

MEMORANDUM

TO: File No. SR-NYSEArca-2019-01

FROM: Lauren Yates
Office of Market Supervision, Division of Trading and Markets

DATE: September 17, 2019

SUBJECT: Meeting with Bitwise Asset Management, Inc., NYSE Arca, Inc., Vedder Price P.C., and Wilson Sonsini Goodrich & Rosati

On September 12, 2019, Elizabeth Baird, Emily Russell, David Shillman, Michael Coe, Edward Cho (by phone), Neel Maitra, David Remus (by phone), and Lauren Yates from the Division of Trading and Markets; Johnathan Ingram and Cindy Oh from the Division of Corporation Finance; Igor Kozhanov from the Division of Economic and Risk Analysis; and Emily Parise from the Office of General Counsel, met with the following individuals:

Teddy Fusaro, Bitwise Asset Management, Inc.
Matt Hougan, Bitwise Asset Management, Inc.
Hope Jarkowski, NYSE Arca, Inc.
David DeGregorio, NYSE Arca, Inc. (by phone)
Tom Conner, Vedder Price P.C. (by phone)
John Sanders, Vedder Price P.C.
Robert Rosenblum, Wilson Sonsini Goodrich & Rosati

The discussion concerned NYSE Arca, Inc.'s proposed rule change to list and trade, pursuant to NYSE Arca Rule 8.201-E, shares of the Bitwise Bitcoin ETF Trust. Bitwise Asset Management, Inc. also provided the attached presentation to the Commission Staff.



Bitwise Asset Management

Presentation to the U.S. Securities and Exchange Commission

September 12, 2019



About Us



Teddy Fusaro

Chief Operating Officer

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.



Matt Hougan

Global Head of Research

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



About Bitwise



01

Pioneer: Created the world's first crypto index fund.

02

Specialist: Focused exclusively on crypto, manages Reg D funds.

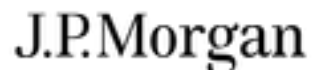
03

Experienced: Deep expertise in crypto, asset management, and ETFs.

INSTITUTIONAL BACKERS



TEAM BACKGROUNDS





Agenda

REVIEW

Review of the September presentation delivered to SEC Commissioners Jackson, Peirce, and Roisman.

UPDATES

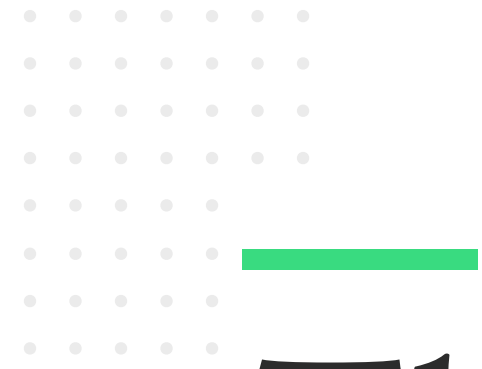
Update on recent bitcoin market developments.

Q&A

Answer as many questions as time will allow.



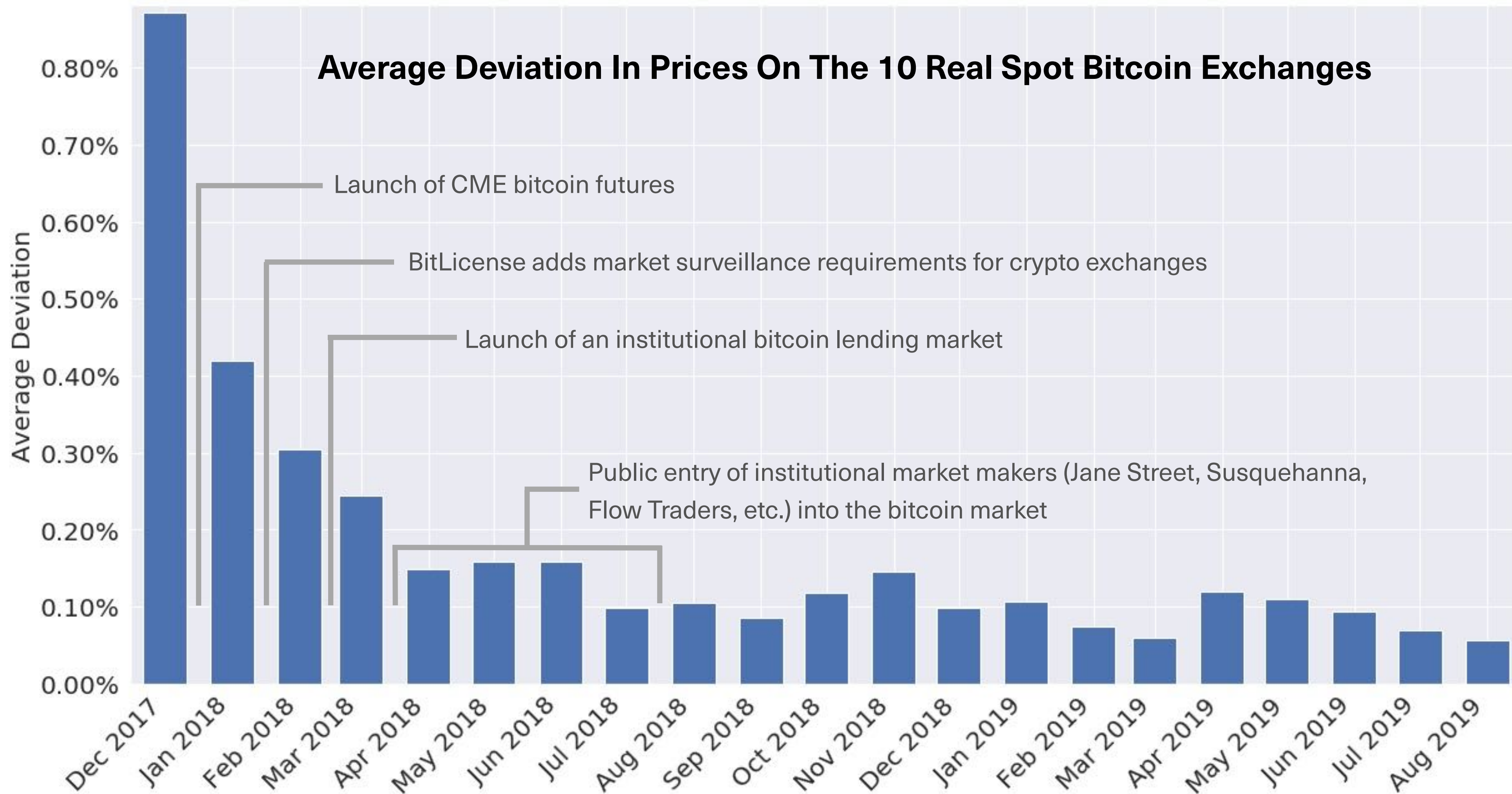
Presentation delivered to SEC
Commissioners Jackson, Peirce, and
Roisman



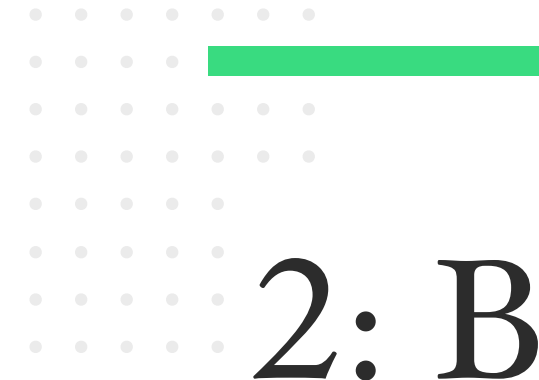
The bitcoin market has materially improved in the past two years.



