

November 15, 2016

Via e-mail: rule-comments@sec.gov

Brent Fields, Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

Re: Continued Comments on SR-Bats BZX-2016-30

(Winklevoss Bitcoin Shares)

Mr. Secretary,

I am writing specifically to respond to one of the critical questions raised as part of the continued comment period regarding SR-Bats BZX-2016-30 (Winklevoss Bitcoin Shares). As background, I have taught finance, capital markets and risk management at Boston University for the past 14 years. Prior to that I was a senior executive on a commodity trading floor as well as a Federal Reserve Bank examiner. In January 2014, I was asked to provide testimony before the New York State Department of Financial Services hearing on virtual currencies, in April of that same year Congressional Testimony and in October at The World Bank (see attached Links). [Testimony - Mark T. Williams, January 29, 2014 - New York State ... Testimony of Mark T. Williams¹ Banking Specialist, Commodities and Top 10 Bitcoin Risks from Mark Williams at World Bank Conference ...](#)

There are several fundamental flaws that make bitcoin a dangerous asset class to force into an ETF structure. These specific problems are outlined below and include shallow trade volume, extreme hoarding, low liquidity, hyper price volatility, a global web of unregulated bucket shop exchanges, high bankruptcy risk and oversized exposure to trading in countries where there is no regulatory oversight, such as China. Furthermore, lack of regulation and consumer protection also increases the chance and incentives for market price manipulation.

What are commenters' views about the current stability, resilience, fairness, and efficiency of the markets on which bitcoin are traded?

The market for trading bitcoin is extremely shallow as measured in trade volume with the majority of bitcoin hoarded by a narrow group of owners. It is estimated that 98 percent of bitcoin is either hoarded or out of circulation.^{1,2} Ownership concentration is high with 50 percent of bitcoin in the hands of less than 1000 people.³ High ownership concentration also creates greater market liquidity risk as large blocks of bitcoin are difficult to sell in a timely and market efficient manner. Daily trade volume is only a small fraction of total bitcoin mined. As of November 2016, approximately 16 million bitcoin have

¹ It is estimated that up to 8 percent of all bitcoin mined have been lost. [The £625m lost forever - the phenomenon of disappearing Bitcoins ...](#)

² The IRS tax ruling on March 25, 2014, taxes bitcoin as property and not as currency which encouraging hoarding over spending and/or selling.

³ [Bitcoin Ownership Breakdown and Future Prognosis - The Bitcoin Forum](#)

been mined while only 1.2 percent, on average (200,000), trade daily.⁴ Over the last year, there have been numerous days where less than 1 percent of mined bitcoin trade.⁵ If the principals behind this ETF, the Winklevoss twins, attempted to immediately sell their estimated holding of 100,000 bitcoin, or 50 percent of average daily trade volume, it would be highly disruptive to the market and adversely impact price.⁶ Historically in many asset classes, shallow trading volumes also provides greater economic incentive for price manipulation including pump and dump type schemes.

Bitcoin also exhibits hyper price volatility. Since the market peak of \$1,200 in November 2013, bitcoin has traded as low as \$200 in 2015 and as high as \$750 in 2016. Over the last two years, bitcoin has exhibited annual price volatility of approximately 50 percent. Bitcoin price volatility is extreme on a year-to-year basis and on a day-to-day basis.⁷ In comparison, the U.S. dollar to other hard currencies typically exhibits an annual price movement in the 10 to 12 percent range. To provide perspective, based on the last two years of trading, bitcoin, on average, is 2.5x more volatile than gold and the S&P 500. Bitcoin also exhibits extreme volatility on an hour-to-hour basis. In early 2016, bitcoin moved by more than 10 percent in value in only one hour. Such extreme price moves make it more difficult to gain fair market price execution and increase the chance that exchanges will game the system when deciding when and how to process buy and sell orders. It has also been common for order execution to take hours or in times of market stress, even days to complete.⁸

Most daily trading volume is conducted on poorly capitalized, unregulated bucket shop exchanges located outside of the U.S. This web of unregulated cryptocurrency exchanges are located in places such as China (OKCoin), Singapore (Quion) Hong Kong (Bitfinex) and Bulgaria (BTCe).⁹ Currently, 90 percent of bitcoin trading volume and 70 percent of mining activities (hashrate) take place in China. These non-U.S. exchanges and their practices significantly influence the price discovery process. Since bitcoin inception, most cryptocurrency exchanges have gone out of business, leaving investors as an aggregate with multimillions of dollars of losses. The February 2014 failure of Japan based Mt Gox, at the time, the largest bitcoin exchange, is a prime example where security weaknesses allowed cybercriminals to steal \$400 million from investors. In August 2016, Hong Kong based BitFinex was hacked and while it is still in operation as of this writing, investors lost over \$60 million.

Lack of regulation has created a low barrier to entry which has allowed bad actors to set up shop. There are no consumer laws to protect investors against cyberattacks, fraud and theft. Even if theft is detected, the pseudonymous nature of bitcoin makes tracking down the culprit and returning stolen property often difficult if not impossible. In such a wild-west environment, price manipulation can also occur, front-running of large buy or sell orders can happen and well-connected customers can gain preferential treatment in order execution. If manipulation can happen in the highly regulated LIBOR market, imagine what level of fraud could happen in the global, unregulated bitcoin exchange traded market.

⁴ [USD Exchange Trade Volume - Blockchain - Blockchain.info](#)

⁵ Coinbase.com bitcoin trading database.

⁶ Under current daily trading volume which has been as low as 125,000, such a position would take weeks to unwind in an attempt to minimize market disruption.

⁷ Not uncommon to experience daily volatility of 3 percent or more.

