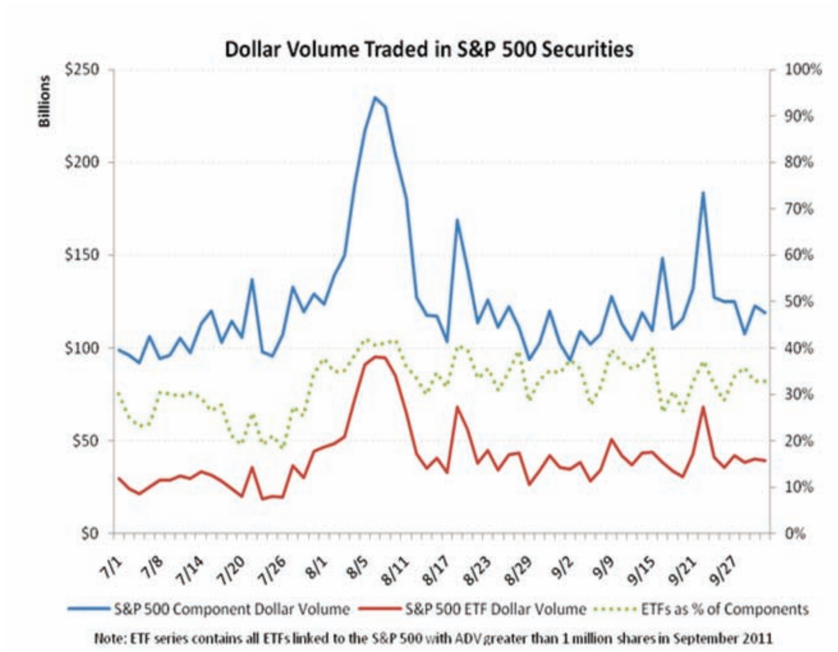
We believe that ETPs are of limited concern when evaluating them in the context of whether they are a potential culprit in future situational analysis of systemic risks to our financial system. While activity in ETPs can generate corresponding transactions in the underlying securities, ETPs pale in comparison with other financial instruments.

Further, some have tried to use the extraordinary trading environment we have experienced over the last year to connect ETP activity with some chaotic trading days. We think these analyses ignore the unparalleled uncertainty that the market must process during the fast paced news and information cycle of every trading day. From rolling flirtations with debt and sovereign failure in Europe, to potential Government debt payment interruptions in the U.S., to a global demand curve for goods, services and human capital that no one can accurately determine our markets are simply trying to rationalize and apply metrics to far too many unknowns. ETPs do not cause this, they, like other asset classes are just trying to move within this turbulent atmosphere.

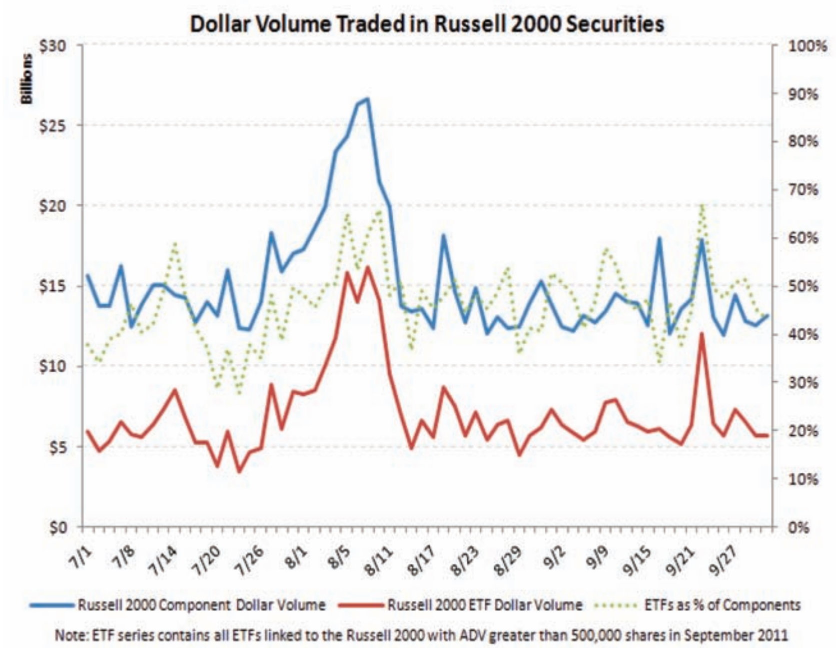
We had our economic research team look at trading in ETFs on normal and volatile days. Trading in ETFs varies roughly in proportion with overall trading in the market. When news breaks and market prices move trading volume increases in both the ETFs and the underlying stocks.

The largest ETFs track the S&P 500 index. As a group they trade about $40B worth of volume each day (July–September 2011). Though large, that is a relatively small amount of trading when compared to the $125B traded daily in the underlying 500 stocks that make up the index.

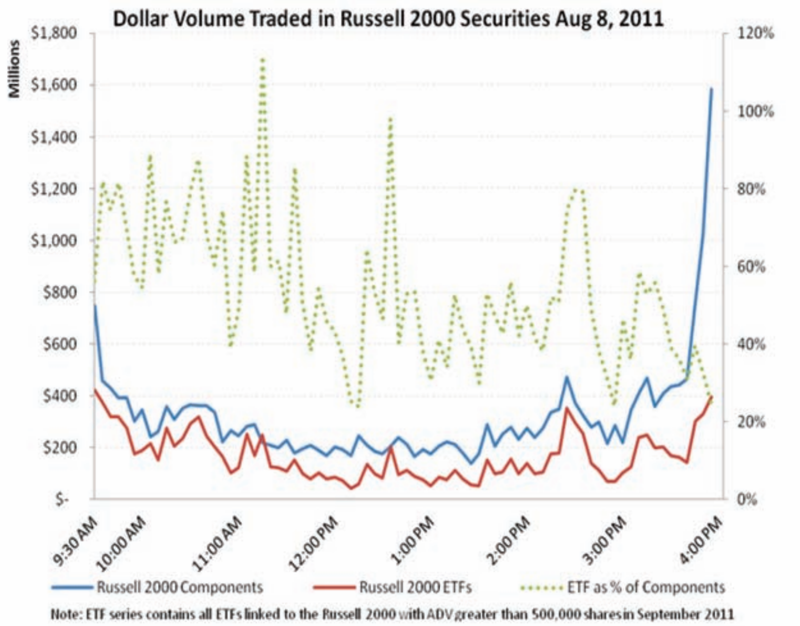
On very volatile trading days, such as those that occurred in early August of this year, trading in both the ETFs and the underlying stocks increases. Because many investors manage their market risk using the ETFs, trading in ETFs rises slightly more on a percentage basis than trading in the underlying. This is not surprising considering the convenient risk management opportunity provided by ETFs.



In a broader index, such as the Russell 2000, ETFs provide even greater benefits to investors. Buying a single security is far easier than 2000 often less liquid ones. For that reason, it is not surprising that ETFs based on the Russell 2000 trade more relative to the underlying. Average daily dollar volume for the Russell 2000 ETFs is about $7B. Average daily dollar volume in the underlying 2000 stocks is about $15B. On volatile days in August 2011 the Russell 2000 ETFs traded over twice as much as on a normal day ($16B on August 9, 2011) while the underlying stocks did not quite double in dollar volume ($27B on August 9, 2011).

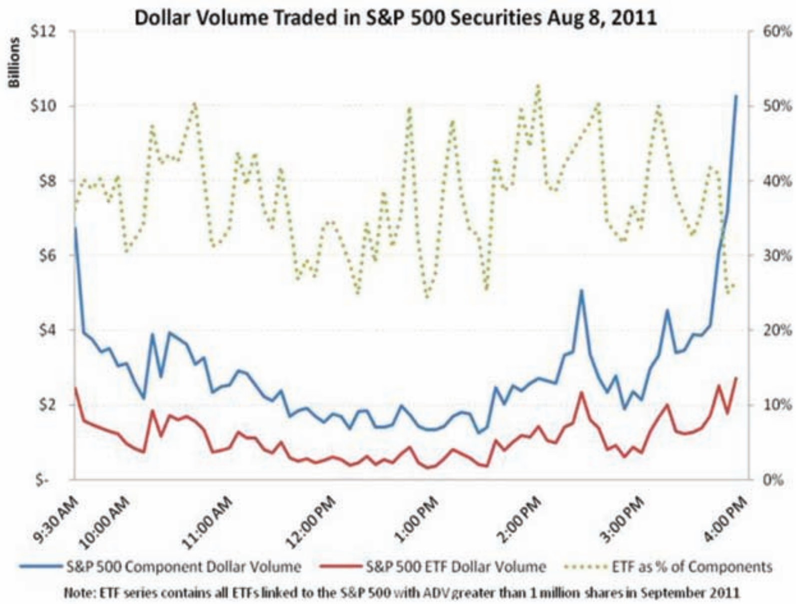


Within the day, ETF volume fluctuates along with volume of the underlying stocks. Late in the day, trading of the stocks underlying the index increases disproportionately, as many investors and traders adjust their exposure near the end of the day. Trading in the ETF is relatively less active late in the day.



Within the day, the Russell 2000 ETFs often trade in dollar volumes approaching the amount traded in the underlying 2000 stocks. Again, this is not surprising considering the benefit offered investors of being able to control their exposure to this large index of relatively small companies with a single instrument. Like the wider index, trading in the underlying components increases significantly at the end of the day, reflecting many investors and traders attempting to buy or sell the individual stocks near the official closing price. Late in the day trading in the ETF itself increases less than the component stocks.

The trading patterns we observe in ETFs are what you would expect from these very popular and useful investment vehicles. It is not surprising to see increased volume near the close and when volatility is high. The amount of the increase is consistent with the value these securities provide investors and traders in managing their exposure to the very real macroeconomic and political events that have driven markets recently.



