

MEMORANDUM

TO: File No. SR-NYSEARCA-2023-44

FROM: David Remus
Office of Market Supervision, Division of Trading and Markets

DATE: July 26, 2023

SUBJECT: Meeting with Bitwise

On July 26, 2023, Eric Juzenas, Molly Kim, Tom McGowan, Ray Lombardo, Sarah Schandler, Stacia Sowerby, and David Remus from the Division of Trading and Markets, participated in a meeting with Teddy Fusaro, Katherine Dowling, and Matthew Hougan from Bitwise.

The discussion concerned NYSE Arca, Inc.'s proposed rule change to list and trade shares of the Bitwise Bitcoin ETP Trust under NYSE Arca Rule 8.201-E. Bitwise provided the attached presentation to the Commission staff.



By Bitwise Asset Management, Inc. and Bitwise Bitcoin ETP Trust
July 26, 2023

Bitwise Asset Management

Engagement with SEC Division of Trading & Markets



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About Us



By Bitwise Asset Management, Inc. and Bitwise Bitcoin ETP Trust
July 26, 2023



Teddy Fusaro
President

Previously Senior Vice President and Senior Portfolio Manager at New York Life. Before that, Head of Portfolio Management and Trading at IndexIQ. Earlier, Direxion and Goldman Sachs.



Katherine Dowling
*General Counsel,
Chief Compliance Officer*

10+ years as Assistant U.S. Attorney, most recently in the Economic Crimes Unit of the U.S. Attorney's Office for the Northern District of California. Previously General Counsel & CCO for True Capital Management.



Matt Hougan
Chief Investment Officer

Previously CEO of Inside ETFs. Before that, CEO of ETF.com. Co-author of the CFA Institute's monograph on exchange-traded funds and its first research brief on crypto. Three-time member of the Barron's ETF Roundtable.

Agenda

By Bitwise Asset Management, Inc. and Bitwise Bitcoin ETP Trust
July 26, 2023



- About Bitwise
- Bitwise Bitcoin ETP Trust Timeline and Research
- Current Filing & Discussion

Bitwise Bitcoin ETP Timeline and Research

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- **January 2019:** Bitwise files S-1 for Bitwise Bitcoin ETF
- **January 2019:** NYSE Arca files 19b-4 to list shares of Bitwise Bitcoin ETP Trust
- **March 2019:** Bitwise delivers presentation to Staff on fake volume and the “real bitcoin market”
- **May 2019:** NYSE Arca files 19b-4 amendment
- **September 2019:** Bitwise files S-1 amendment
- **October 2019:** Staff issues Disapproval Order; Commission stays Order
- **January 6, 2020:** Bitwise meets with SEC Staff to discuss best pathway forward
- **January 14, 2020:** NYSE Arca withdraws 19b-4; Bitwise withdraws S-1
- **January 2020 - August 2021:** Bitwise conducts 14 meetings with — and provides >250 pages of research to — the SEC Staff, including the divisions of Trading and Markets, Economic Risk and Analysis, and Corporate Finance
- **November 2021:** Meeting with Staff of Division of Investment Management to discuss ETH Futures ETFs
- **June 2022:** Bitwise Bitcoin ETF Disapproval
- **May 2023:** Engagement with SEC Staff to discuss ETH Futures and other matters
- **June 2023:** NYSE Arca files 19b-4 to list shares of Bitwise Bitcoin ETP Trust

Bitwise 2021 Bitcoin ETF Research: Academic Review

By Bitwise Asset Management, Inc. and Bitwise Bitcoin ETP Trust
July 26, 2023



Price Discovery In The Modern Bitcoin Market: Examining Lead-Lag Relationships Between The Bitcoin Spot And Bitcoin Futures Market

By Matthew Hougan, Hong Kim, and Satyajee Pal

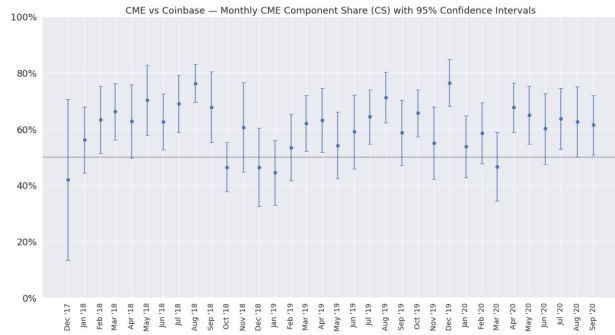
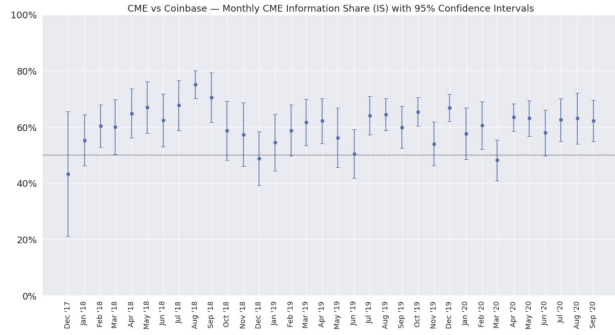
Bitwise Asset Management

