

May 12, 2017

Brent J. Fields, Secretary
Securities and Exchange Commission
100 F Street, N. E.
Washington, DC 20549-1090

Re: Bats BZX Exchange's Proposed Rule Change to List and Trade Shares Issued by the Winklevoss Bitcoin Trust (File No. SR-BatsBZX-2016-30)

Dear Mr. Fields,

I have been asked by Bats BZX Exchange, Inc. to opine on issues raised in the March 10, 2017 disapproval order (the Order) by the SEC's Division of Trading and Markets of a proposed rule change (File No. SR-BatsBZX-2016-30)¹ to list and trade shares of the Winklevoss Bitcoin Trust.² In particular, I have been asked to address the analysis provided in the Order concerning the reliability of the Gemini Exchange Auction Price and whether this price is readily susceptible to manipulation. The reliability of the Gemini Exchange Auction Price is an important consideration because of its role as a reference price in determining the net asset value (NAV) of trust shares traded on the Bats BZX Exchange. I have also been asked to opine on the means proposed by the Bats BZX Exchange to detect and deter manipulation in order to assure reliable pricing of the trust shares.

With respect to the reliability of the Gemini Exchange Auction Price, based on available evidence to date, I find that:

- The Gemini Exchange Auction Price is reliable in that it generally reflects prices for bitcoin traded at other U.S.-based bitcoin exchanges and for bitcoin traded at U.S. dollar-based exchanges globally. When noticeable discrepancies appear, such as on January 5, 2017, arbitrage mechanisms quickly force prices back into alignment.
- The fungibility of the underlying bitcoin product across bitcoin exchanges facilitates arbitrage and helps keep prices in proper alignment (that is, within the bounds of arbitrage).
- Because prices for bitcoin across exchanges are linked through arbitrage mechanisms, the possibility of manipulation of the bitcoin price on any one venue is constrained. Because of this linkage, manipulation of the bitcoin price on any one venue would require manipulation of the global bitcoin price to be effective. Manipulation of the global

¹ See Securities Exchange Act Release No. 79183 (October 28, 2016), 81 FR 76650 (November 3, 2016).

² See Securities Exchange Act Release No. 80206 (March 10, 2017), 82 FR 14076 (March 16, 2017).

bitcoin price would be prohibitively costly to the would-be manipulator, making such an occurrence unlikely.

- To the extent that spoofing conduct is present in bitcoin markets, it is unlikely to have a material impact on the value of trust shares. This is because spoofing, if successful, causes price oscillations of extremely small magnitudes (such as within the bid/ask spread) and does not result in a material change in the level of the bitcoin price.

With respect to the means proposed by the Bats BZX Exchange to detect and deter manipulation and ensure reliable pricing of the trust shares, I find that:

- The surveillance agreement between the Gemini Exchange and Bats BZX Exchange allows for continuous monitoring of trading activity to detect and deter manipulation of the Gemini Exchange Auction Price. In addition, the rules of the Bats BZX exchange are reasonably designed to prevent fraudulent and manipulative acts and practices with respect to determining the NAV of the trust shares.
- The trust sponsor has adopted procedures that greatly reduce the ability of a malicious actor from using the daily auction price on the Gemini Exchange to influence the NAV of the trust. If the sponsor determines in good faith on a given day that the Gemini Exchange Auction Price does not reflect the fair market value for bitcoin, the sponsor can use an alternative means to value the trust's bitcoin.
- Penalties for engaging in manipulative conduct serve as a deterrent against manipulation of the Gemini Exchange Auction Price. Although a penalty is applied after a manipulation occurs or is attempted, it is nonetheless a useful tool for deterring, and therefore preventing, manipulation.

In addition to the findings above with respect to the Gemini Exchange Auction Price, I also make the following observations:

- The SEC staff appears to be applying a standard of “cannot be manipulated” to the bitcoin market as opposed to a standard of “not readily susceptible to manipulation” that has been applied to other traded commodities.
- The fact that it may be possible to manipulate the underlying market seems to be, in the eyes of the SEC staff, sufficient cause for the denial of the application. But, of course, any market can potentially be manipulated—that’s why the CFTC and SEC have anti-manipulation authority.
- The CFTC has broad reaching anti-fraud and anti-manipulation authority over trading of commodities, including spot trading of commodities. Because the CFTC has expressly designated bitcoin as a commodity, the CFTC is broadly responsible for the integrity of the bitcoin spot market to the extent that manipulation of this underlying market could have an impact on the regulated derivatives market. Notably, provisions of the Commodity Exchange Act specifically address the requirement that contracts traded on registered exchanges be, “not readily susceptible to manipulation.”
- The CFTC has, by permitting a registered swap execution facility (SEF) to offer a bitcoin priced swap product, determined that the bitcoin price index used to settle its swaps was not readily susceptible to manipulation and by extension, the underlying spot market

from which the index was produced was also not readily susceptible to manipulation. Therefore, it appears that the CFTC has addressed the issue of whether the spot bitcoin market is readily susceptible to manipulation.