1: The bitcoin spot market has become efficient



* Source: Kaiko. Data as of August 31, 2019. Chart shows average price deviation on a second-by-second basis, averaged over the course of each month, on the prices on each of the 10 real spot bitcoin exchanges.



2: Bitcoin custody has become fully institutional

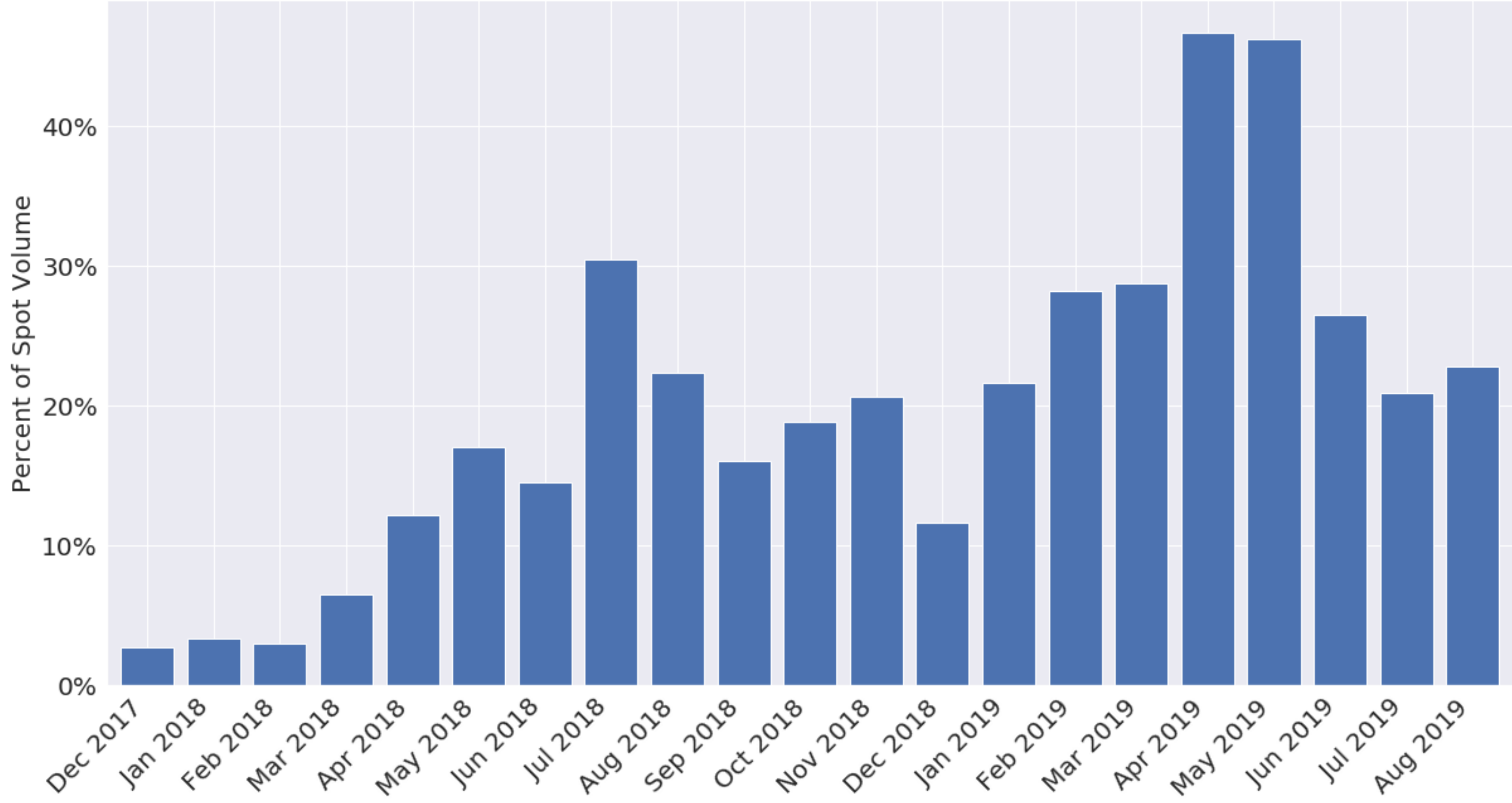
Name	2017		2018		2019		Regulatory Structure
	REGULATED	INSURANCE	REGULATED	INSURANCE	REGULATED	INSURANCE	
Gemini	✓		✓	✓	✓	✓	New York Limited Purpose Trust Company
Kingdom Trust	✓		✓	✓	✓	✓	South Dakota Trust Company
itBit	✓		✓		✓		New York Limited Purpose Trust Company
Coinbase Custody			✓	✓	✓	✓	New York Limited Purpose Trust Company
BitGo			✓		✓	✓	South Dakota Trust Company
Anchorage					✓	✓	South Dakota Trust Company
Bakkt					✓	✓	New York Limited Purpose Trust Company
NY Digital Investment Group					✓	✓	New York Limited Purpose Trust Company
Fidelity Digital Assets					PURSUIING	✓	New York Limited Purpose Trust Company
Prime Trust					✓		Nevada Trust Company

* This overview is based on Bitwise's analysis of the existing landscape and discussions with each institution, as well as public disclosures from each custody company. "Insurance" means that the Custodian has disclosed some amount of insurance against theft, loss, fraud, or natural disaster causing a loss of the digital assets held in custody. Custodians (not just in crypto but in all asset classes) typically do not insure the full amount of assets held in custody, but maintain insurance ratios that are commensurate with the level of risk.



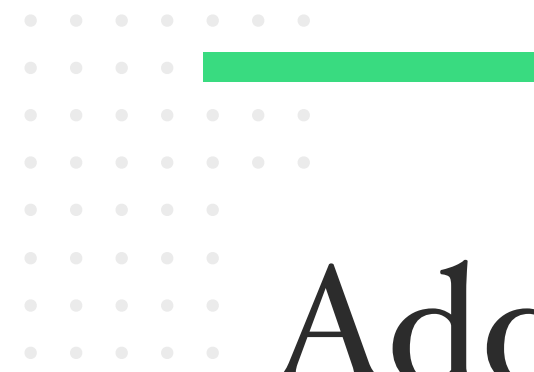
3: The regulated futures market has become significant

Bitcoin Futures Volume Expressed As A Percentage Of Bitcoin Spot Volume



The average daily volume for bitcoin futures on the CME in August 2019 was \$234,385,300.

* Source: CME Group, Kaiko. Data as of August 31, 2019. Chart shows average daily volumes for CME bitcoin futures expressed as a percentage of the ADV of all ten of the significant spot bitcoin markets around the world.



Addendum: Additional research available

Bitwise has prepared extensive research on the evolving nature of the bitcoin market and has made this material available to the SEC staff.

1. The Real Bitcoin Market (March 2019)

This 225-slide presentation provided a comprehensive examination of the presence of real and fake volume in the bitcoin market. The research showed that 95% of the volume reported to popular data aggregators is either fake or wash trading. The presentation also examined the state of the custody market, regulation, liquidity and other factors.