⁸ This was particularly true during the market turmoil created in February 2014 when Mt Gox, the market's largest cryptocurrency exchange, went bankrupt.

⁹ [List of all cryptocurrency exchanges - CryptoCoin Charts](#)

Bitcoin is a promising digital innovation but still in an embryotic stage as the marketplace requires more time to define and better understand this new potential asset class. Approving the COIN ETF prematurely before structural protections and controls are firmly in place, would put investors at undue risk.

Thanks again for the opportunity to comment.

Sincerely,

Mark T. Williams

Opening Statement of Mark T. Williams¹
Banking Specialist, Commodities and Risk Management Expert
Boston University Finance Department
The New York State Department of Financial Services
January 29, 2014
Virtual Currencies Hearing
Academic Panel 2:30 pm to 4:30 pm
90 Church Street
New York City, New York

Good Afternoon. My name is Mark Williams. For the last decade, I have been on the finance faculty at Boston University where I specialize in banking, capital markets and commodity trading risk. In 2010, I wrote *Uncontrolled Risk*, a book about the fall of Lehman Brothers and what caused the 2008 real estate asset bubble. Prior to my academic career, I was a senior executive for a Boston-based commodity-trading firm and have worked as a Federal Reserve Bank examiner.

I appreciate the opportunity to testify today. My discussion will not focus on the promise of virtual currencies as enough of that

¹ Mark T. Williams has no direct or indirect financial interest in Bitcoin, Bitcoin-related startups or any other virtual currency company.

was discussed yesterday. Today my focus is on the significant and currently unaddressed risks associated with virtual currencies. Sound business and regulatory decisions can only be made when these identified risks and promised benefits are measured against each other.

In the last five years, the number of virtual currencies has exploded. Currently, over seventy-five e-currencies trade representing about \$11 billion in stated market value. Of these currencies, Bitcoin at about \$10 billion is by far the biggest. By proxy, the strength or weakness of Bitcoin is the strength or weakness of the virtual currency industry, and if the two high-profile arrests of this week are an accurate indication, Bitcoin still has a long way to go before it should be relied upon as a mainstream means of transaction or even for investment speculation.

Bitcoin is a virtual currency in name only. Since inception, it has shown extreme annual price volatility that has topped 150 percent.² On any given day, Bitcoin can fluctuate by 20 percent or more, making it unfit as a transactional currency.³ Price instability, uncertain tax treatment and concentrated ownership, including by some individuals who have addressed this hearing⁴, has morphed Bitcoin into a virtual high-risk speculative commodity.⁵

Dangerously for investors, Bitcoin is in a hyper-asset bubble that has begun to deflate. Since 2013, the price has gone from \$13 to a market high of \$1,200. China's decision not to recognize Bitcoin as a legitimate currency was the pin that started to pop the bubble. Today it trades at \$790.⁶ Bitcoin

² Annual price volatility in 2010 and 2011 topped 150 percent. In 2013 it was about 140 percent.

³ From December 17th to 18th, 2013, the price of Bitcoin dropped by 20 percent in a single day. Over a two-day period in December (16th to 18th), the value dropped by approximately 50 percent.

⁴ Cameron and Tyler Winklevoss testified on January 28, 2014 and highlighted the Bitcoin ETF application they have filed with the SEC and hope to sell to the public.

⁵ Bitcoin is mined, of scarce supply and bought and sold. It also can exhibit triple digit annualized price volatility.

⁶ BTCe quote as of January 29, 2014.

price has been artificially inflated through a cartel ownership structure, extreme hoarding, questionable exchange practices⁷, marketing hype and greater opportunities for market manipulation. Since December peak price, Bitcoin prices have fallen over 30 percent.⁸ As investors gain greater awareness of how prices have been artificially inflated, Bitcoin prices will revert back to 2013 lows⁹, even possibly falling to single digits by June of this year.¹⁰

Bitcoin also lacks consumer and investor protection making it problematic for broader adoption. Untraceable coins make it harder to solve crimes. As prices have skyrocketed, the economic incentive for fraud has also increased. Recently, \$220 million in Bitcoin were reported stolen and have not been recovered.

⁷ E-exchanges including Mt.Gox, BTC China, BTC e and Bitstamp provide inadequate intraday trading information, are unregulated and it is not uncommon for quoted Bitcoin prices to vary between exchange by 10 percent or more.

⁸ December 4, 2013 (\$1,200) to January 30, 2014 (\$790)

⁹ On January 2, 2013, Bitcoin was \$13.28.

¹⁰ December 5, 2013, Beware of Bitcoin, Cognoscenti WBUR, Mark T. Williams,

Reputational damage remains high. Is Bitcoin an innovative response to facilitate meaningful commerce or a designer currency for the criminally inclined? The recent indictment of the Vice Chairman of the Bitcoin Foundation, for money laundering, exposes the ongoing credibility problem with regulators and law enforcement officials. Poor reputation will also stunt capital inflow and industry prospects. Banks remain hesitant to open new accounts or provide funding to Bitcoin-related startups, not simply due to lack of regulatory clarity, but due to perceived legal liability risk.

The trust and integrity associated with the U.S. Dollar as a transactional currency has been earned over centuries and supported by ongoing monetary and fiscal policy, soundness of the central banking system, regulation and enforcement.

If Bitcoin, in its current embryonic stage, were to gain wider acceptance without appropriate regulatory controls and oversight, we could expect a proliferation of its misuse for unlawful purposes.

Bitcoin as a fast and low-cost electronic payment system is highly innovative and provides much promise but significant risks still need to be adequately addressed through regulation, better investor and consumer protection and greater scrutiny as a high-risk speculative asset class.

In summary, I look forward to answering any further questions the hearing committee might have about the many unaddressed risks relating to Bitcoin or any of the other virtual currencies presently traded.