- In my view, even a “dominant” exchange (in terms of trading volume) cannot dictate the global price of bitcoin. An exchange does not coordinate trading across its membership to influence the market price. A dominant exchange in terms of trading volume does not imply that there is a dominant actor on the dominant exchange with the ability to attain a dominant market share to manipulate the price of bitcoin. To the contrary, in my view the larger the market share of any given exchange, the harder it is for a dominant actor to obtain a dominant market share of the dominant exchanges trading volume.
- I would expect that the availability of a bitcoin ETP would help attract professional market makers to the spot market (as well as the market for bitcoin ETPs). The presence of professional market makers would add to the resiliency of the spot price on the exchange, improve liquidity and other measures of market quality, and promote trading volume at the exchange.

I offer the bases for my opinions below.

I understand that a key consideration for the Commission in determining whether to approve or disapprove a proposal to list and trade shares of a new commodity-trust exchange-traded product (ETP) is the susceptibility of the trust shares, or the price of the underlying asset, to manipulation. In addressing this consideration, I focus on the Gemini Exchange Auction Price because it will be the primary reference price for determining the NAV of the bitcoin held by the trust. The investment objective of the trust is for the shares of the trust to track the price of bitcoins on the Gemini Exchange. The NAV of the trust would be calculated each business day based on the price of that day’s 4:00 ET Gemini Exchange Auction Price. If the sponsor determines in good faith on a given day that the Gemini Exchange Auction Price does not reflect the fair market value for bitcoin, the Sponsor can use an alternative means to value the Trust’s bitcoin.

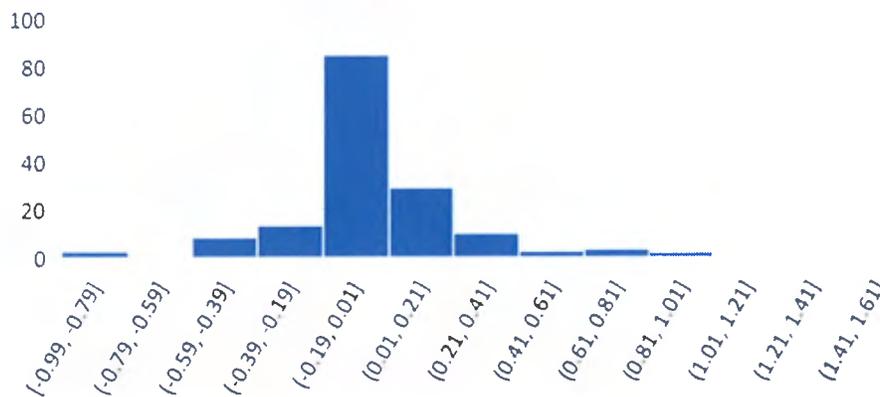
In conducting my analysis of the reliability of the Gemini Exchange price, I relied on daily pricing data from the WinkDex.com website (see: <https://winkdex.com/>). Data from this website are compiled from the publicly available price and volumes from several bitcoin exchanges from several jurisdictions. As a threshold matter, I note that since bitcoin is a fungible product, one would expect that in a well-functioning market that the spot bitcoin prices across exchanges would be correlated and to the extent there are deviations, that they would be quickly corrected through either formal or informal arbitrage mechanisms.³

³ I refer to the conveyance of pricing information across exchanges by order flow to be “formal arbitrage.” I refer to the conveyance of pricing information across exchanges by other means, such as quote revision based on observing prices in related markets, to be “informal arbitrage.” Together, formal and informal arbitrage serve to link markets to the extent that no constraints on these activities are present. Describing arbitrage mechanisms in this way is rooted in the academic finance literature. See, for example, Miller, Merton, “Volatility, Episodic Volatility, and Coordinated Circuit-Breakers: The Sequel,” *Pacific-Basin Capital Markets Research*, 3: 11-21 (1992). And Miller, Merton, Jayaram Muthuswamy, and Robert Whaley, “Predictability of S&P 500 Index Basis Changes: Arbitrage-Induced or Statistical Illusion?” *Journal of Finance* 44(2): 479-514, (1994).

As a first step, I reproduced, updated, and expanded the descriptive statistics reported in a letter from Bats Global Markets to the SEC, dated November 25, 2016.⁴ The letter reports statistics based on daily deviations of the Gemini Exchange Auction Price from the median 4:00 price of all U.S.-based Bitcoin exchanges from September 21, 2016 (the date of the launch of the Gemini Exchange Daily Auction) and November 18, 2016. In that letter, an average deviation of .12 percent was reported. At a bitcoin price of \$1,400, the dollar value of this average deviation would be approximately \$1.68.