2. Economic And Non-Economic Trading In Bitcoin: Exploring The Real Market (May 2019)

This 105-page white paper built on the aforementioned presentation by providing exhaustive proof of and an examination of the rationale behind the presence of fake volume in the bitcoin ecosystem. Critically, it also showed that if you remove the data from exchanges with fake volume, the resulting market is extremely efficient and well-arbitraged.

3. Commentary On The Winklevoss Order (June 2019)

This 187-page document provided detailed, annotated commentary on the SEC's July 28, 2018, order regarding the Winklevoss Bitcoin Trust. It examined the reasons the Winklevoss ETF application was rejected and how new facts and circumstances mitigate the concerns raised.

4. Commentary On And Fact-Checking Of Comment Letters (June 2019)

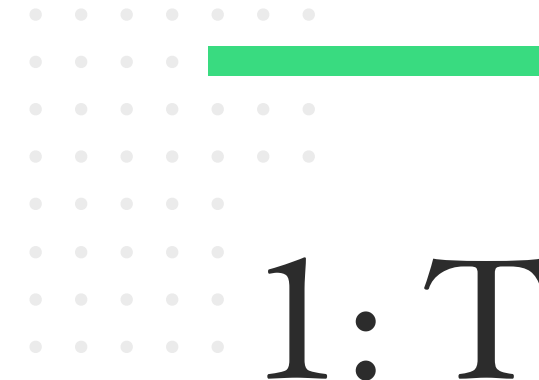
Comment letters are a critical source of public input. In multiple filings, we have analyzed and fact-checked all serious comment letters received for the Bitwise Bitcoin ETF Trust.



Update on recent bitcoin market developments



What happened following the publication of our research showing that 95% of all reported bitcoin trading volume is fake?



1: The report received extensive media coverage



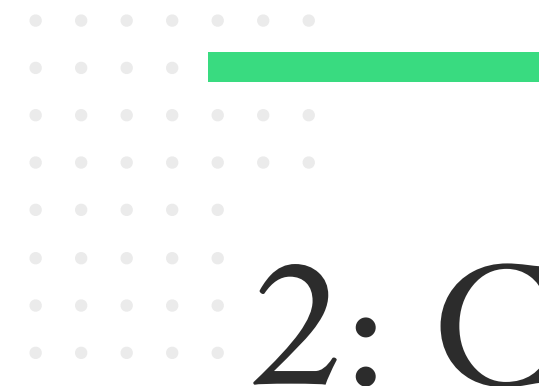
MARKETS
Most Bitcoin Trading Faked by Unregulated Exchanges, Study Finds
Bitwise's research casts new doubts about fraud in nascent market



A study by Bitwise Asset Management is an attempt to alleviate longstanding concerns that a bitcoin exchange-traded fund would leave investors exposed to market manipulation. PHOTO: LIGHTROCKET/GETTY IMAGES

MEDIA STATISTICS

- 45+ dedicated media articles across print, TV, podcast, and radio
- Coverage included The Wall Street Journal, CNBC, Bloomberg, FOX, Forbes, Barron's, The Economist, and every major crypto-dedicated media outlet
- 1M+ views on Twitter
- 355k+ Google search results for "Bitwise fake volume"



2: Crypto data providers responded quickly and positively

COINMARKETCAP

- Confirmed that the concerns raised in the report were “valid.”
- Launched a significant new initiative called the “Data Accountability & Transparency Alliance,” or DATA, to improve its metrics.

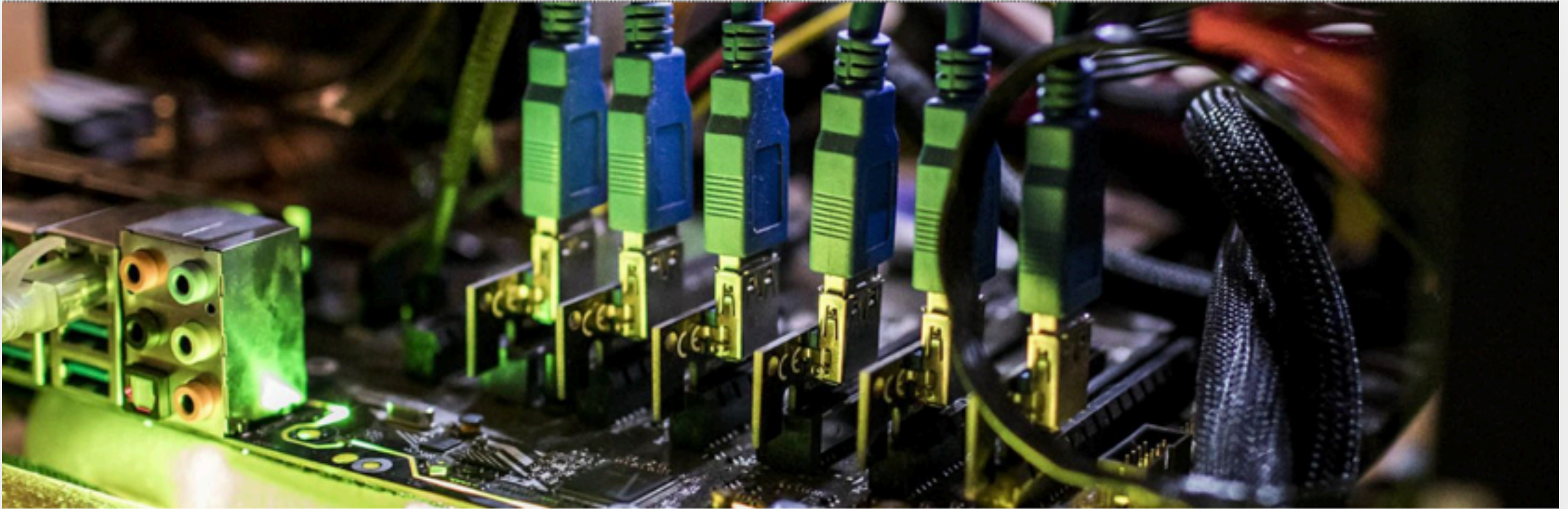
MESSARI & OPENMARKETCAP

- Adopted Bitwise’s 10 exchanges as the market.

NOMICS

- Launched “Exchange Transparency Ratings,” requiring verified data feeds for exchanges with volume claims.