Ensuring a Quality Market for ETPs

Let me take a moment to comment on regulation. NASDAQ MarketWatch and regulators at FINRA and the SEC monitor activity in all securities traded or listed on the NASDAQ stock market, including ETPs. As I inferred earlier, we support coordinating SRO, Broker, SEC and FINRA policy to help answer the question: How can investors better understand these products? Suitability and education should the underpinning of this regulatory dialogue.

From a listing perspective the SEC's division of Trading and Markets is deliberate and thorough in its review of new products. Aside from new products that fall within the generic listing standards, in other words "plain vanilla" index based products, sponsors are required to submit a rule filing with the SEC through the exchange (in the form of a 19b-4); the time to market is typically no shorter than 3 months and involves multiple rounds of comments between the Commission, exchange and sponsor. Listing standards have evolved with new products and will continue to do so; we are actively engaged with the SEC in developing new listing standards to deal with new product developments.

The SEC and the exchanges have also partnered to look at trading rules for all exchange traded assets including ETPs. Trading of ETPs is protected by the same volatility protection provided for normal equities. Following the 2008 and financial crisis and the May 6, 2010, "Flash Crash", NASDAQ OMX along with the other exchanges and the SEC implemented two market-wide changes that limit the impact of volatility on stock prices.

First, we have new short selling restrictions that are triggered whenever a security's price falls more than 10 percent on a day. At that point an order to sell short may not trade against bids, preventing them from depleting demand for the stock. Since the short sale rule was implemented in February 2011, ETFs are responsible for less than 4 percent of the incidents of short selling restrictions, despite making up about 14 percent of the listed securities in the U.S.

Second, all markets have adopted Single Stock Trading Pauses that occur when a security's price moves rapidly over a 5 minute period. In such a case the stock is halted for 5 minutes then re-opened with an auction. Since the SSTP rule went into effect in June 2010, ETFs have been responsible for just over 2 percent of all SSTP halts while making up 14 percent of all securities. Since the SSTP rule was expanded to cover a greater number of ETFs and other securities in August 2011, ETFs have been responsible for less than 3 percent of all SSTP halts.

NASDAQ along with the other exchanges and the Securities and Exchange Commission are working to upgrade from the Single Stock Trading Pauses to a marketwide limit up limit down rule. Limit up limit down rules proved effective in the futures markets during the May 6, 2010, "flash crash." The advantages of a limit up limit down rule are that it prevents trades at extreme prices before they happen and then does not immediately go into a halt, thereby allowing the continuous market to recover in many cases without the need for a complete halt.

An important consideration for the limit up limit down rule is interaction between price limits in individual stocks and limits in securities that derive their prices from those individual stocks such as ETPs. We are working with the other exchanges and the Securities and Exchange Commission to control any unintended consequences of the rule on ETPs.

ETPs in the U.S. Are Different From Internationally Similar Products

Finally, we should examine the comparisons with foreign-issued ETPs. I believe that the U.S. product design is superior. This is especially true when comparing U.S. products with comparable European products. Specifically, with derivative-based ETPs, in some cases, we see that there is a vertical integration within the structure of the products increasing the risk profile; this can be unknown to the investor. The trading and creation flow of a derivative-based ETP has a number of components: sponsor, exchange, market maker, and custodian bank, to name some. In some cases, under the European UCITS (Europe's equivalent of the Investment Company Act of 1940) structure, individual firms are permitted to fulfill multiple roles within the construct of the product's trading and or creation/redemption process. In other words, the Sponsor/Issuer of an ETP could be the same entity as the market maker, distributor, intraday NAV calculation agent, custodian bank and counterparty to any underlying asset (swap or otherwise). Under the Investment Act of 1940, this is not permitted. In the U.S. construct, the Sponsor is tasked with securing independent third parties to fulfill the different, critical roles, therefore mitigating additional risks inherent in a vertical silo, European UCITS structure.

Additionally, as it relates to synthetic ETPs, the relationship between the Fund Sponsor and the underlying derivative counterparty is vastly different in the U.S. as compared to Europe. In Europe, when entering into a swap, cash is delivered to the swap counterparty (sometimes an affiliate of the sponsor) in return for collateral. However, the return collateral is often uncorrelated to the fund investment (particularly in unfunded arrangements) and in the event of a default by the counterparty the fund is left with the risk of the collateral basket and likely haircut in unwinding the collateral assets. In the U.S., this risk does not exist. Instead, the sponsor enters into a swap and delivers no cash to the counterparty; the cash is put into a third party, independent custodian account, and is invested in cash equivalents or money market instruments to collateralize the swap. The accounts are governed by a tri-party agreement. However the sponsor has authority and investment discretion over the account. Consequently, there is no collateral risk as a result of counterparty default.

Finally, there is a notable difference in transparency with respect to ETP trading in Europe and the U.S. In the U.S., our national market system mandates that all trades of 100 shares or more, both on exchange and off exchange, have to be reported to the consolidated tape—ensuring that all investors see the same transaction data for a given security. In Europe's several jurisdictions, despite significant efforts to unify securities rules across borders, all trades are not reported to a central tape. Most ETP trades in Europe do not take place on an exchange (they trade over-the-counter) and these trades are often not reported in a timely fashion. There are obvious advantages for dynamic price discovery when all activity in any security is visible to the marketplace. As well, there are cautionary disadvantages that can lead to serious market abuses when trades can be functionally hidden from the market—and there are recent examples of the dangers inherent in such a regime.

Conclusion

ETPs have grown in popularity because of their proven usefulness in helping investors diversify and manage risk in today's complicated markets. That popularity is reflected in daily trading activity, as it should. But they do not dominate today's market. Their proportion of trading is what you would expect when considering their usefulness. During market volatility caused by explainable economic and political events, we have seen no evidence that they increase in volume or volatility beyond what we would expect. We believe that regulatory community is well-positioned to monitor and discipline the growth and innovation within this important category of financial products.

Thank you again for the opportunity to share our experience and views about ETPs. I am happy to answer any questions you may have.

PREPARED STATEMENT OF NOEL ARCHARD

MANAGING DIRECTOR, BLACKROCK I-SHARES

OCTOBER 19, 2011

Thank you Chairman Reed and Ranking Member Crapo for the opportunity to appear today before this Subcommittee to discuss Exchange Traded Funds (ETFs), which have become an important investment product for investors large and small. My name is Noel Archard and I am a Managing Director at BlackRock with responsibilities for product development in our ETF business which operates under the name iShares.

BlackRock is one of the world's leading asset management firms, offering clients a variety of equity, fixed income, cash management, alternative investment, real estate, and advisory products. BlackRock employs more than 9,700 people, including 5,500 in the U.S. Our client base includes corporate, public, union and industry pension plans; governments and official institutions; banks and insurance companies; endowments, foundations and charities; and individuals.

BlackRock, through iShares, is the market leader in the ETF industry both in the U.S. and globally, with iShares assets under management in the U.S. of $470 billion and $632 billion globally. We began managing our first ETFs in 1996 and subsequently launched the iShares brand in 2000. We seek to provide financial products that serve the best interests of our clients.

ETFs are one of the most dynamic and investor value-enhancing market developments of the last 25 years. They offer investors a low-cost, flexible and efficient way to invest in portfolios of stocks that track indices and diversify portfolio risk.

While the first ETFs were straightforward, tracking relatively broad benchmarks such as the S&P 500 or individual country indexes, today some sponsors have introduced new products of increased complexity that carry greater risk and may not be appropriate for retail "buy and hold" investors. Products which raise such concerns include so-called leveraged and inverse funds (described in greater detail below), products that are backed principally by derivatives rather than physical holdings. These products require a greater deal of disclosure and up-front work with clients for them to understand investment and structural risks and BlackRock believes that they should not be labeled ETFs.

If there is one over-arching principle that we at BlackRock believe should guide all participants in the growing ETF marketplace, it is transparency in all aspects of the product structure. It is incumbent on our industry and its regulators to ensure that investors who purchase ETFs—and any financial product—know what they are buying and appreciate the risk and costs associated with those products. That is why BlackRock welcomes the focus of this Subcommittee on ETFs, as we believe that more knowledge and more information about ETFs will benefit investors and the general public alike.

In this vein, we have called for new standards for ETFs and "Exchange Traded Products" (ETPs) more broadly to enhance transparency and investor protection. Clear labeling combined with disclosure of fees and risks is a critical starting point to achieving the better clarity investors need to understand various structures.

For the U.S. marketplace, BlackRock and iShares specifically recommend the following:

- Clear labeling of product structure and investment objectives
  - A standard for funds using the ETF label to exclude from that classification any leveraged or inverse products and any primarily derivatives-based products currently described as "ETFs"
- Frequent and timely disclosure for all holdings and financial exposures
- Disclosure of all fees and costs paid, and
- Adoption of an ETF rule for the U.S. ETF market by the SEC encompassing:
  - Clear and consistent product structure guidelines
  - Enhanced disclosure for higher risk products, and
  - Codification of routine exemptive relief that has been granted multiple times over many years.

The Value of ETFs to Today's Investors

ETFs exist across a range of asset classes, including many not readily available through other investment products, thereby permitting investors to diversify their risk easily and efficiently by accessing different areas of the global markets within one investment portfolio. ETFs have made it convenient for investors to tailor a financial portfolio based on their financial objectives.

In addition, by holding a basket of securities, rather than a single stock or bond, ETFs represent broad diversification within an asset class. Looking at ETFs trading on U.S. exchanges today, the top 50 funds by assets under management represent 60 percent of the ETF market and overwhelmingly represent broadly diversified portfolios with an average of 580 securities per fund.

Unlike traditional mutual funds, which are priced once daily, ETFs trade like stocks, and, like stocks, can be traded throughout the day, which provides increased investment flexibility to both professional and retail investors.

Also, unlike typical mutual funds, which disclose their holdings only quarterly and with a substantial time lag, most ETFs disclose all or substantially all of their portfolio holdings frequently, often daily, so investors can readily understand what they own.