Using the same measure, I updated the statistics using available data through March 1, 2017. Figure 1, below, shows the frequency and range of daily deviations from the median price (expressed as a percentage of the median price). As seen in the tallest column in Figure 1, on the largest number of days (over 80 of the 161 observed) deviations fell between -0.19 and 0.01 percent which is relatively low. The average deviation of the Gemini Exchange price from the median price during this period was .0058 percent and the average absolute deviation (that is, the average absolute value of deviations) was .1804 percent.⁵ This means that if the median bitcoin price is \$1,400, then the average absolute deviation of the Gemini Exchange Auction Price from the median would be approximately \$2.52.

Figure 1. Percentage Deviation of Gemini Exchange Bitcoin Price from Median U.S. Based Bitcoin Price at 4:00 PM ET 9/21/2016 - 3/1/2017



Similarly, I calculated the daily deviation of the Gemini Exchange price from the median price across all U.S. dollar exchanges globally. From September 21, 2016 through March 1, 2017, the average deviation from the median global U.S. dollar bitcoin price was .0489 percent with an average absolute deviation of .2398 percent. This means that if the median bitcoin price is

⁴ Letter from Kyle Murray, BATS Global Markets, Inc., to the SEC dated November 25, 2016 and found at: <https://www.sec.gov/comments/sr-batsbzx-2016-30/batsbzx201630-1594698-132357.pdf>.

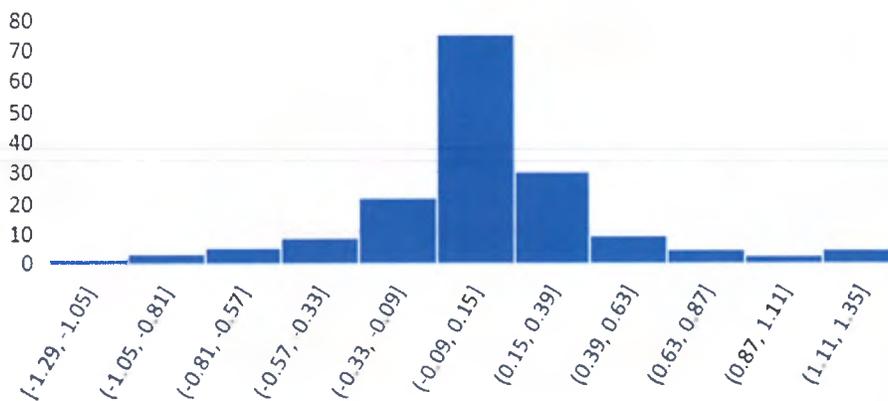
⁵ The average absolute deviation calculates the average of the absolute value of observed deviations. Using absolute values prevents negative deviations being cancelled out by positive deviations of the same size.

\$1,400, then the average absolute deviation of the Gemini Exchange Auction Price from the median would be approximately \$3.36. Figure 2, below, shows the frequency and range of daily deviations from the median price (expressed as a percentage of the median price). The figure shows that the largest number of daily deviations (over 70 of the 161 days observed) had values between -.09 percent and .15 percent, a relatively low number.

Inspection of Figures 1 and 2 display a significant outlier occurring on January 5, 2017. This was the date that the People’s Bank of China (PBOC) announced tighter reporting requirements from Chinese bitcoin exchanges for cash transactions and overseas transfers. On this date, the deviation of the Gemini Exchange Auction Price from the U.S.-based median price and the global U.S. dollar median price was -.93 percent. Inspection of the underlying data shows that another exchange price was primarily responsible for this deviation, and not the Gemini Exchange Auction Price. By January 7, this deviation declined to a level below the long-term average.

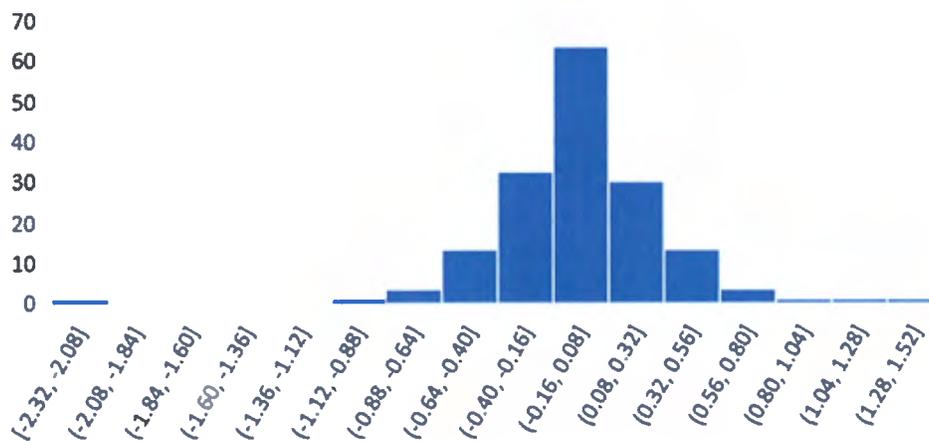
Shocks that affect exchange prices in some jurisdictions, but not others, are known to occur in some markets that underlie approved ETP products. For example, a commodity exchange in one jurisdiction may be subject to strict daily price limits whereas commodity exchanges in other jurisdictions may not be subject to similar restrictions. This means that on days that the strict price limits are binding, prices from this commodity exchange will deviate from prices observed on commodity exchanges in other jurisdictions.