Bloomberg



Cryptocurrencies
Crypto Aggregator Says Concerns Over Inaccurate Data Are Valid

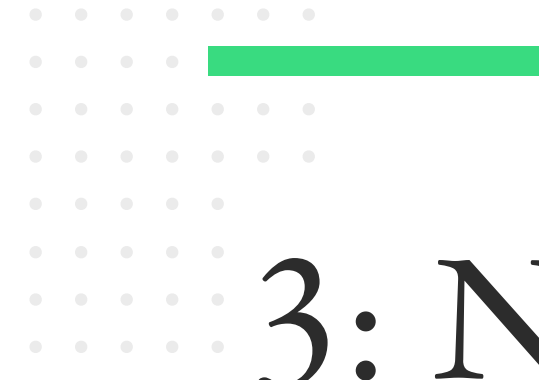
By [Olga Kharif](#)
March 25, 2019, 11:45 AM PDT

► [CoinMarketcap.com to add data on liquidity, exchange traffic](#)

► [A report out last week called the site’s Bitcoin data wrong](#)

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Photogr



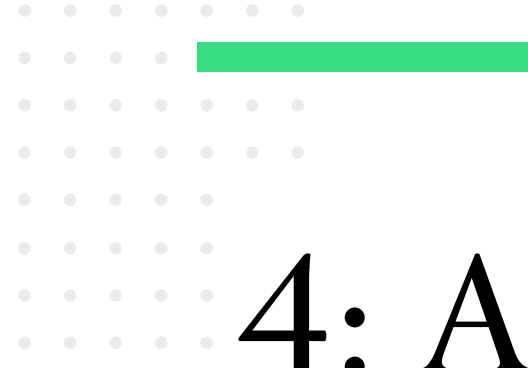
3: Nine exchanges reported >90% drop in volume

EXCHANGE	MARCH 2019 ADV	AUGUST 2019 ADV
OEX	\$358,328,000	0
OOOBTC	\$92,222,000	0
Xena Exchange	\$27,902,000	~\$1,000
UEX	\$11,353,000	0
Trade By Trade	\$10,475,000	0
Cashierest	\$5,382,000	~\$500,000
GDAC	\$3,351,000	~\$250,000
Bitbu	\$2,769,000	0
CPDAX	\$2,759,000	~\$75,000



4: Three of 73 named exchanges responded to our research, publicly or privately

ABCC	BITMART	CHAOEX	COINSUPER	FCOIN	KRYPTONO	TIDEBIT
BCEX	BITMAX	COINALL	COINTIGER	FIFTYFIVE	LATOKEN	TOKOK
BGOGO	BITRUE	COINBENE	COSS	GATEIO	LBANK	TOPBTC
BIBOX	BITSANE	COINBIT	CPDAX	GOPAX	LIVECOIN	UPBIT
BIGONE	BITZ	COINCHECK	CRYPTOLOGY	HITBTC	LUNO	ZAIF
BILAXY	BTCBOX	COINDEAL	DIGIFINEX	HOTBIT	OEX	ZB