ETFs utilize an innovative "creation and redemption" process which helps keep an ETF's market price in line with the price of the fund's underlying assets or net asset value per share (NAV). Through the creation and redemption process, a group of certain broker-dealers and market makers called "authorized participants" (APs) work with ETF sponsors to (a) create new shares of an ETF if demand for shares in the secondary market exceeds supply or (b) redeem shares if the secondary market supply exceeds demand. APs generally manage the supply of ETF shares by delivering the underlying securities that make up the ETF to the fund in exchange for shares of the ETF, which the AP may then make available for trading in the secondary market. This process also works in reverse. APs can readily redeem a block of a specific ETF's shares by gathering enough shares of the ETF and then exchanging for the underlying securities held by the ETF. The creation and redemption process not only helps the ETF trade in line with its underlying value, but also reduces the portfolio turnover and related transaction costs at the fund level, so that ETF investors are less impacted by portfolio activity (as compared to a traditional open-end mutual fund).

Benefits Have Led to Rapid Adoption

Investments in ETFs by both institutional and retail investors has increased year over year, with global ETF assets now estimated to be $1.4 trillion, of which $969 billion is in the U.S. market. Each time the financial markets and the financial industry has experienced a severe disruption—the tech sector bubble bursting in 2000, the mutual fund market timing scandals, the 2008 credit crisis, last year's "Flash Crash" and this year's credit crisis—ETF flows have subsequently grown. This is because investors value the transparency, efficiency and simplicity of ETFs.

Individual investors now use ETFs in a variety of ways: to build a balanced portfolio through careful asset allocation, for example, or to engage in tactical investing among sectors. ETFs help individuals manage their investment costs, understand what they own and diversify a portfolio. This in turn helps them build a nest egg, prepare for retirement, or save for their children's education.

Institutional investors use ETFs for a variety of strategies as well, including hedging and achieving exposure to otherwise difficult to access markets. This helps institutions such as large pension plans, foundations and endowments to manage their risks and meet their financial obligations.

Concerns Raised With the ETF Market Today

In the past few years, ETF sponsors have introduced increasingly complex exchange traded products that in some cases have failed on investors' expectations or failed to maintain appropriate standards of transparency and simplicity. This has introduced new risks to investors that may not be fully understood or, importantly, may not be appropriate for long-term investors. Calling such products ETFs causes investor confusion and regulators should require a different label. Products which raise this concern include:

- Daily-rebalance leveraged and inverse products
- Products principally backed by derivatives rather than physical holdings

While these products currently make up less than 10 percent of the ETF assets in the U.S., they have generated created magnified and questionable concerns about the role of all ETFs in the marketplace, including ETFs that do not use inverse and leverage strategies or invest principally using derivatives. Nevertheless, these concerns must be addressed by the ETF industry and regulators in order to ensure the benefits to investors provided by the majority of ETFs continue to be realized.

Leveraged and Inverse Funds

As noted above, a specific type of derivatives-based ETF has introduced further complexity by seeking to provide returns that are (a) a multiple of the underlying index through the use of leverage (which can magnify gains or losses) or (b) the inverse (or a multiple of the inverse) of the underlying index (resulting in an ETF that attempts to profit from the decline in the value of the underlying benchmark).

Leveraged and inverse ETFs typically seek to maintain a specific ratio of leverage to the benchmark each day and therefore have to increase or decrease their exposure each day in response to market movements. This daily rebalancing process keeps daily leverage at the desired level, but over longer periods performance may be significantly different than the unleveraged performance of the benchmark index multiplied by the fund's specified leverage (or inverse leverage) ratio. The use of leverage results in significantly different risks than traditional ETFs, which should be clearly disclosed and reflected in the name of the product category.

Use of Derivatives Rather Than Physical Securities

Much of global regulatory focus has been on, among other issues, ETFs that use derivatives to replicate the performance of a given benchmark rather than holding the physical assets (such as actual stocks or bonds) that comprise that benchmark. Our view is that physical-backed ETFs are typically a better choice for investors because physical-backed funds provide investors with least amount of risk relative to holdings in the fund—the fund is literally comprised of securities fully owned by the fund with little or no counterparty risk. We recognize that derivative-backed products can have a valid role in an investor's portfolio when an underlying asset class is hard to access or less liquid and therefore ETF exposure to the asset class can only be provided efficiently through derivatives. It is important to note that over 90 percent of the ETF assets in the U.S. today are primarily backed by physical holdings.

Market Volatility

Many questions have been raised over the past year regarding the connection between the growth of ETFs and various market dynamics. Some theories have tried to link macro-market volatility to the rise in ETFs, while others have pegged end-of-day volatility to the use of leveraged and inverse ETFs.

Our analysis of the data does not suggest that ETFs increase market volatility. Any action that might be undertaken to address increased market volatility would be counterproductive unless hard data shows that ETFs in fact lead to increased market volatility. The historical evidence available to us shows that the broad dynamics of market volatility are reflective of overall macroeconomic uncertainty. Current levels of volatility are not unprecedented and have been observed in past periods of high macroeconomic uncertainty including well before ETFs and other similar instruments were available in the market. During periods of volatility, market participants look for mechanisms to trade on broad economic and market news and ETFs provide an effective mechanism to do so. This explains why we see increased ETF usage in times of increased volatility, but that does not mean that ETF usage is the cause of increased volatility. Indeed, all evidence suggests that the primary cause of volatility lies with the fundamental macroeconomic uncertainty that then gets priced into the market in the form of market volatility.

A number of questions have been raised about the role of leveraged and inverse ETFs in creating end-of-day volatility. This should be addressed in two parts. The first type of volatility we have seen in the markets recently is when the market swings dramatically in opposite directions near the close of the market. Leveraged and inverse ETFs which rebalance daily must do so structurally in line with market direction, meaning that when the market is down, they must adjust their positions in the same fashion as the market (*i.e.,* down) rather than against it. Arguments put forward that instances when the market is down 2 percent 15 minutes before the close and then up 2 percent at market close are perpetrated by the presence of leveraged or inverse rebalancing seems counter-intuitive.

A second type of the volatility focuses more on the potential for leveraged or inverse funds to create a greater directional impact to market moves in a particular direction (either up or down) at the close. While it is possible that certain narrow market segments may be impacted by such daily rebalancing activity, the fact that most leveraged and inverse ETFs do not transact in physical securities suggests that further analysis will be necessary before any conclusions can be drawn about the impact of these types of funds on end-of-day volatility.

Recommendations for Reform of the ETP Marketplace

While ETPs all share certain characteristics, "ETF" has become a blanket term describing many products that have a wide range of different structures. This has led to confusion among investors. It is important for investors to understand the differences among products that are all described as "ETFs" despite exposing investors to different types and levels of risk. The ETF industry today, both in the U.S. and globally, is not doing a sufficient job in explaining those differences consistently.

Transparency is the one overarching principle that should guide all participants in the ETF industry. When they were first introduced more than two decades ago, ETFs helped bring a new level of transparency to the financial industry. While most ETFs continue to provide clear and transparent information about risks, holdings and fees, ETF transparency can and should be improved for the benefit of investors. This means transparency regarding the structure and risks of products; transparency regarding the holdings of products; and transparency about fees charged.

Like all securities, ETFs are regulated by various Government agencies. Regulations, however, may need to further adapt to the rapid changes in the marketplace. BlackRock believes that clarity of labeling and what constitutes an "ETF" are essential and has made the following recommendations to enhance investor protection. Our focus is on ETFs that are index or passive vehicles—the vast majority of the market—rather than active ETFs.

1. Clear Labeling of Product Structure and Investment Objectives

Investors should know what they are buying and what a product's investment objectives are. This can be achieved by establishing a standard classification system with clear labels to clarify the differences between products. As previously noted, Exchange Traded Product or "ETP" should be the broad term used to describe products that trade on an exchange. ETF should refer only to a specific subcategory that meets certain agreed standards. The attachment to this statement summarizes our recommended classifications for exchange traded products.

At the most basic level, and with respect to what an investor expects of an exchange traded fund, a product defined as an ETF should mean that the product is regulated as a publicly offered investment fund (in the U.S., a registered investment company regulated by the SEC) and is appropriate for a long-term retail investor. Products that are designed only for professional or short-term investors, such as exchange traded products that use leveraged or inverse strategies, would not be permitted to use the "ETF" label. Regarding derivatives usage, any significant use of derivatives, including swaps, should be clearly disclosed. This is why having an ETF rule that sets forth consistent standards in the U.S. is so important.

BlackRock recognizes that different regulators around the world have different views about what is permissible within a fund. U.S., European and Asian regulators, for example, are taking different stances on the permissibility of using derivatives (including swaps) in ETFs. A standardized classification system would benefit all investors in understanding what they are buying, and such a system can also assist regulators in developing appropriate rules in each jurisdiction. Foreign regulators have already sought comment on addressing issues of fund categorization for exchange traded products. We believe the SEC should convene a working group of industry participants to agree upon the criteria for a standardized classification system and then issue a rule to assure uniform adoption. This type of classification will also provide the necessary framework for other disclosure standards that we believe are necessary as described below.

2. Frequent and Timely Disclosure of All Holdings and Financial Exposures

Just as investors should understand the structure of any exchange traded product they are buying, they should also understand what that product holds. To that end, sponsors should be required to provide a clear picture of what the product holds and any of its other financial exposures. Ideally, the goal should be daily disclosure of holdings and exposures, but we recognize that there are currently practical, technical and legal constraints that may prevent full disclosure of all portfolio holdings in some products.

3. Disclosure of All Fees and Costs Paid

As some funds have become more complex, the fees associated with some of them have also become more complex. Investors should have complete clarity regarding all the costs and revenues associated with any fund they buy, so they can clearly establish the total cost of ownership. Thus, in addition to clearly stating the management fee paid by the fund to the sponsor, the disclosure should include any costs or fees that affect the investors' holdings and returns. For example, some exchange traded products provide exposure to foreign currencies by investing in non-U.S. dollar bank deposits, which may or may not pay a market rate of interest. We believe that if investors are receiving a return below the market rate of interest that is a hidden cost that should be disclosed.