Figure 2. Percentage Deviation of the Gemini Exchange Bitcoin Price from Median U.S. Dollar-Based Bitcoin Price at 4:00 PM ET 9/21/2016 - 3/1/2017



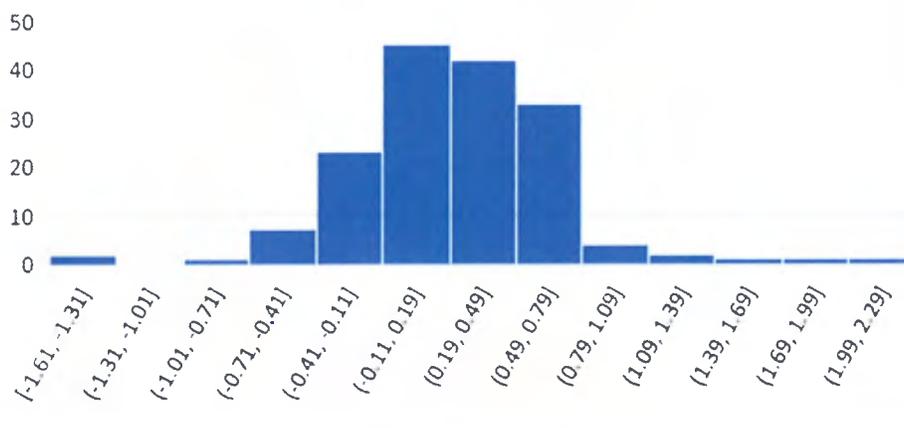
Another way to describe the data is to calculate the average deviation of the Gemini Exchange Auction Price from the volume-weighted average 4:00 exchange price (excluding Gemini). The average deviation of the Gemini Exchange price from the U.S.-based volume-weighted average is $-.0368$ percent and the average absolute deviation is $.2511$ percent (corresponding to a dollar value of approximately \$3.52 with a bitcoin price of \$1,400). The average deviation of the Gemini Exchange price from the global U.S. dollar-based volume-weighted average exchange price is $.2227$ percent and the average absolute deviation is $.3933$ percent (corresponding to a dollar value of approximately \$5.51 with a bitcoin price of \$1,400).⁶ As with the median price statistics, pricing deviations on January 5, 2017 were an outlier with a deviation of -2.32 percent between the Gemini Exchange price and the volume-weighted average U.S.-based exchange price, and a deviation of -1.54 percent between the Gemini Exchange price and the volume-weighted average global U.S. dollar-based exchange price. As with the median price analysis, pricing deviations were reduced in the following days, returning to the long-run average level by the next day at U.S.-based exchanges and globally by January 9, 2017. The duration of the disruption in the global market reflects the fact that the PBOC's requirements affected non-U.S. (that is, Chinese) exchanges.

Figure 3. Percentage Deviation of Gemini Exchange Bitcoin Price from Volume-Weighted Average U.S.-Based Bitcoin Price at 4:00 PM ET 9/21/2016 -3/1/2017



⁶ I was unable to use all U.S. dollar-based exchanges in calculating my global average because of missing data from some exchanges. It was unclear whether the observations were not reported or if there was no USD trading volume for a significant number of days. As a result, I excluded CampBX and LakeBTC from my calculation of the global USD bitcoin average. I also excluded observations from LocalBitcoins.com because I understand that, rather than a many-to-many exchange, the site operates like a bulletin board and has geographic constraints for facilitating in-person exchanges. I understand that prices from LocalBitcoins.com are generally not included in aggregations of exchange prices.

Figure 4. Percentage Deviation of Gemini Exchange Bitcoin Price From Volume-Weighted Average U.S. Dollar-Based Bitcoin Price at 4:00 Pm ET 9/21/2016 - 3/1/2017



Overall, the descriptive statistics show that the Gemini Exchange Auction Price is a reliable indicator of bitcoin pricing for U.S.-based bitcoin exchanges and for global U. S. dollar-based bitcoin prices. When there are significant deviations between the Gemini Exchange price and prices in other markets, the deviations are quickly reduced to normal (and small) levels. Although there are episodic deviations between the Gemini Exchange price and other exchange prices, the Gemini Exchange price is not primarily responsible for these deviations. There is a tendency for pricing across exchanges, when there are observed deviations, to move towards convergence.

My observations based on daily price data are consistent with observations from within the industry. For example, data presented by Daniel H. Gallancy suggests that price discrepancies across bitcoin exchanges generally are arbitrated away within a matter of seconds.⁷ Additionally, an industry participant in the daily auction on the Gemini Exchange observes that arbitrageurs are actively eliminating any cross-market pricing discrepancies resulting in approximately equivalent prices for U.S. dollar-based bitcoin globally.⁸ I expect that linkages between exchanges will improve over time as the market attracts arbitrageurs to exploit profitable opportunities when deviations occur. I understand that the bitcoin market includes participants who are chiefly arbitrageurs, and who through their trading help force convergence among the prices of bitcoin exchanges after a deviation in price occurs. Price deviations across exchanges create incentives that arbitrageurs respond to, thus working to eliminate cross-exchange pricing deviations.