June 11, 2021

Academic Literature on Spot vs. Futures

#	Authors	CME IS	CME CS	Intervals	Time Period	Result
1	Corbet, Lucey, et al.	15%	18%	1 min	--	Spot leads
2	Baur and Dimpfl	14%	14%	15 min	12/18/2017 - 10/18/2018	Spot leads
3	Kapar and Olmo	89%	--	1 day	12/18/2017 - 05/16/2018	Futures lead
4	Alexander and Heck	66%	73%	30 min	12/18/2017 - 06/30/2019	Futures lead
5	Hu, Hou, and Oxley	55%	--	1 day	12/18/2017 - 06/16/2019	Futures lead
6	Akyildirim, Corbet, et al.	91-97%	67-87%	1/5/10/15/30/60 min	12/18/2017 - 02/26/2018	Futures lead
7	Fassas, Papadamou, and Koulis	97%	77%	1 hour	01/01/2018 - 12/31/2018	Futures lead
8	Entrop, Frijns, and Seruset	50%	53%	1 min	12/18/2017 - 03/31/2019	Mixed
9	Aleti and Mizrach	53-55%	68-91%	5 min	01/02/2019 - 02/28/2019	Futures lead
10	Chang, Herrmann, and Cai	--	63%	1 min	07/01/2019 - 12/31/2019	Futures lead

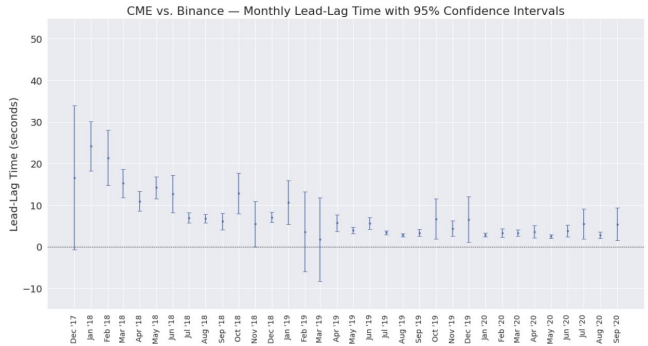
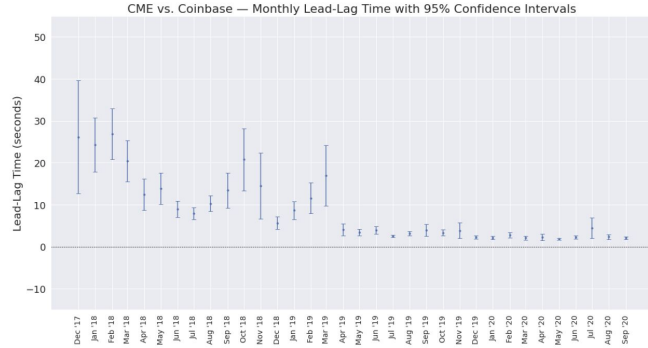
Bitwise 2021 Bitcoin ETF Research: IS/CS Lead-Lag



	CME IS	Confidence Interval	CME CS	Confidence Interval
Binance	58.32%*	56.78% - 59.86%	57.38%*	55.45% - 59.32%
Bitfinex	65.75%*	64.22% - 67.29%	65.08%*	63.28% - 66.89%
Bitstamp	64.10%*	62.74% - 65.47%	68.03%*	66.21% - 69.86%
Coinbase	60.60%*	59.20% - 62.00%	60.88%*	58.99% - 62.77%
Gemini	56.44%*	55.03% - 57.84%	56.73%*	54.73% - 58.72%
Huobi	60.91%*	59.34% - 62.49%	58.97%*	56.96% - 60.98%
itBit	53.33%*	51.91% - 54.75%	52.97%*	50.93% - 55.00%
Kraken	63.17%*	61.58% - 64.76%	63.24%*	61.29% - 65.19%
LBank	66.03%*	63.95% - 68.11%	63.51%*	61.34% - 65.68%
OKEx	56.19%*	54.74% - 57.64%	53.60%*	51.73% - 55.47%

Bitwise 2021 Bitcoin ETF Research: Hayashi-Yashida Lead Lag

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	Lead-Lag Time (seconds)	Confidence Interval (seconds)
Binance	7.28*	6.53 - 8.03
Bitfinex	9.03*	8.33 - 9.73
Bitstamp	6.52*	5.96 - 7.08
Coinbase	8.42*	7.65 - 9.18
Gemini	6.51*	5.91 - 7.11
Huobi	7.57*	6.96 - 8.18
itBit	8.63*	7.89 - 9.37
Kraken	17.19*	16.00 - 18.38
LBank	16.62*	15.37 - 17.87
OKEx	8.27*	7.41 - 9.13



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Engagement Priorities – Path Forward



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Areas for discussion



- 19b-4
- “Lead-Lag” Analysis
- Winklevoss Standard
- Information Sharing Agreements
- Creation and Redemption Procedures



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Thank you



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