4. Adoption of an ETF Rule for the U.S. ETF Market by the SEC

The vast majority of ETFs traded in the U.S. are regulated under the Investment Company Act of 1940 (the "1940 Act"), the same as mutual funds, but receive dispensations from the SEC so they can trade on exchanges and create and redeem shares only with APs. Because ETFs are a hybrid of conventional mutual funds and closed-end funds, they do not fit neatly within the 1940 Act. As a result, in order for ETFs to operate in the U.S., they must obtain exemptive relief from the SEC. This exemptive relief can take years to obtain, and, as a consequence, ETF sponsors may receive similar, but sometimes different, SEC relief. It appears that a great deal of the SEC's limited resources devoted to ETF regulation, however, are expended on what are now routine exemptive applications for identical and/or substantially similar products from different sponsors. Using as its foundation the ETF rule proposed in 2008, we urge the SEC to convene a public working group of market participants to develop clear, consistent regulations for U.S. ETFs that establish criteria for classification, take into account the ETF transparency recommendations set forth above and promote the aspects of the ETF market that create the greatest investor utility. In addition to enhancing investor protection, this would create greater efficiency for the SEC and promote competition.

We believe the SEC should, after consultation with ETF market participants, adopt an ETF rule that provides uniform treatment of ETFs and enhances disclosures, particularly for complex and higher risk products such as leveraged and inverse funds. In our view, having consistent rules applicable to ETFs in the U.S. would help investors to better understand differences in these products and make more informed investment decisions.

Conclusion

As the global leader in exchange traded funds, BlackRock welcomes the Subcommittee's focus on ETFs and related products. We explicitly support uniform standards on labeling, transparency and disclosure that will improve investor protection and help ensure that investors understand precisely the risks and attributes of the ETFs they are purchasing. BlackRock is committed to working with regulators, other market participants, this Subcommittee and other policy makers to help ensure that these important enhancements are made on a timely basis by all participants in our industry.

Recommended Classifications for Exchange Traded Products

ACRONYM	NAME	DEFINITION
ETP	Exchange Traded Product	• Catch-all term for any portfolio exposure product that trades on an Exchange. • ETFs, ETCs, ETNs, and ETIs, are all subsets of ETP.
ETF	Exchange Traded Fund	• The product is regulated as a publicly offered investment fund and can be appropriate for a long term retail investor • Funds with daily leverage and inverse strategies should not use the ETF label. • Funds whose exposure is achieved via a swap should use the best practices detailed below.
ETN	Exchange Traded Note	• Debt securities that may be structured as notes or trusts depending on their domicile. • Backed by the credit of its issuer (often an investment bank) which may or may not be collateralized. • The extent of regulatory oversight of these products currently varies region by region.
ETC	Exchange Traded Commodity	• Limited to products that only hold physical commodities. • In the U.S., these are highly regulated under the Securities Act of 1933 • Securities that provide exposure to physical commodities but are structured as debt instruments and not backed by the physical underlying should not be considered an ETC.
ETI	Exchange Traded Instrument	• A type of ETP that describes any portfolio exposure product traded on an exchanged that is not outlined above. • The buyer should exercise increased due diligence.

PREPARED STATEMENT OF HAROLD BRADLEY

CHIEF INVESTMENT OFFICER, EWING MARION KAUFFMAN FOUNDATION

OCTOBER 19, 2011

Mr. Chairman, and Members of the Subcommittee, thank you for giving me the opportunity to testify today about ETFs and the public policy challenges they pose. I have prepared this written testimony with my colleague at the Kauffman Foundation, Robert Litan, who is Vice President for Research and Policy. I am Chief Investment Officer of the Foundation. Both of us draw in this testimony on prior studies we have done on the growing ETF market, [1] by ourselves and with experts in securities settlements. But we offer here supplemental information, which we hope will be of use to this Committee. I will be delivering an oral summary of this testimony at the hearing.

Our bottom line is this: While ETFs began as a constructive financial innovation over 18 years ago, they have grown so fast in number and in variety that they now account for roughly half of all the trading in U.S. equities markets today. In the process, in our view, ETFs have increasingly distorted the role of equities markets in capital formation, while posing systemic risks from potential settlement failures.

We outline below the basis for these admittedly controversial conclusions, as well as some regulatory fixes to the problems we identify.

ETFs and the Problems U.S. Equities Markets Today

Investors increasingly realize U.S. equity markets are broken. And it isn't just amateur investors burned by the financial crisis of 2008 who think so. A recent *New*

[1] *See,* Harold Bradley and Robert E. Litan, "Choking the Recovery: Why New Growth Companies Aren't Going Public and Unrecognized Risks of Future Market Disruptions", *http://www.kauffman.org/research-and-policy/Choking-the-Recovery.aspx;* and Harold Bradley and Robert E. Litan, *See,* "Canaries in the Coal Mine: How the Rise in Settlement 'Fails' Creates Systemic Risk for Financial Firms and Investors", *http://www.kauffman.org/research-and-policy/Canaries-in-the-Coal-Mine.aspx.*

York Times article says professional U.S. investors believe new derivative instruments "have turned the market into a casino on steroids."[2]

What has gone wrong, and what are the consequences? It helps to first remind ourselves why stock markets exist. They were established to provide a place for companies to access public investment capital—money invested to make more products, to hire more workers, to build distribution networks around the world. That market no longer exists. As is well known, modern stock markets are geared instead to day traders, hedge funds and other short-term investors. Add to that list a modern "innovation": Exchange Traded Funds (ETFs), which may be more dangerous than all the preceding factors combined.

Here is why. The past 12 years reveal that fewer and fewer U.S. companies elect to trade on primary U.S. stock markets. The number of exchange-traded stocks dropped almost 30 percent—from about 6,200 to 4,300 today. During that same time, the Securities Exchange Commission (SEC) gave ETF sponsors a free pass from certain U.S. securities regulations. The predictable response? The number of ETFs grew exponentially—eleven times—from 95 to more than 1,100 (Chart 1).

We have enough history with financial innovations to at least raise questions when we see an innovation growing at very rapid rates. ETFs are no exception. We believe that these instruments may now be undermining the fundamental role of equities markets in pricing securities to ensure that capital is efficiently allocated to growing businesses. When individual common stocks increasingly behave as if they are derivatives of frequently traded and interlinked ETF baskets, then it is trading in the ETFs that is driving the prices of the underlying stocks rather than the other way around. This tendency is especially pronounced for ETFs that are comprised of small cap stocks or stocks of newly listed companies, that generally are thinly traded. The stocks of these companies are the proverbial tiny boats being tossed around on the ETF ocean. As we outlined in our earlier Kauffman Foundation report: "Choking the Recovery: Why New Growth Companies Aren't Going Public and Unrecognized Risks of Future Market Disruptions,"[3] the reluctance to become such a little boat is an important reason why growing private companies may be avoiding the public markets.

To understand why we reach this conclusion, it is useful to understand the essential structure of an ETF. In the early days of the industry, ETF sponsors now owned by BlackRock and State Street created baskets of securities designed to track broad market indexes, such as the S&P 500. In contrast, today's widely diverse ETF products cater to every hedge fund's unique tastes. Product design allows hedge funds and day traders to make bets on global uranium production companies, on market volatility, on emerging market sovereign debt, and everything in between. Embedded in some of these ETFs are even more derivative instruments.

Unlike mutual funds that price the basket of securities once daily and allow for purchases and redemptions at that price, ETFs provide continuous trading throughout the day. As electronic trading has supplanted human specialists on the trading floor, the specialists and market makers adapted and assumed the role as "Authorized Participants" (APs) in manufacturing ETFs. When a customer buys shares of an ETF, the AP serves as the middleman between all buyers and sellers. If at any time during the trading session (and especially at the end of the day) there are far more buyers than sellers, the AP balances its books and buys shares in the underlying stocks of the ETF basket—say lithium stocks—to create ETF units and offset its risk. When there are more sellers than buyers, the AP must destroy these same units by selling stocks or offset its risk by selling similar instruments, like futures and options. On most days, buyers and sellers nearly match—and the AP can go home and sleep well, hedged against adverse price moves.

When buyers stampede into ETFs, the AP (now short the ETF to the buyer) must quickly purchase related instruments or stocks to balance his risk. An old adage of the trading business says that APs are in the moving business and not the storage business—they are traders and facilitators, never intending to be the beneficial owner of a stock. This act creates extremely tight linkages between the movement of ETFs and common stock prices. And the effect can be much larger on some stocks than others, with some stocks being the largest holdings in many different ETFs. For example, Apple Computer is reported to be one of the top 10 holdings in more than 57 ETFs, IBM in 52 ETFs and WalMart in 30 ETFs.[4] These same stocks are held in varying weights in dozens of other ETFs.

With the preceding mechanics in mind, it will come as no surprise that there can be enormous one-way moves in ETF-driven stocks in very short periods of time. This

[2] "Volatility, Thy Name Is ETF", *New York Times.* October 10, 2011.
[3] *http://www.kauffman.org/research-and-policy/Choking-the-Recovery.aspx*
[4] *www.etfdb.com*

happened en masse in May 2010 during the so-called Flash Crash (Chart 2), and again in October 2011 when stocks experienced a "Flash Up" as the Russell IWM (Russell 2000 small cap ETF) rallied almost 7 percent in the 20 minutes prior to the close (Chart 3). This happens as buyers of futures and ETFs, generally triggered by news or technical price patterns, all jump in the water at the same time. The APs, who by regulatory requirements must provide constant bid and ask prices for each ETF, then scramble to purchase other closely related packages of the same securities or the underlying stocks themselves.

High comovement of securities is not new, often occurring when markets reflect crowd panic or euphoria. What is new, however, is how ETFs decrease diversification benefits, with stocks and sectors worldwide moving together, even when there is no panic. Stocks move together today more than at any time in modern market history with recent data indicating that individual common stock prices that make up the S&P 500 index now move with the index 86 percent of the time (Chart 5 and Chart 6). As has been described, there are now so many products consisting of the same common stocks that it would be surprising only if this tight linkage was not evident.