⁷ See Letter from Daniel H. Gallancy, CFA, SolidX Partners, Inc. (March 15, 2017).

⁸ See Letter from Circle Internet Financial, Inc., (February 3, 2017).

The fungibility of the underlying bitcoin product across bitcoin exchanges facilitates arbitrage and helps keep prices in proper alignment, considering differences in exchange trading rules and creditworthiness that can constrain arbitrage. Based on available data, I find that the arbitrage process is helping to keep bitcoin prices aligned across bitcoin exchanges. This process makes prices more resilient and resistant to manipulative conduct. Because prices for bitcoin across exchanges are linked through arbitrage mechanisms, the possibility of manipulation of the bitcoin price on any one venue is constrained. Manipulation of the bitcoin price on any one venue requires manipulation of the global bitcoin price in order to be effective. Manipulation of the global bitcoin price would be prohibitively costly making it unlikely that any one actor could obtain a dominant market share of the global bitcoin market.⁹

The fungibility of the bitcoin product and the process of arbitrage make the trading volume on a particular exchange less relevant as an indicator of the exchange's contribution to price discovery. The Gemini Exchange does not need to be a dominant exchange in order to have its pricing reflect the forces of supply and demand for bitcoin.¹⁰ The Trust's price setting is transparent whereas an index may use a proprietary formula. Between September 21, 2016 and March 1, 2017, the volume of the Gemini exchange has accounted for 24.03 percent on the volume for U.S.-based exchanges, and 7.35 percent of the global market for U.S. dollar-based bitcoin.

Arbitrage order flow provides an economic force that causes the revision in prices leading to a correction in mispricing across exchanges. However, market participants do not need to wait for the arbitrageur to arrive in order to revise prices. Order flow from formal arbitrage will help link markets but is not absolutely necessary as market participants can "peek" across exchanges to see prices elsewhere and act upon them. In other words, information can be conveyed from one market to the other by means other than formal arbitrage. Miller (1992) referred to this process of information transmission across related markets as "smart shopping."¹¹

I would expect that the availability of a bitcoin ETP would help attract professional market makers to the spot market (as well as the market for bitcoin ETPs). The presence of professional market makers would add to the resiliency of the spot price on the exchange, improve liquidity and other measures of market quality, and promote trading volume at the exchange.

Craig Lewis has submitted a White Paper that addresses (among other things) the potential for manipulating bitcoin prices by either 1) disseminating false or misleading information; or by 2) attaining a dominant market share by controlling the available supply of bitcoin.¹² With respect to the first possibility, Lewis observes that "unlike traditional securities, there are no periodic information events, such as earnings announcements. Since there is no "inside" information to

⁹ As of the afternoon of May 9, 2017 the market capitalization for bitcoin globally was \$27.9 billion.

¹⁰ For a fungible asset like bitcoin developing an index of prices across exchanges is unlikely to add significant value. In fact, an index may make arbitrage costlier.

¹¹ See Miller, Merton, "Volatility Episodic Volatility, and Coordinated Circuit-Breakers: The Sequel," *Pacific-Basin Capital Markets Research*, 3: 11-21 (1992).

¹² See Craig M. Lewis, "SolidX Bitcoin Trust: A Bitcoin Exchange Traded Product" (February, 2017) submitted to comment file SR-NYSEArca-2016-101) and a supplemental submission, dated March 3, 2017: Craig M. Lewis, "Supplemental Submission to SolidX Bitcoin Trust: A Bitcoin Exchange Traded Product" (March 3, 2017).

exploit, bitcoin valuations are based on publicly available information, providing a relatively high degree of information transparency.”¹³ This view is consistent with the regulation of commodity trading in general which does not utilize the SEC concept of “inside information,” for reasons discussed below. With respect to the second possibility, Lewis concludes that it would be difficult and prohibitively costly to attain a dominant market share to manipulate the price of bitcoin.

The SEC staff expressed concern, based on a public comment, that the price of bitcoin is defined primarily by major Chinese exchanges, that are not regulated or audited, and that the price is defined entirely by speculation with no ties to fundamentals. Furthermore, the SEC staff expressed concern that trading was sparse on U.S. exchanges and could not mitigate manipulation from dominant unregulated exchanges. In my view, even a “dominant” exchange (in terms of trading volume) cannot dictate the global price of bitcoin. An exchange does not coordinate trading across its membership to influence the market price. A dominant exchange in terms of trading volume does not imply that there is a dominant actor on the dominant exchange with the ability to attain a dominant market share to manipulate the price of bitcoin. To the contrary, in my view the larger the market share of any given exchange, the harder it is for a dominant actor to obtain a dominant market share of the dominant exchanges trading volume.