BITBANK	BTCMARKETS	COINEAL	DIGITALASSE	HUOBI	OKEX	ZBG
BITFOREX	BW	COINEGG	DRAGONEX	IDAX	OOOBTC	
BITHUMB	BXTHAILAND	COINEX	EXMO	IDCM	P2PB2B	
BITKER	CASHIEREST	COINSBANK	EXTSTOCK	INDODAX	RIGHTBTC	
BITLISH	CEXIO	COINSBIT	EXX	KORBIT	SIMEX	



4: As discussed in our May 24 Comment Letter, incorporating this volume does not impact our conclusion

Incorporating this volume into our reporting would [increase] the real average daily spot bitcoin trading volume in April ... [by] 12%.

*- Bitwise Asset Management
Comment Letter to the SEC
May 24, 2019*

Third-Party Estimates Of Wash Trading

	HitBTC	Huobi	OKEx
Blockchain Transparency Institute	> 90%	> 60%	> 90%
TheTie	82.8%	90.8%	94.0%
Sylvain Ribes	67.8%	88.2%	94.9%
Average	80.2%	79.7%	93.0%

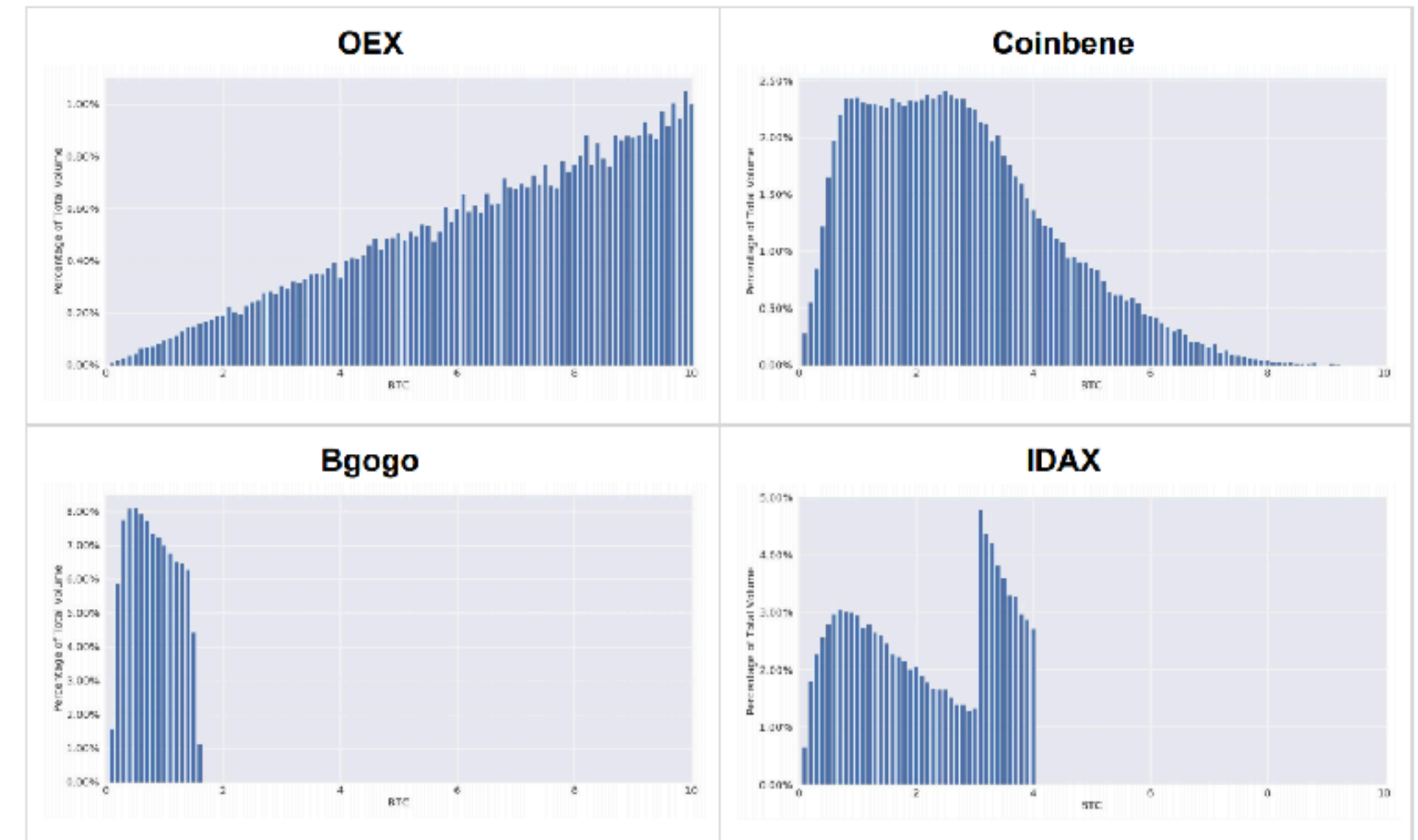
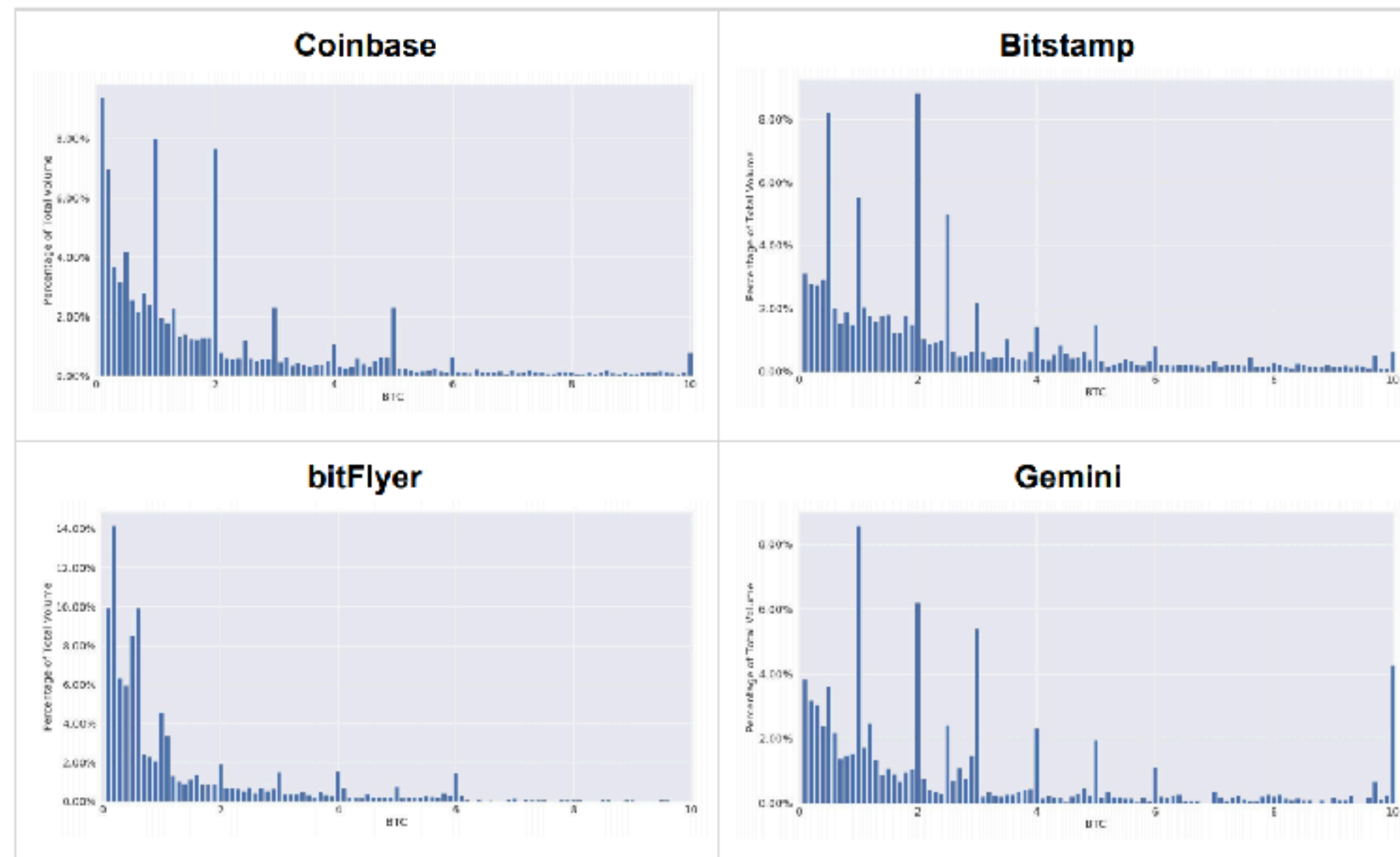
* Source: "Economic and Non-Economic Trading In Bitcoin: Exploring the Real Spot Market For The World's First Digital Commodity" (p. 43-44), Bitwise Asset Management, May 24, 2019. <https://sec.gov/comments/sr-nysearca-2019-01/srnysearca201901-5574233-185408.pdf>