ETFs only work if market makers can purchase component equities in the index they intend to track. We think ETFs like the small capitalization IWM have outgrown a market maker's ability to buy component securities. Indeed, this particular ETF is reported to be one of the top five stockholders in almost 900 small capitalization stocks held in the IWM (Chart 7). As the one of us who is a former trader and portfolio manager of small capitalization companies (Bradley) can safely assert, most of these companies trade with poor liquidity and will move significantly in price when immediate demands for liquidity are made (Chart 8). Consequently, market makers can often only match their positions against futures, options, or other ETFs, or they must employ derivatives and synthetic securities. Perceived easy to trade ETFs cannot ever make hard to trade stocks easier to buy or sell. Absent easily accessible and liquid hedges for APs, investors must anticipate that extreme stock price volatility will persist.

When financial assets move in highly correlated ways, regulators should worry that capital markets are not doing their principal job—that is, properly allocating capital between different assets or financial instruments in such a way as to properly discipline risk and reward success. J.P. Morgan's Delta One derivatives team published a chart late in 2010 that displays the historically unprecedented correlations found in today's stock trading which they term a "correlation bubble": in which stocks move together 60 percent of the time even when the Volatility Index (VIX), a measure of panic, remains at relatively subdued levels (Chart 8).

These are deep changes, with implications that go far beyond whether IBM and, say, HP trade together. Richard Bookstaber, current adviser to the Securities Exchange Commission staff and author of the seminal 2007 book *A Demon of Our Own Design,* observes that "(t)he complexity at the heart of many recent market failures might have been surmountable if it were not combined with another characteristic we have built into markets, one that is described by the engineering term tight coupling. Tight coupling means that components of a process are critically interdependent; they are linked with little room for error or time for recalibration or adjustment."

The increasing comovement of individual stocks reflects the intensity of trading in instruments whose total value and daily trading volumes eclipse the value of the instruments they are designed to "track" (Chart 9). There is no time for an AP to call time-out to calmly hedge one-sided trading markets. There is also no ability to create liquidity where there isn't any, with liquid ETFs trading around baskets of illiquid stocks. As assets balloon in ETFs, investors should all worry about the disconnect between the size of these funds, liquidity and possible market price disruptions in small company stocks, commodities, bonds, and pretty much everything else.

Given all these risks, and given investor nervousness, why do these instruments grow in popularity? Follow the money. Financial advisers earn brokerage commissions every time they tactically allocate assets in a client's portfolio by mixing and matching industry, sector and country ETFs. The same advisers often promise clients an immediate trading response to unexpected news or world events. Operating expenses of some ETFs are lower than those of similarly invested mutual funds. But far more important is that Investors have learned to love ETFs largely for tax reasons because they are taxed like stocks: investors only pay capital gains taxes if they sell the ETF for a higher price than the one at which it was bought. In contrast, mutual fund investors have no control over whether or not they pay capital gains taxes or recognize losses, since these decisions are made by the manager of the mutual fund. This explains why many mutual fund investors were shocked to find out that they owed money on realized capital gains in 2008 even though the net asset value of these funds dropped significantly that year during the financial crisis (the managers held on to their losers, but sold their winners). The pass through nature of taxes to mutual fund shareholders may be the biggest driver of the rapid expansion of assets under management in ETFs.

ETF Risks

Innovations in nascent markets with small trading volumes often attract moths to the flame with promises that often cannot be delivered in times of market stress, or when the innovation becomes over-large. Markets grow rapidly. They become more complex. Regulators have been slow to react to this very profitable and fast growing niche of the financial markets, one that may endanger capital formation by its very design.

The proliferation in the number and trading volumes of ETFs raise larger concerns beyond just their potential impact on initial public offerings. With ETFs making it so easy to effectively trade hundreds or even thousands of stocks in fractions of a second, it is no surprise that they are account for about half of all trading in equities markets. ETFs make it so easy and inexpensive to translate investor highs and lows into the entire market or large portions of it virtually instantaneously. Thus it comes as no surprise, at least to us, that the markets themselves have become so volatile, not only day to day, but within each day.

Price volatility is scaring individual investors. It is not an accident that mutual funds have seen such large net redemptions. These investors are either going into ETFs, and thus perhaps unknowingly contributing to market volatility in the process, or out of the markets altogether in cash. In either case, the net result is not helpful for long run economic growth.

ETFs have other more prosaic risks. They can be used easily in the service of fraud, as was demonstrated recently when a single UBS "rogue trader" lost more than $2 billion on bad ETF trades that were not properly hedged in the markets. Shortly before this event, we, and two experts in securities settlement warned of potentially even greater potential dangers if regulators remain lax about the industry's policing of timely trade settlement. Increasingly, terms like "create to lend" find their way into the lexicon of the ETF industry. Market makers enjoy significant and historically arcane exemptions from rules applying to trading and settlement that extend to all other market participants—we worry these special privileges may lead to high levels of trading "fails" and greater systemic risks to the overall market.[5] Such trading "fails" in ETFs during times of market stress could domino into a greater systemic risk issue for our markets (Chart 11).

Time has proven that shorter settlement periods and high levels of compliance are the best antidotes for systemic risks that might involve the failure of a very large trading party. Congress specifies that buyers of equities deliver cash and sellers of equities deliver securities 3 days after a trade. When money arrives from buyers, but the securities do not, a failure to deliver occurs. This happened frequently in Government securities before large fines were imposed on those failing to either receive or deliver a trade. Congress and the SEC invested much time analyzing similar problems in naked short selling of small capitalization stocks. So why then, in 2010, did two of the biggest ETFs, the SPY (the SPDR S&P 500 TR ETF) and the IWM (iShares Russell 2000 index ETF) constitute 21 percent of the failures in the entire stock market (Chart 12)? Why would such broad indexes with supposedly instant arbitrage characteristics fail to deliver in such a significant manner? We fear that hedge funds and commercial banks may be relying on lax enforcement of settlement rules to create a cheap funding source for their trades—as has previously occurred in other parts of the capital markets.

The industry argues that fails in ETFs don't really matter—that an AP need only buy more physical securities to create necessary units and relieve the failed trade settlement. We believe that to be a false narrative. A cursory analysis of trading volumes in IWM component securities indicates it would take more than 180 trading days, or more than 6 months, trading at 10 percent of each stock's volume every day, to offset reported short interest in that ETF. Attempts to purchase these mostly hard to trade common stocks, held in very large concentrations already by ETFs, will create sharp price movements up and down. The math, given the current size of short positions, the history of high settlement failure rates in ETFs, and the illiquidity of many component stocks in the IWM, just doesn't work.

[5] *See,* "Canaries in the Coal Mine: How the Rise in Settlement 'Fails' Creates Systemic Risk for Financial Firms and Investors", March 2011, *http://www.kauffman.org/research-and-policy/Canaries-in-the-Coal-Mine.aspx.*

What Should Be Done?

We believe that, as Richard Bookstaber has warned, it is time to recalibrate the regulation of our capital markets. That starts with an emphasis on what's good for companies in our public markets rather than what's good for trading volumes in the Nation's futures markets, options markets and stock exchanges.

First, it is important for the SEC to begin to recognize some fundamental differences in the risks posed to the market by price volatility in stocks and ETFs. Take, for example, the circuit breakers pioneered by the NYSE Euronext before the Flash Crash that created a brief 5-minute trading halt for individual stocks that move more than 10 percent in price during the preceding five minutes. While this was a surprise to competing exchanges that ignored the exchange's trading halt and were forced to cancel large numbers of "bad trades," the NYSE Euronext canceled no trades as a result of this market anomaly.

Believing that ETFs and stocks are equivalent, the SEC recently applied the same circuit breaker logic to ETFs. While this approach may seem logical, it ignores the volatility-creating effect of ETFs themselves, which to us, demands even tighter constraints on ETF price movement than on common stocks. The essential characteristic of portfolio construction is to achieve a diversification benefit; that is, a single stock exhibits much higher volatility than does a portfolio of stocks.

Said another way, a 10 percent movement of a broad based index would necessarily imply far higher volatility in components of that index. Consequently, we think the SEC should ask Self-Regulatory Organizations (SROs) to require a circuit breaker time out whenever an ETF moves more than 5 percent in the preceding five minutes. During more than 17 years of trading history, 5 percent moves over an entire trading session were rare; so a 5 percent constraint on short term price changes should not interfere with day trading interests too much and will keep ETFs in certain indexes or industries from overly affecting the price behavior of component stocks on days like May 6, 2010 (Chart 10).

Second, we are concerned that after years of indifference to the increasing comovement between indexes and common stocks regulators will now put still worse "fixes" in place. Comment is being solicited on the SEC's desire to restrict trading beyond fixed, arbitrary highs and lows each trading session—what are called limit up, limit down constraints on price movement for stocks and for indexes. These types of trading constraints have been in place for some time at the Nation's commodity exchanges where contracts trade on margin and such hard limits have been used to collect additional margin on outstanding bargains.

At worst, while infrequent, these limits historically "trapped" traders on the wrong side of a move when markets move quickly and remain frozen (for example, consider traders who sold short hard winter wheat just prior to reports that the Chernobyl nuclear reactor melted down). At best, such limit up, limit down rules serve as enormous magnets to day traders. As markets approach daily price limits that may suspend trading for either a brief time or for the day, customers quickly cancel resting orders that stand in the way of the big waves, awaiting a more opportune time to take the opposite side of the trade. Often commodities that close "locked limit up" will "gap" open to higher levels on the ensuing market opening before enticing sellers back into the market.

Third, the SEC should reconsider its past policy of granting blanket exemptions to ETFs from its rules governing mutual funds. We are not advocating that ETFs be treated identically to mutual funds, because clearly the two instruments are different. But a new regulatory regime is called for, one that takes account of and ideally attempts to mitigate the adverse impacts and risks of ETFs we have identified. At the very least, the SEC should begin a broad inquiry into the nature and magnitude of these impacts and risks with a view toward improving its own and the public's understanding of the market-wide impacts of these financial instruments.