The SEC staff expressed concern that the price of bitcoin could be manipulated through spoofing conduct. Spoofing is commonly understood to be a form of market abuse where a person (the “spoofers”) intentionally attempts to cause changes in prices by creating a misleading perception of supply and demand for futures contracts in the order book of the exchange (Order at 14085). Spoofing is understood to work by misleading other traders and enticing them to react to large orders (or a series of layered orders) submitted by the spoofers, but where the orders are never intended to be executed.

University of Houston Professor Craig Pirrong has argued that spoofing cannot cause the price to diverge persistently from where it otherwise would be, such as would be the case with other forms of manipulative conduct.¹⁴ To the extent that spoofing conduct is present in bitcoin markets, it is unlikely to have a material impact on the value of trust shares. This is because spoofing, if successful, causes price oscillations of extremely small magnitudes (such as within the bid/ask spread) but does not result in a material change in the level of the price. The victims of spoofing conduct are unlikely to be holders of trust shares but rather market makers in the spot bitcoin market. Craig Lewis has also concluded that the likelihood of spoofing in the spot bitcoin market is low.¹⁵

The SEC staff also evaluated the means proposed by the BZX Exchange to detect and deter manipulation and ensure reliable pricing of the trust shares. The SEC staff appears to be applying

¹³ See Craig M. Lewis, “SolidX Bitcoin Trust: A Bitcoin Exchange Traded Product” (February, 2017), page 5, submitted to comment file SR-NYSEArca-2016-101) and a supplemental submission, dated March 3, 2017.

¹⁴ See Craig Pirrong, I’m Not Spoofing You About Judicial Overkill, Streetwise Professor, (Nov. 4, 2015), <http://streetwiseprofessor.com/?p=9678>.

¹⁵ See Craig M. Lewis, “SolidX Bitcoin Trust: A Bitcoin Exchange Traded Product” (February, 2017) page 9. Submitted to comment file SR-NYSEArca-2016-101) and a supplemental submission, dated March 3, 2017

a standard of “cannot be manipulated” to the bitcoin market as opposed to a standard of “not readily susceptible to manipulation” that has been applied to other traded commodities.¹⁶ Like the view expressed in the Bats BZX petition, I am not aware of any other case in which the Commission has required a finding that there is no possibility of manipulation of a market in order for a proposed rule change to be consistent with the Exchange Act.¹⁷

The SEC staff argues that one path for manipulating the bitcoin market is through the possession of material nonpublic information. The Order states “there may be material non-public information related to the actions of regulators with respect to bitcoin; regarding order flow, such as plans of market participants to significantly increase or decrease their holdings in bitcoin; regarding new sources of demand, such as new ETPs that would hold bitcoin; or regarding the decision of a bitcoin based ETP with respect to how it would respond to a “fork” in the blockchain, which would create two different, non-interchangeable types of bitcoin.”

I agree with the Bats BZX petition that these potential avenues for manipulation of the bitcoin market also exist in the context of other commodity-trust ETPs. In commodities markets, the information that moves markets is general to global or macroeconomic developments as opposed to developments within a corporation. While there is no prohibition on or concept of “insider trading” with respect to market participants trading in commodity futures, the Commodity Exchange Act (CEA) does prohibit government employees and exchange operators from trading based on non-public information they obtain in the performance of their job. See CEA 7 USC Sec. 13(e). There is no prohibition of ordinary market participants trading on information that could impact price. In the commodity markets, market participants know their own positions and likely order flow that they will bring to market. They know their plans to significantly increase or decrease their holdings of a commodity. They may even possess information about new sources of commodity supply or demand. The information they possess may be market moving or otherwise relevant to trading decisions, but that does not make the information material nonpublic “inside information” because it is information produced by the trader himself through his own commercial activity and is not obtained in violation of fiduciary duty owed to the owner of the information. For a market participant to trade illegally on material nonpublic information, possession of that information must result from a violation of a fiduciary duty to the owner of the information. In any commodity market, when market-moving macroeconomic information is illegally disclosed by a government employee (such as the illegal disclosure of a crop report or a pending Federal Reserve decision), this employee breached a fiduciary duty to his employer. Various federal statutes establish severe penalties, including criminal penalties, for individuals who illegally disclose nonpublic government information. It is the illegal conduct that is subject of enforcement actions, but it is not enforced as a violation of anti-manipulation rules since the underlying illegal conduct is misappropriation of information (that is, theft) and not manipulation.¹⁸

¹⁶ See CFTC Core Principle 3:

<http://www.cftc.gov/IndustryOversight/ContractsProducts/EconomicRequirements/index.htm>

¹⁷ See Bats BZX Petition dated March 24, 2017, page 13.

¹⁸ See Stephen J. Dinehart, “Insider trading in futures markets: A discussion,” *Journal of Futures Markets*, Volume 6, Issue 2, Summer 1986, Pages 325–333.