5: Data patterns on certain exchanges rapidly shifted to match our real-world patterns

Trade Size Histogram Test From May 24 White Paper

Real Exchanges

Fake Exchanges



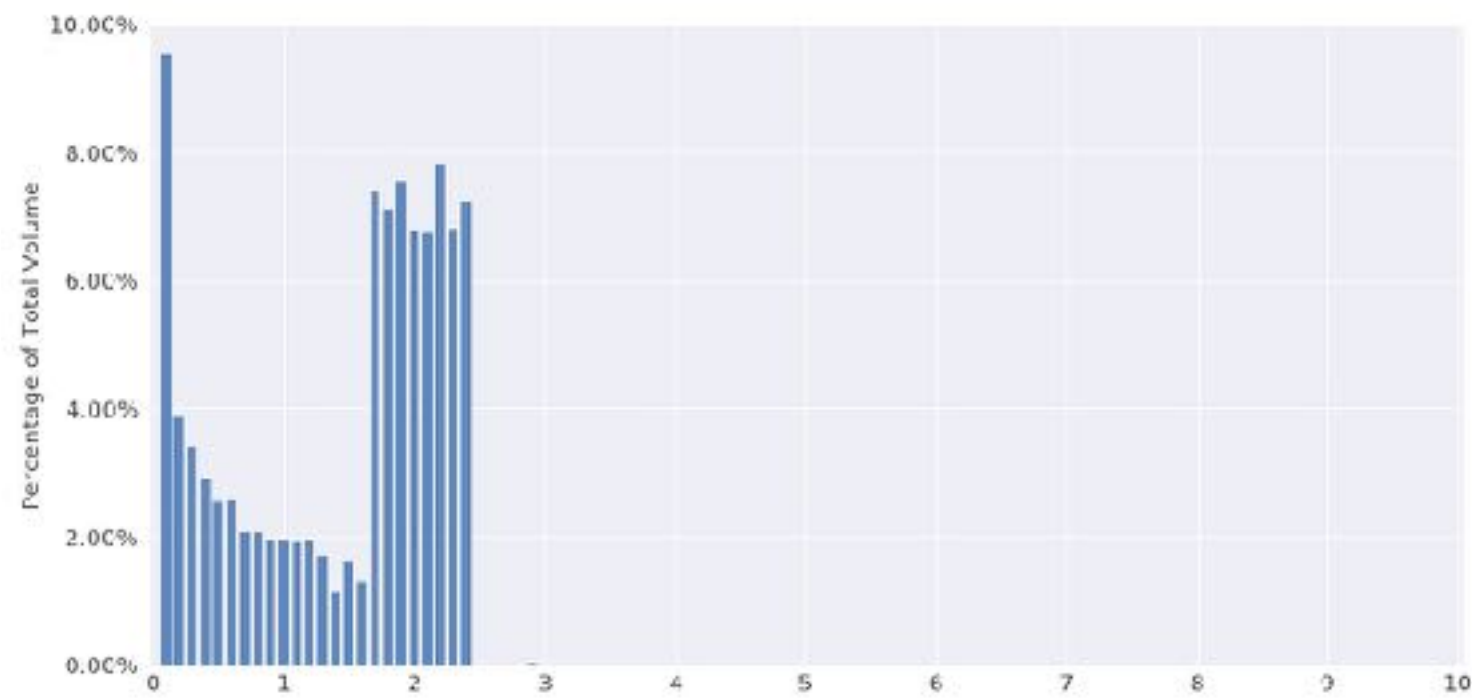
* Source: "Economic and Non-Economic Trading In Bitcoin: Exploring the Real Spot Market For The World's First Digital Commodity" (p. 22-23), Bitwise Asset Management, May 24, 2019. <https://sec.gov/comments/sr-nysearca-2019-01/srnysearca201901-5574233-185408.pdf>