In particular, we question whether market making exemptions are really necessary in an age of high frequency trading and instantaneous access to market liquidity. Questions should be asked about ETF creation and destruction practices, about securities lending operations, and the new ownership of ETF sponsors by custody banks engaged in large lending operations. And regulators should investigate the theoretical "reason" that explains away large outstanding short ETF positions as easily "covered" in the cash markets, which appears impossible from a cursory examination of the small capitalization IWM ETF and a simple mathematical analysis of stock holdings and liquidity.

Fourth, in the interim, we suggest significant improvements into the transparency of ETF construction and trading including the consideration of the following prescriptions:

- Require ETF sponsors to explicitly describe unit creation and destruction processes in their prospectuses and summary information, including provisions to align short interest in an ETF with the liquidity of ETF constituents.
- Require custodian banks to report each week fails-to-receive and fails-to-deliver of equity and ETF securities in an analogous fashion to the requirements imposed by the Federal Reserve on primary dealers of U.S. debt securities. Eliminate market maker exemptions and impose significant penalties or fees for all transaction fails.
- Establish broader fails reporting, including all transaction activity for systemically important financial institutions, especially primary custody banks, including:
  - Aggregate dollar value of securities lending pools by asset class on a monthly basis so that investors and regulators might anticipate shifts of the security supply and its implications for market stability (as customers often cease lending at the beginning of a serious liquidity crisis);
  - Fails-to-deliver (receive) securities and stratify by customer segment;
  - Fails data according to custody bank business lines, *e.g.,* trading, securities lending, financing (repo services), *etc.*

Thank you Mr. Chairman, and Members of the Committee, for allowing me to present our views. I look forward to your questions.

Appendix

Chart 1: U.S. Exchange Listed Companies and U.S. Exchange Listed ETF Growth

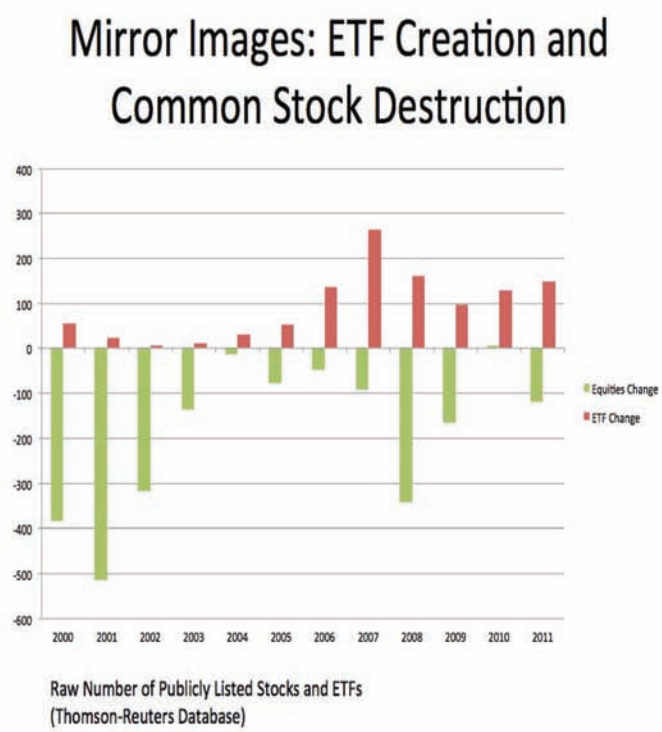


Chart 2: The Flash Crash – How Illiquid Small Cap Stocks Led the Market Down

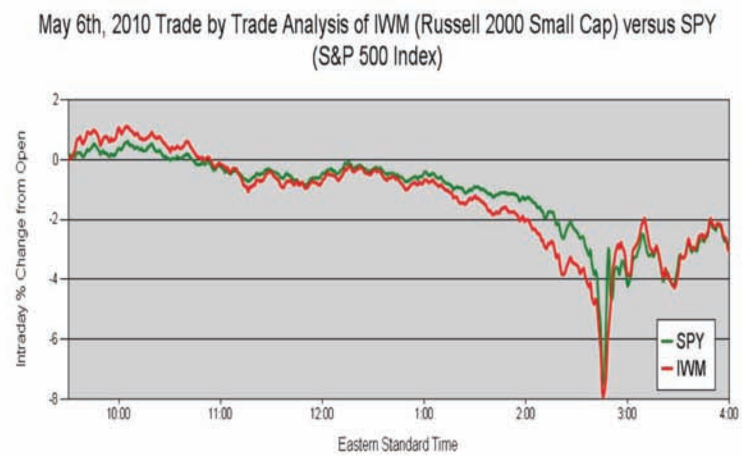


Chart 3: The Flash Up – Russell 2000 Index Moves Up ~7% in 20 Minutes

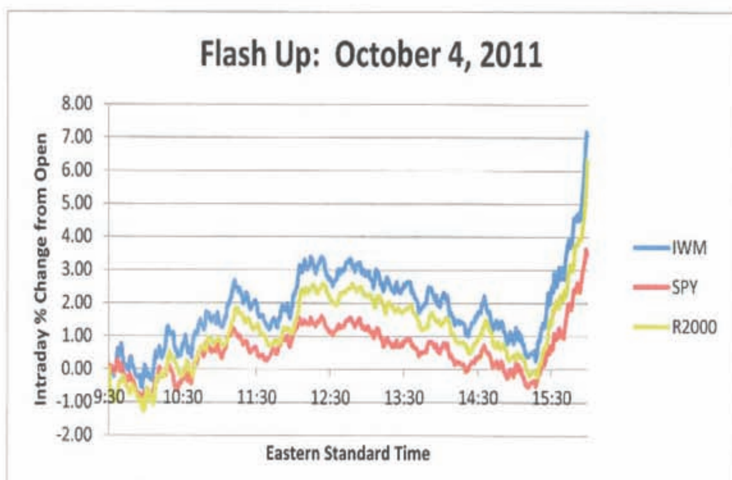
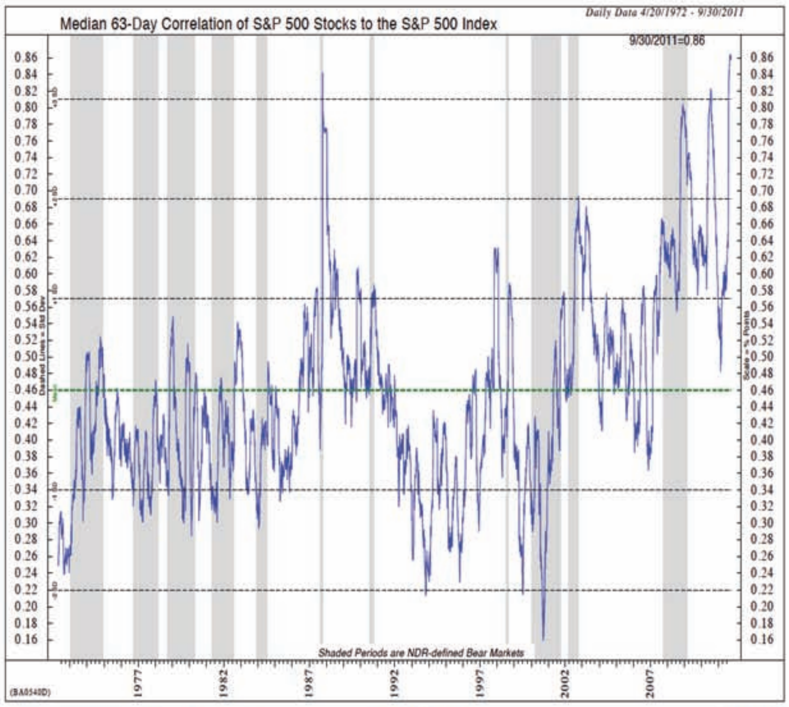


Chart 4: Ned Davis Research – S&P 500 Stocks Move in Lockstep to S&P 500 Index



Please see important disclosures at the end of this report. (HZB339) www.ndr.com Issue #11.29

Chart 5: Empirical Research – Co-movement of Large Capitalization Stocks Unprecedented in Modern Markets

- ...And the extraordinary correlations are telling us to bet:

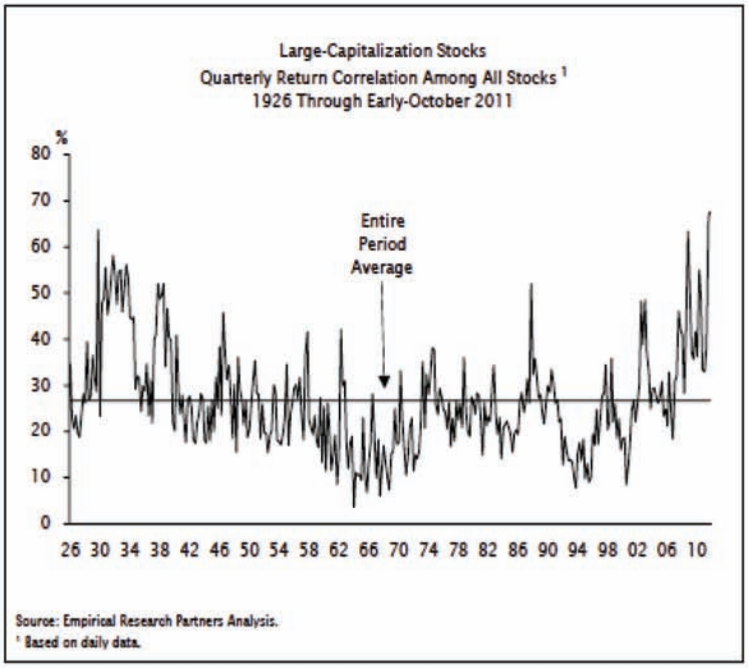


Chart 6: Concentration of Small Capitalization Company Holdings in IWM (ETF)

	Largest Holder	Top 5 Holders	Top 10 Holders	All IWM Holdings
# Securities	99	867	1737	1953
% of IWM holdings (unweighted)	5.1%	44.4%	88.9%	--
% of IWM holdings (weighted)	2.0%	35.1%	88.9%	--
Mean Days to Buy Stocks for Unit Creation	41	30	28	27
Median Days to Buy Stocks for Unit Creation	34	25	23	23
Total Days Needed to Create Units at 10% of Daily Trading Volume	170	188	188	188