The SEC staff views the Bats BZX Exchange’s proposed surveillance procedures as “necessary, but not sufficient” because the Gemini exchange is not a significant market. However, as noted above, because bitcoin is a fungible product, the possibility of manipulation of the bitcoin price on any one venue is constrained. Manipulation of the bitcoin price on any one venue requires manipulation of the global bitcoin price in order to be effective. In my view, the type of potential manipulation that is most relevant for determining the NAV of the trust’s shares is if a malicious actor attempted to use the Gemini Exchange Auction Price to influence the NAV of the trust. The surveillance agreement between the Gemini Exchange and Bats BZX Exchange is aimed at detecting and deterring such conduct. The agreement allows for continuous monitoring of trading activity in order to effectively conduct surveillance of the Gemini Exchange Auction Price.

In addition, if the sponsor determines in good faith on a given day that the Gemini Exchange Auction Price does not reflect the fair market value for bitcoin, the sponsor can use an alternative means to value the trust’s bitcoin such as using the 4:00 spot price at the itBit exchange or using fair market value as determined in good faith by the sponsor and calculated by the trust’s administrator.

The Gemini Exchange Auction is designed to “not be readily susceptible to manipulation.” The auction is designed with pre-trade transparency with indicative auction pricing published publicly throughout the 10 minutes prior to the auction. This allows for full and transparent participation by all Gemini Exchange participants, and uses a mechanism similar to what other exchanges use in setting opening and closing prices. The auction also concentrates liquidity and trading volume in a single moment each day.

Overall, the anti-manipulation rules, surveillance procedures, and auction design of the Bats BZX exchange appear to be reasonably designed to detect and deter fraudulent and manipulative acts and practices with respect to determining the NAV of the trust shares as well as detecting and deterring other violations of applicable federal securities laws and rules.

Besides surveillance procedures and anti-manipulation rules of the Bats BZX Exchange, penalties for engaging in manipulative conduct serve as a deterrent against manipulation of the Gemini Exchange Auction Price and the resulting trust share NAV. Although a penalty is applied after a manipulation occurs or is attempted, it is nonetheless a useful tool for deterring, and therefore preventing, manipulation.

In the Order, it appears that SEC staff is conflating the requirement that the Bats BZX Exchange and/or the Gemini Exchange have in place systems to detect and deter manipulation of their market with a requirement that the underlying spot market(s) be free from manipulation and/or the ability to be manipulated. The very fact that it may be possible to manipulate the underlying market seems to be, in the eyes of the SEC staff, sufficient cause for the denial of the application. But, of course, any market can potentially be manipulated—that’s why the CFTC and SEC have anti-manipulation authority.

The Order states that the Commission does not believe that the record supports a finding that Gemini Exchange is a “regulated market” comparable to a national securities exchange or to the

futures exchanges that are associated with the underlying assets of the commodity-trust ETPs approved to date. The Order also argues that the CFTC does not set the standards for, approve the rules of, examine, or otherwise regulate bitcoin spot markets. The CFTC has broad reaching anti-fraud and anti-manipulation authority over trading of commodities, including spot trading of commodities.¹⁹ Because the CFTC has expressly designated bitcoin as a commodity²⁰, the CFTC is broadly responsible for the integrity of the bitcoin spot market to the extent that manipulation of this underlying market could have an impact on the regulated derivatives market. Notably, provisions of the Commodity Exchange Act specifically address the requirement that contracts traded on registered exchanges be, “not readily susceptible to manipulation.”²¹

The CFTC has approved one Swap Execution Facility (SEF) and is in the process of reviewing applications for another, provisionally registered SEF.²² The CME group, which is also regulated by the CFTC, recently created the CME CF Bitcoin Reference Rate (BRR) and CME CF Bitcoin Real Time Index (BRTI), a standardized reference rate and spot price index with independent oversight. According to CME, the purpose of these products is to accelerate the professionalization of bitcoin trading and further establish digital assets as a new asset class. BRR and BRTI launched November 14, 2016. If the CFTC believed the offerings of the CME and other market participants *or the underlying spot market for bitcoin* were readily susceptible to manipulation, contrary to CFTC Core Principle 3, they would not have approved TeraExchange’s offering.

Implicit in the CFTC approval of the TeraExchange SEF application and contract certification, is the finding, by the CFTC, that the TeraExchange pricing mechanism for purposes of settling its swaps was not readily susceptible to manipulation and by extension, the underlying spot market from which the index was produced was also not readily susceptible to manipulation. Therefore, it appears that the CFTC has addressed this issue of whether the spot bitcoin market is readily susceptible to manipulation. Other jurisdictions have approved and/or embraced bitcoin and

19 See CFTC Rule 180.2 and 7 USC Section 9 which makes it unlawful for any person directly or indirectly to manipulate or attempt to manipulate the price of any swap or commodity in interstate commerce.