5: For example, consider this pattern evolution at Coinsuper

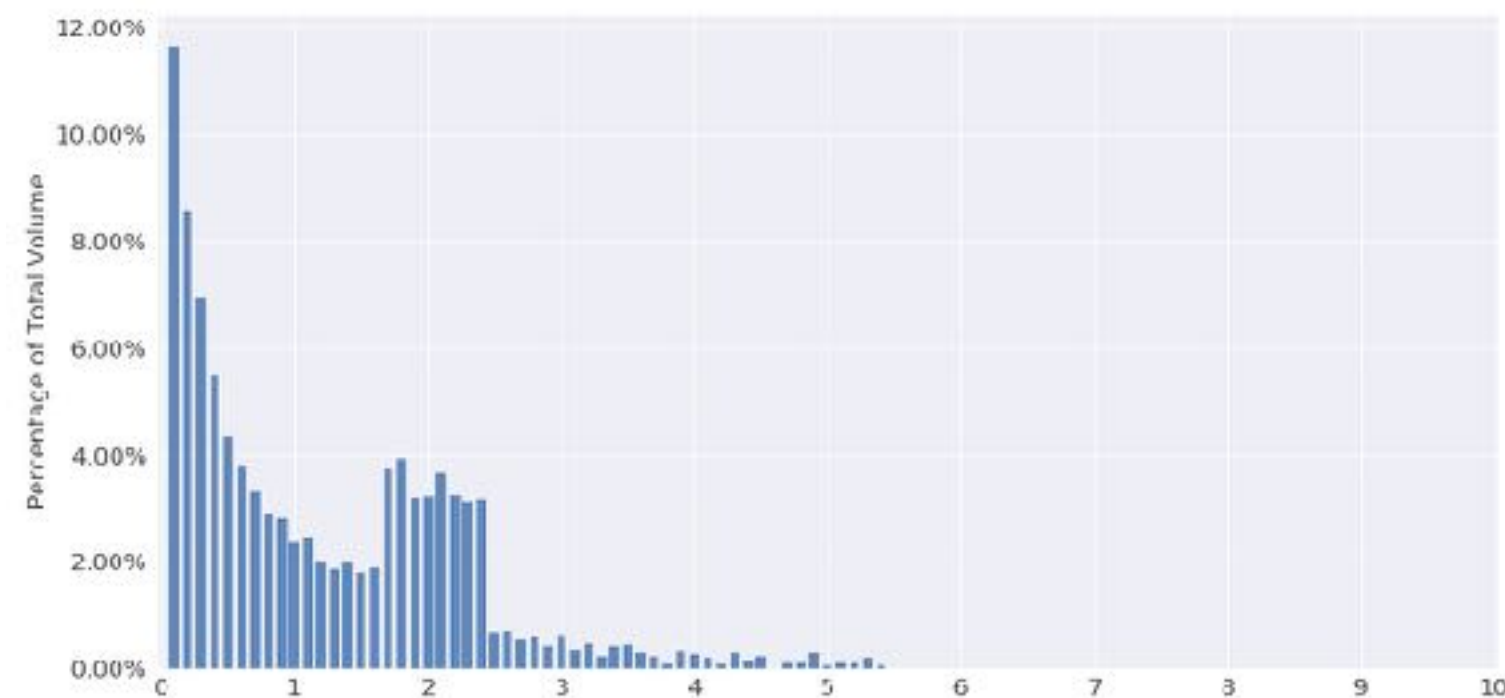
Coinsuper

WEEK 1



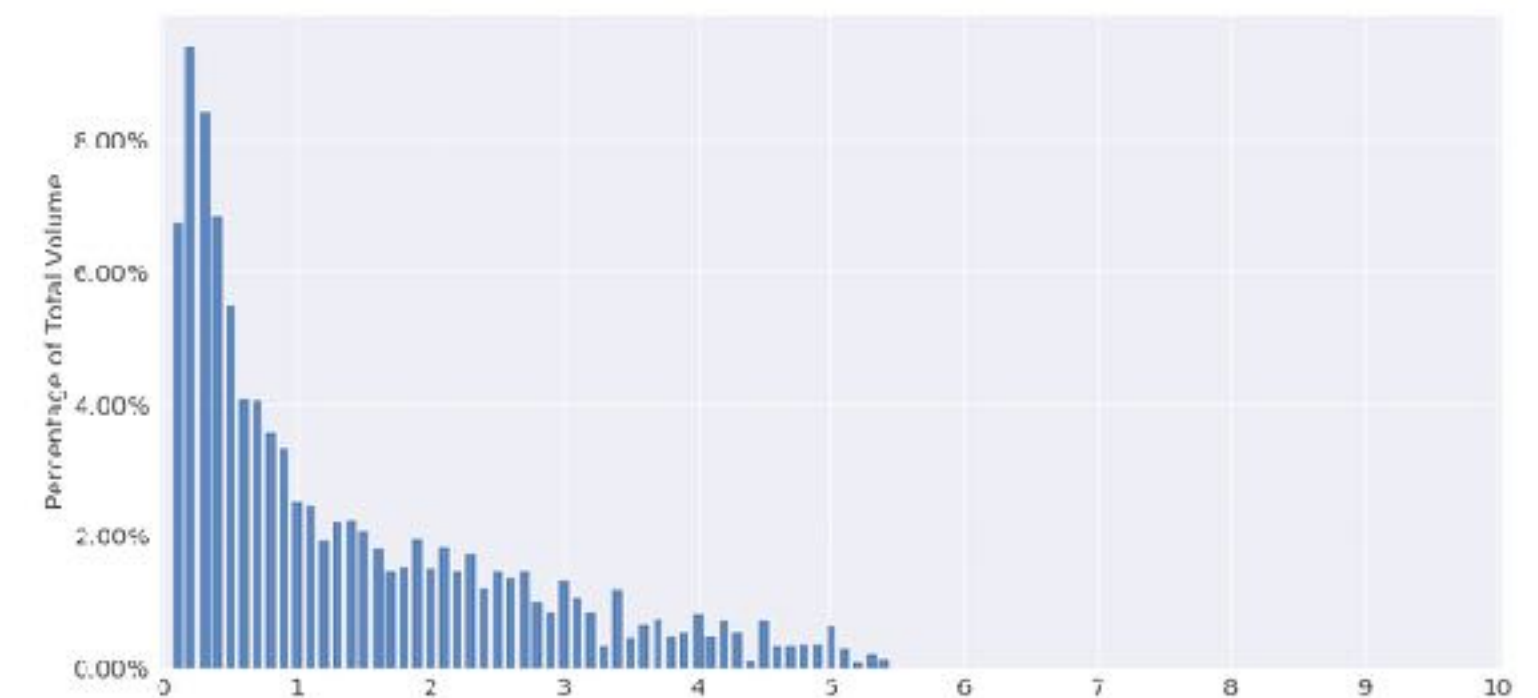
5/19/19-5/26/19

WEEK 2

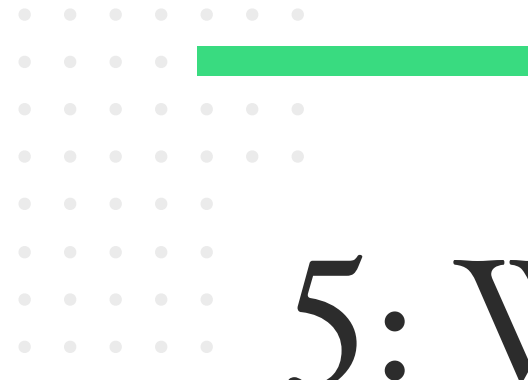


5/26/19-6/2/19

WEEK 3



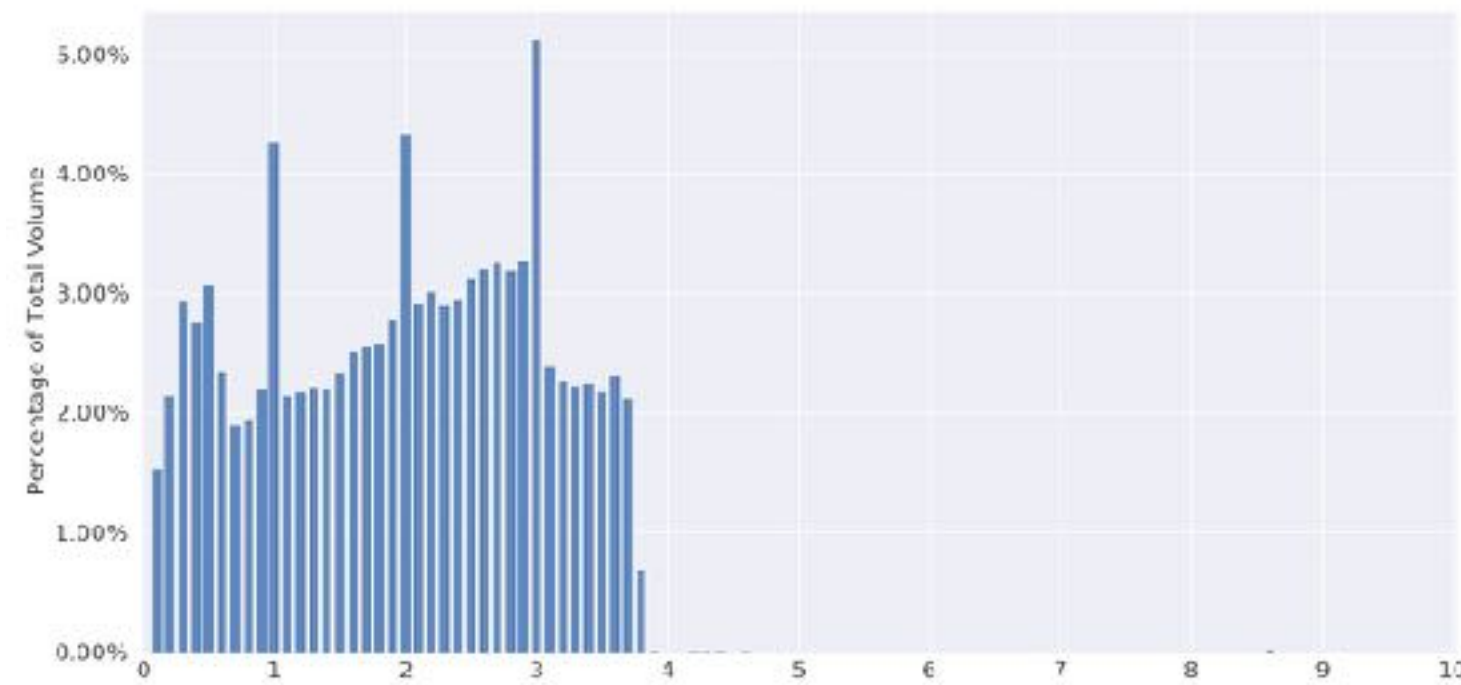
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5: We saw a similar evolution at CHAOEX