Source: Yahoo! Finance

Chart 7: IWM Holdings Liquidity Compared to Market

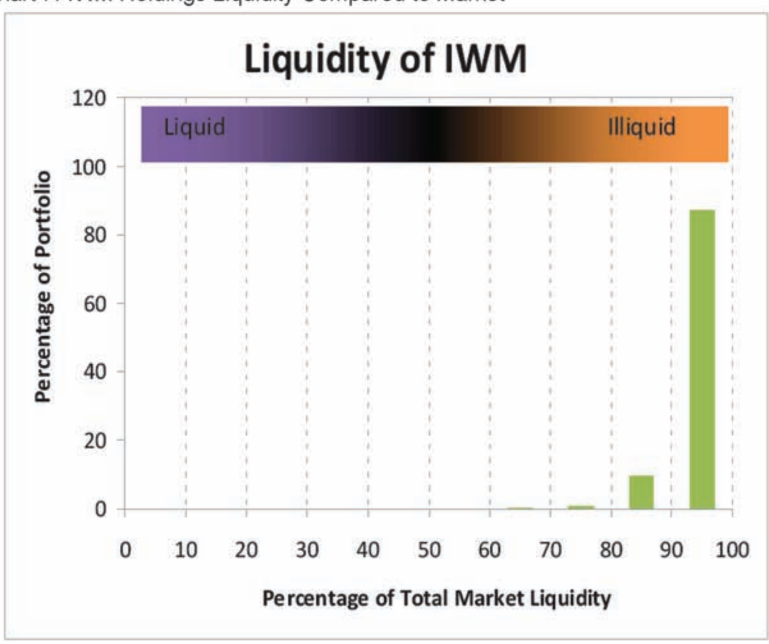
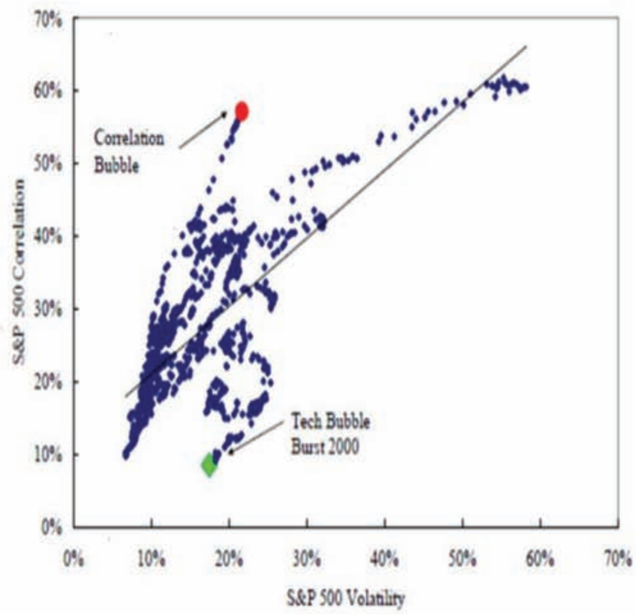
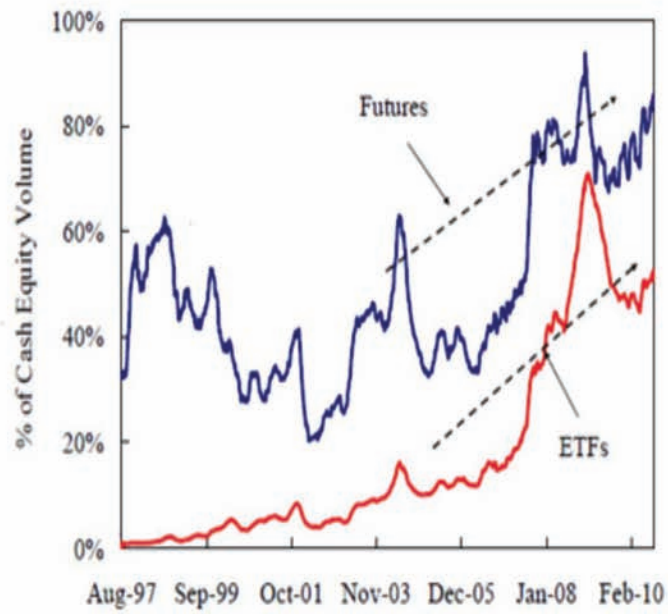


Chart 8: J.P. Morgan Delta One Desk and the Correlation Bubble



Source: J.P. Morgan Equity Derivatives Strategy.

Chart 9: Futures and ETF Dollars Traded Swamping Value of Common Stocks Traded



Source: J.P. Morgan Equity Derivatives Strategy.

Chart 10: ETF Circuit Breakers Meaningless at 10% Given Market History

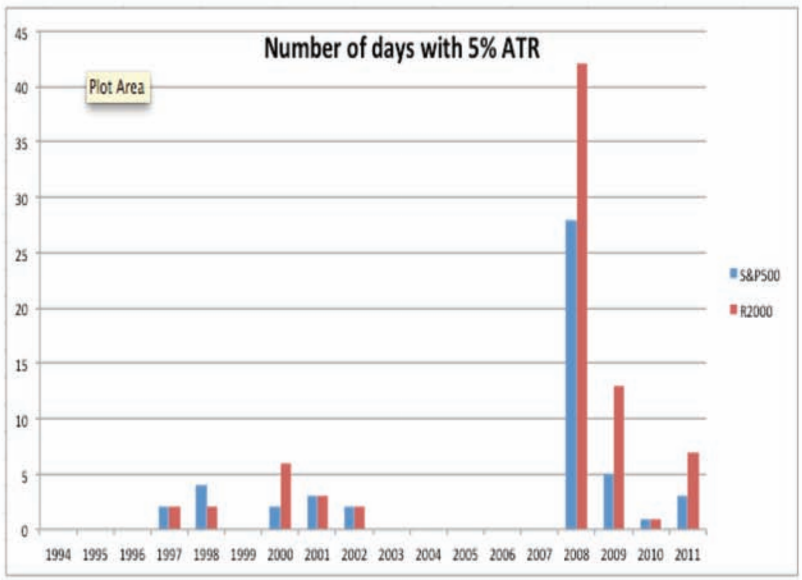
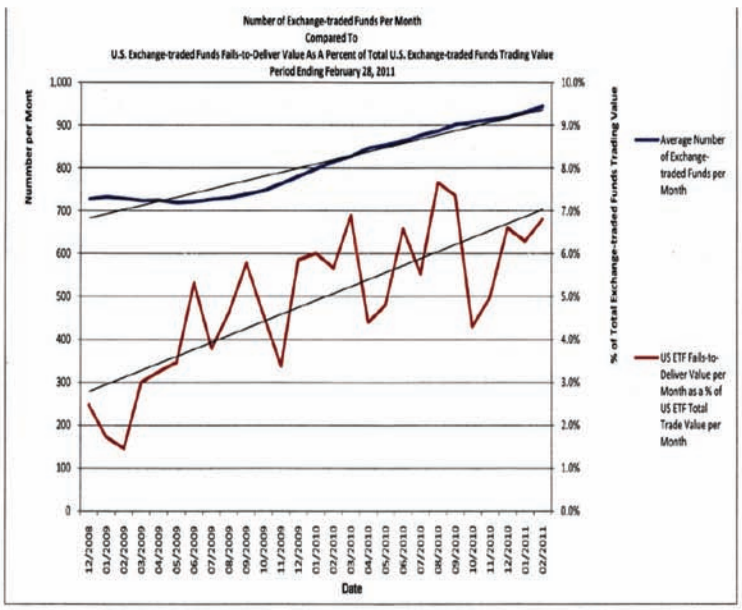


Chart 11: Persistent and Climbing ETF Fails to Deliver as Percent of ETF Dollars Traded



Sources:
U.S. Securities Exchange Commission, New York Stock Exchange, Depository Trust and Clearing Corporation, Investment Company Institute, World Federation of Exchanges

Chart 12: U.S. Exchange-Traded Funds – Top 10 ETF Fails (Full Year 2010)

Symbol	Description	Value of Fails Reported	# of Days Failing	% Value of ETF Fails	% Value of All Fails
SPY	SPDR S&P 500 ETF Tr	$74,770,649,095	248	27.4%	15.3%
IWM	iShares Russell 2000 Index	$27,542,976,085	249	10.1%	5.6%
QQQQ	Powershares QQQ	$9,726,205,729	247	3.6%	2.0%
FAZ	Direxion Daily Financial Bear	$8,917,534,272	245	3.3%	1.8%
FAS	Direxion Daily Financial Bull	$8,615,461,265	245	3.2%	1.8%
XLF	Financial SPDR	$6,316,149,807	240	2.3%	1.3%
XRT	SPDR S&P Retail	$5,645,840,903	240	2.1%	1.2%
XLE	Energy Sector SPDR	$4,491,801,629	241	1.4%	.8%
IYR	iShares DJ US Real Estate	$3,805,037,250	240	1.4%	.8%
XLI	Industrial Sector SPDR	$3,762,812,985	233	1.4%	.8%
	Top 10 ETFs Fails Value	$153,594,469,019			31.4%
	All ETF Fails Value	$272,767,713,480			55.8%
	All Securities Fails Value	$488,297,395,379			

Average Year = 250 Trading Days
Source: Fred Sommers Basis Point Group

RESPONSES TO WRITTEN QUESTIONS OF SENATOR HAGAN FROM EILEEN ROMINGER

Q.1. I agree with Mr. Archard, who noted in his testimony that it is important for the industry and its regulators to insure investors who purchase Exchange Traded Funds (ETFs) appreciate the risks and costs associated with those products.

Securities lending by ETFs exposes investors to a host of complex risks that are not related to ownership of underlying equities. I understand that securities lending is disclosed as a risk in prospectuses, but what else could be done to ensure that retail investors understands the risks associated with securities lending?

A.1. The Commission and its staff are currently engaged in two initiatives that may help investors better understand the risks associated with securities lending by funds.