20 In re Coinflip, Inc., CFTC No. 15-29 (Sept. 17, 2015), available at <http://www.cftc.gov/idc/groups/public/@lrenforcementactions/documents/legalpleading/enfcoinfliporder09172015.pdf> (“Section 1a(9) of the [Commodity Exchange] Act defines ‘commodity’ to include, among other things, ‘all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in.’ . . . The definition of a ‘commodity’ is broad. . . . Bitcoin and other virtual currencies are encompassed in the definition and properly defined as commodities.”) (citations omitted).

21 See 7 USC Section 7(d)(3) DCM Core Principles: Contracts Not Readily Subject to Manipulation “The board shall list on the contract market only contracts that are not readily susceptible to manipulation.”

22 The CFTC has designated two SEFs which will offer bitcoin based products – LedgerX (provisionally registered) and TeraExchange (fully registered). In order to grant registration and approve trading, the CFTC, as part of the approval process must determine that contracts traded on the exchange are in compliance with this core principle. As such, a framework for providing oversight and deterring market manipulation currently exists in the United States.

digital assets. In March 2016, the Japanese cabinet approved bills which elevated bitcoin and other digital currencies to the same status as other forms of money. On April 1, 2017, Japan's parliament recognized Bitcoin as an authorized method of payment.²³ Japan has begun to regulate bitcoin as a form of prepayed payment and is approving regulated virtual currency exchanges.²⁴ The JFSA imposes capital requirements, audit requirements as well as anti-money-laundering and know-your-customer requirements on the exchange.²⁵ So, aside from the CFTC, another competent regulator with whom the SEC has an MOU maintains a regulated bitcoin market in their jurisdiction. Notably a host of other jurisdictions including UK, Australia, Hong Kong, Singapore, Indonesia and Thailand have established some form of regulatory sandbox for blockchain, the technology that underlies bitcoin.

One concern of commenters to the SEC was that the Gemini Exchange had relatively low trading volume, allegedly making the exchange price less reliable than if the volumes were larger. A review of ETF products approved by the SEC shows a group of products have lower average daily trading volume (ADV) than the Gemini Exchange.²⁶ The table below shows the approved ETF products with lower estimated ADVs than for the Gemini Exchange.

In summary, I believe that the approval of the Bats BZX Exchange rule change to list and trade shares of the Winklevoss Bitcoin Trust will facilitate represent a cost-effective and convenient means for investors to gain exposure to bitcoin similar to a direct investment in bitcoin. The approval of this ETP will help make bitcoin markets more transparent and improve the availability of investment and portfolio diversification opportunities for investors. I believe that a bitcoin ETP will also protect current investors in bitcoin by providing regulatory certainty over this market. An approval of this product would add a valuable choice for investors relative to their current options of investing in bitcoin directly.

²³ Business Insider <http://www.businessinsider.com/bitcoin-acceptance-growing-in-japan-2017-4>. See (in Japanese) the original JFSA regulation at: JFSA regulation - <http://www.fsa.go.jp/news/28/ginkou/20161228-4/22.pdf>.

²⁴ <http://www.coindesk.com/japan-bitcoin-law-effect-tomorrow/>

²⁵ Id.

²⁶ The comparison is not precise. Assuming the May 9 bitcoin price of approximately \$1,700, the ADV of the Gemini Exchange between 9/21/2016 and March 1, 2017 translates to about \$4.2 million. The ADV figures for the ETF products did not specify precise date other than 2017.

ETF Ticker	Name	Underlying Type	Average Underlying \$ADV (\$MM)
NGE	Global X MSCI Nigeria ETF	INTL	0.2
ICOL	iShares MSCI Colombia Capped ETF	INTL	2.3
PAK	Global X MSCI Pakistan ETF	INTL	2.4
VNM	VanEck Vectors Vietnam ETF	INTL	2.8
XMPT	VanEck Vectors CEF Municipal Income ETF	CEF	3.0
PCEF	PowerShares CEF Income Composite Portfolio	CEF	3.1
QAT	iShares MSCI Qatar Capped ETF	INTL	3.3
EPHE	iShares MSCI Philippines ETF	INTL	3.4
GREK	Global X MSCI Greece ETF	INTL	3.6
PZI	PowerShares Zacks Micro Cap Portfolio	SM CAP	3.7
GXG	Global X MSCI Colombia ETF	INTL	3.7
YYY	Yield Shares High Income ETF	CEF	3.9
ENZL	iShares MSCI New Zealand Capped ETF	INTL	4.1

Respectfully submitted,



James A. Overdahl, Partner

Delta Strategy Group

600 Pennsylvania Avenue, Suite 300

Washington, DC 20003

DATED: May 12, 2017.

CERTIFICATE OF SERVICE

I, James A Overdahl, a partner at Delta Strategy Group, hereby certify that on May 12, 2017, I served copies of my attached statement for the record concerning Bats BZX Exchange's proposed rule change to list and trade shares issued by the Winklevoss Bitcoin Trust (File No. SR-BatsBZX-2016-30), by way of facsimile telephone number (202) 772-9324, and by sending the original the same day by Federal Express to 100 F Street, N.E., Washington, D.C. 20549-1090

Dated: May 12, 2017


James A. Overdahl, Partner