First, section 984(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act requires the Commission to undertake rulemaking to increase the transparency of information available to brokers, dealers, and investors with respect to the loan or borrowing of securities. In addition, the staff of the Commission's Division of Investment Management is currently reviewing the limitations and guidance applicable to securities lending by funds (including ETFs).

In addition, while securities lending involves a number of potential risks, there are particular regulatory requirements applicable to ETFs and other funds registered under the Investment Company Act that help to address these risks. For example, registered funds may not lend out more than one-third of their total assets. Loans must be 100 percent collateralized, and the collateral must be marked to market daily. Generally, only cash, securities issued or guaranteed by the U.S. Government or its agencies, and irrevocable bank letters of credit are acceptable collateral. Funds may invest cash collateral only in short-term, highly liquid instruments. In addition, common securities lending practice typically finds many loans collateralized in amounts between 102 percent and 105 percent, and lending agents typically indemnify loans against borrower default.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR HAGAN FROM HAROLD BRADLEY

Q.1. I agree with Mr. Archard, who noted in his testimony that it is important for the industry and its regulators to insure investors who purchase Exchange Traded Funds (ETFs) appreciate the risks and costs associated with those products.

Securities lending by ETFs exposes investors to a host of complex risks that are not related to ownership of underlying equities. I understand that securities lending is disclosed as a risk in prospectuses, but what else could be done to ensure that retail investors understands the risks associated with securities lending?

A.1. Senator Hagan asks an important question about securities lending, where risk disclosures are now shrouded in dense legalese and guided by decades of regulatory interpretation. Risk disclosures should be as plain to investors as warnings about cancer are to buyers of cigarettes. Today that language confuses even sophisticated investors and should be dramatically simplified.

We discussed our concerns at the hearing on October 9, 2011, about the high percentage of failed trades in ETF securities (more than 4 percent of principal dollars traded versus .5 percent of dollars traded in individual securities). It is apparent that off balance sheet securities lending and re-hypothecation is to blame for the inherent instability in the ETF marketplace. Many apologists for the high degree of settlement failures site the role of the National Securities Clearing Corp. (NSCC) as the ultimate guarantor of trades, much as the Chicago Mercantile Exchange (CME) was thought to be the ultimate guarantor of client funds in the MF Global bankruptcy. We believe that the ETF marketplace, destabilized by trading and securities lending interests, could reduce re-hypothecation risk in the following ways:

- Require ETF sponsors to publish in offering prospectus the expected annualized tracking error of all ETFs vis-a-vis the reference securities benchmark. An explicit tracking error disclosure should then become an obligation of the sponsor, in much the same way that the Securities Exchange Commission (SEC) obligates a mutual fund manager to manage funds consistent with portfolio disclosures. For instance, a mutual fund manager promising a "global" mandate must own no more than 40 percent of assets in U.S. domiciled securities. A manager promising a "small capitalization" style must own more than 80 percent of assets in that capitalization range. An explicit tracking error disclosure would reveal immediately to investors the very high risks of owning leveraged or inverse ETFs, which rely necessarily on large derivatives exposures, and thus have very large expected annualized tracking error of 30 percent and more against public securities benchmarks. Plain vanilla indexes such as the S&P 500 should reveal very low levels of expected tracking error (less than 2 percent). This would impose no burdens on quantitative managers who rely on a variety of methodologies and readily available software packages (*e.g.,* Barra, Northfield, Barclays Capital Live) to estimate *ex ante* tracking error of quantitatively managed portfolios.
- Once sponsors are held to explicit performance obligations derived from product "advertising," they will then, in turn, obligate market makers to adhere to tight tracking error standards. This should result in timely ETF creation and destruction practices, thereby reducing trading and re-hypothecation risk.
- The SEC could further reduce systemic risks in these processes by eliminating long-standing market maker "exemptions" from securities and lending rules governing other market participants. Such exemptions have no role in today's highly automated securities markets. The days of bicycles delivering stock certificates in Wall Street's canyons and of pneumatic tubes sending paper stock certificates from floor to floor are long gone. So too, is the need for market maker exemptions that were important before the days of digital securities settlement.

Additionally, we suggest the following steps to better protect investors from loss of principal involved in brokerage transactions, such as those that occurred when principal amounts in segregated commodity brokerage accounts were "re-hypothecated" by MF Global in a series of bad sovereign debt "repo" trades. Our recommendations are in bullet form below and we provide context and explanation below for our recommended changes to regulation and law:

- Hypothecation and re-hypothecation descriptions in typical margin agreements should be written in easy to understand language, along the following lines—
  - We have the right, at any time, to lend your securities to subsidiaries and traders and to earn the interest from that lending activity;
  - We will not pay you interest when we borrow your securities;
  - These securities are often posted as collateral by other traders for deals they have made with a promise to pay at a later point in time; if those deals go bad, you will lose the value of the securities that have been lent as part of these deals;
  - When we borrow these securities from you, they are most often used as collateral by others, meaning they will be lost if the borrower makes a bad trade.
- Restrict hypothecation and re-hypothecation; do not allow firms to lend to subsidiaries subject to different regulatory jurisdictions, as is believed to have occurred in the MF Global debacle.
- Require brokers to offer all investors with margin accounts an "opt-in" to securities lending after a plain English description of the activities to which investors are bound; we think such an "opt in" will likely create a strong incentive for brokers to share compensation from such activities with clients.

The disappearance of segregated funds in the MF Global repo mess bears some discussion in the context of our recommendations. A Reuters securities law story based on analysis by WESTLAW can be found at: *(http://newsandinsight.thomsonreuters.com/Securities/Insight/2011/12__-__December/MF__Global__and__the__great__Wall__St__re-hypothecation__scandal/).* In part, it describes how related company entities in different jurisdictions allowed for disastrous regulatory arbitrage.

> Puzzling many, though, were the huge sums involved. How was MF Global able to "lose" $1.2 billion of its clients' money and acquire a sovereign debt position of $6.3 billion—a position more than five times the firm's book value, or net worth? The answer it seems lies in its exploitation of a loophole between UK and U.S. brokerage rules on the use of clients' funds known as "re-hypothecation."

RE-HYPOTHECATION

> By way of background, hypothecation is when a borrower pledges collateral to secure a debt. The borrower retains ownership of the collateral but is "hypothetically" con-

trolled by the creditor, who has a right to seize possession if the borrower defaults. In the U.S., this legal right takes the form of a lien and in the UK generally in the form of a legal charge. A simple example of a hypothecation is a mortgage, in which a borrower legally owns the home, but the bank holds a right to take possession of the property if the borrower should default. In investment banking, assets deposited with a broker will be hypothecated such that a broker may sell securities if an investor fails to keep up credit payments or if the securities drop in value and the investor fails to respond to a margin call (a request for more capital).

Re-hypothecation occurs when a bank or broker re-uses collateral posted by clients, such as hedge funds, to back the broker's own trades and borrowings. The practice of re-hypothecation runs into the trillions of dollars and is perfectly legal. It is justified by brokers on the basis that it is a capital efficient way of financing their operations much to the chagrin of hedge funds. [Emphasis added.]

U.S. RULES

Under the U.S. Federal Reserve Board's Regulation T and SEC Rule 15c3-3, a prime broker may re-hypothecate assets to the value of 140 percent of the client's liability to the prime broker. For example, assume a customer has deposited $500 in securities and has a debt deficit of $200, resulting in net equity of $300. The broker-dealer can re-hypothecate up to $280 (140 percent x $200) of these assets. But in the UK, there is absolutely *no statutory limit* on the amount that can be re-hypothecated. In fact, brokers are free to re-hypothecate all and even more than the assets deposited by clients. Instead it is up to clients to negotiate a limit or prohibition on re-hypothecation. On the above example a UK broker could, and frequently would, re-hypothecate 100 percent of the pledged securities ($500). This asymmetry of rules makes exploiting the more lax UK regime Incredibly attractive to international brokerage firms such as MF Global or Lehman Brothers which can use European subsidiaries to create pools of funding for their U.S. operations, without the bother of complying with U.S. restrictions.

We find the current disclosure practices of U.S. brokerage firms about securities lending practices to be appalling in terms of complexity and obfuscation. Listed below is an example of language regarding securities lending lifted from a Web site of Scottrade *(www.scottrade.com)* and is typical of such disclosures:

Pledge of Securities, Options, and Other Property. All securities and other property now or hereafter held, carried or maintained by us in or for your Account may, from time to time without notice to you, be pledged, repledged, hypothecated or re-hypothecated by us, either separately or in common with other securities and other property . . . Any losses, gains or compensation resulting from these ac-

> tivities will not accrue to your brokerage Account. We are required under SEC rule 15c3-3 to retain in our possession and control all fully paid-for securities. Securities used as Collateral for Margin Loans are not fully paid for and therefore are not subject to the same obligation.
>
> *Loan of Securities.* We are authorized to lend ourselves, as principal or otherwise, or others any securities held by us in your Account and we shall have no obligation to retain under our possession and control a like amount of such securities. In connection with such loans, we may receive and retain certain benefits (including interest on collateral posted for such loans) to which you shall not be entitled. In certain circumstances, such loans may limit, in whole or in part, your ability to exercise voting rights of the securities lent.

In the E*TRADE "Managed ETF Portfolio Agreement and Advisory Agreement," investors are compelled to sign an agreement that says, among other dense legal acknowledgements, that the investors "acknowledge that securities held in a Margin account may be pledged, re-pledged, hypothecated or re-hypothecated for any amount due E*TRADE Securities, LLC, in account(s) or for a greater amount . . . Securities products and services: (i) are not insured by the FDIC; (ii) carry no bank or Government guarantees; and (iii) are subject to investment risks, including possible loss of principal invested."

Senator Hagan, the only way to better inform retail investors about the risks associated with securities lending is to overhaul both disclosure and hypothecation rules long in force in our Nation's securities markets. Securities lending is an under-regulated, less than opaque part of the earnings stream of major broker dealers and investment banks.

Thank you for your interest in this area.