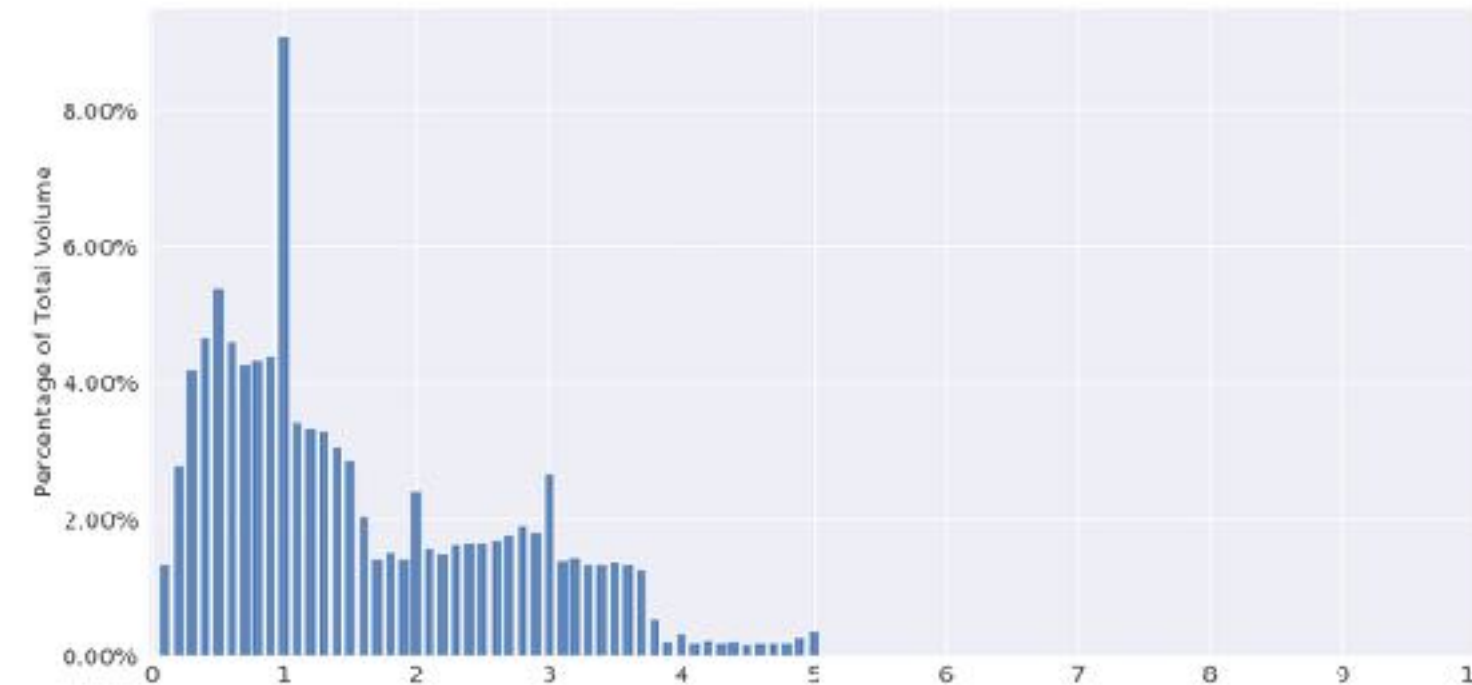
CHAOEX

WEEK 1



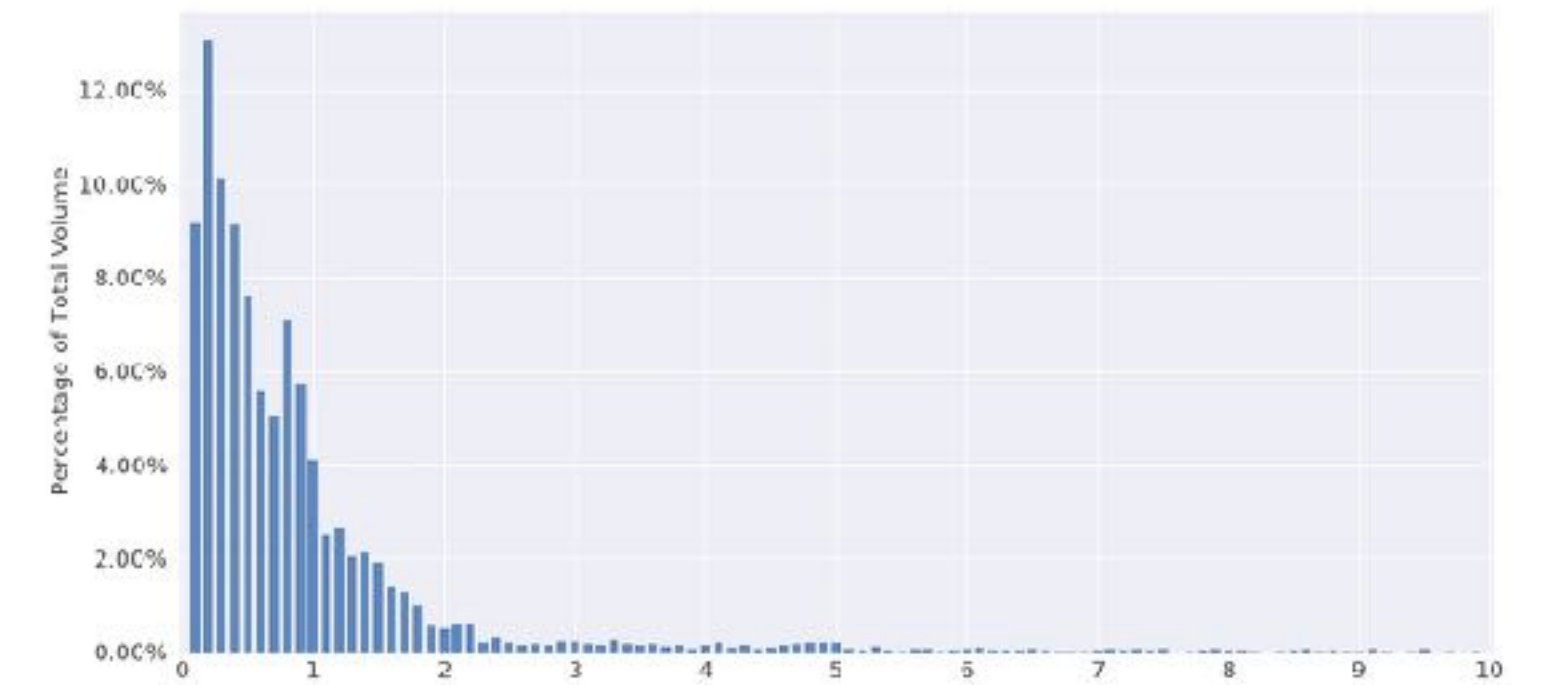
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WEEK 2

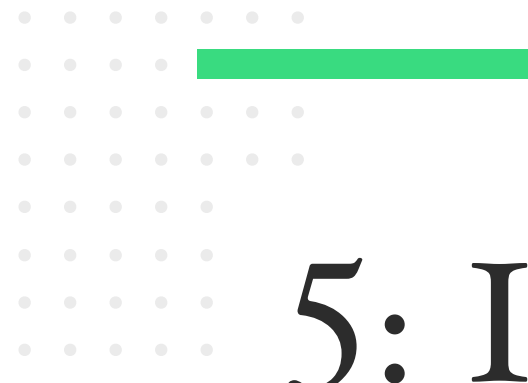


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WEEK 3



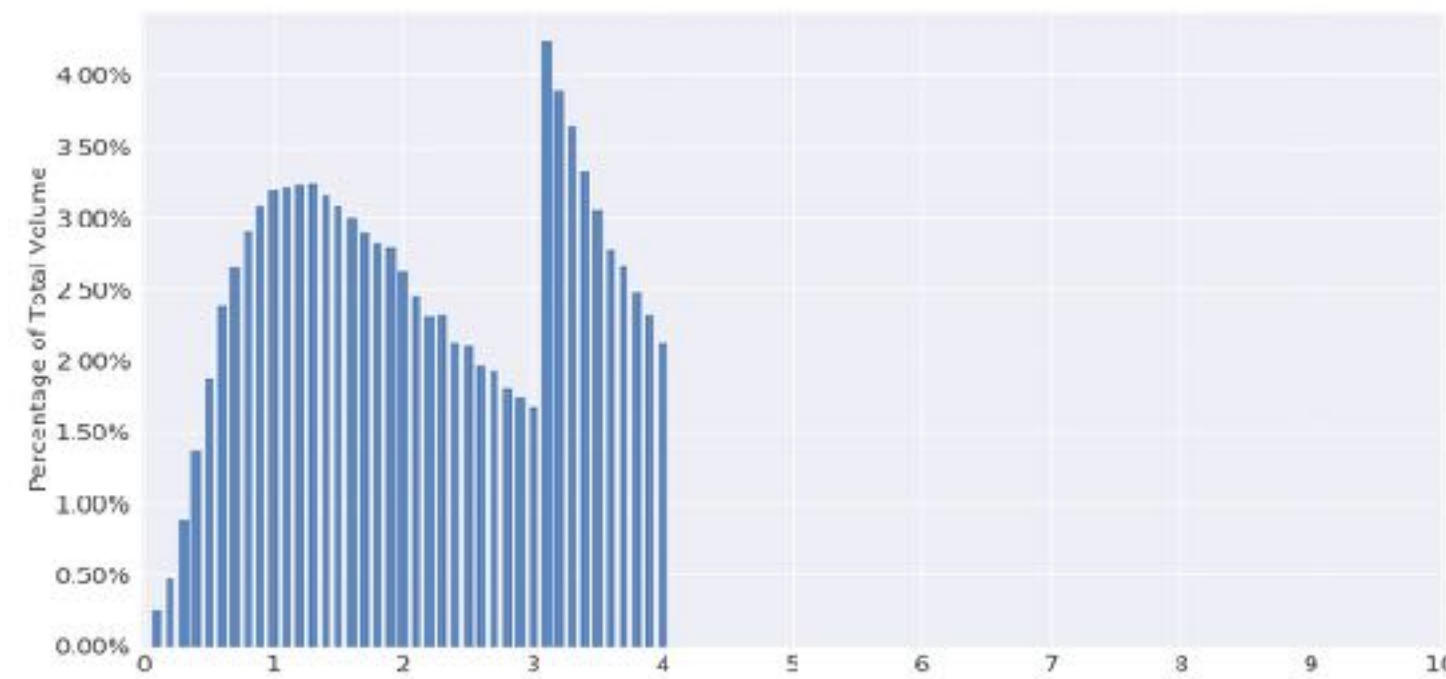
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5: IDAX offered another example

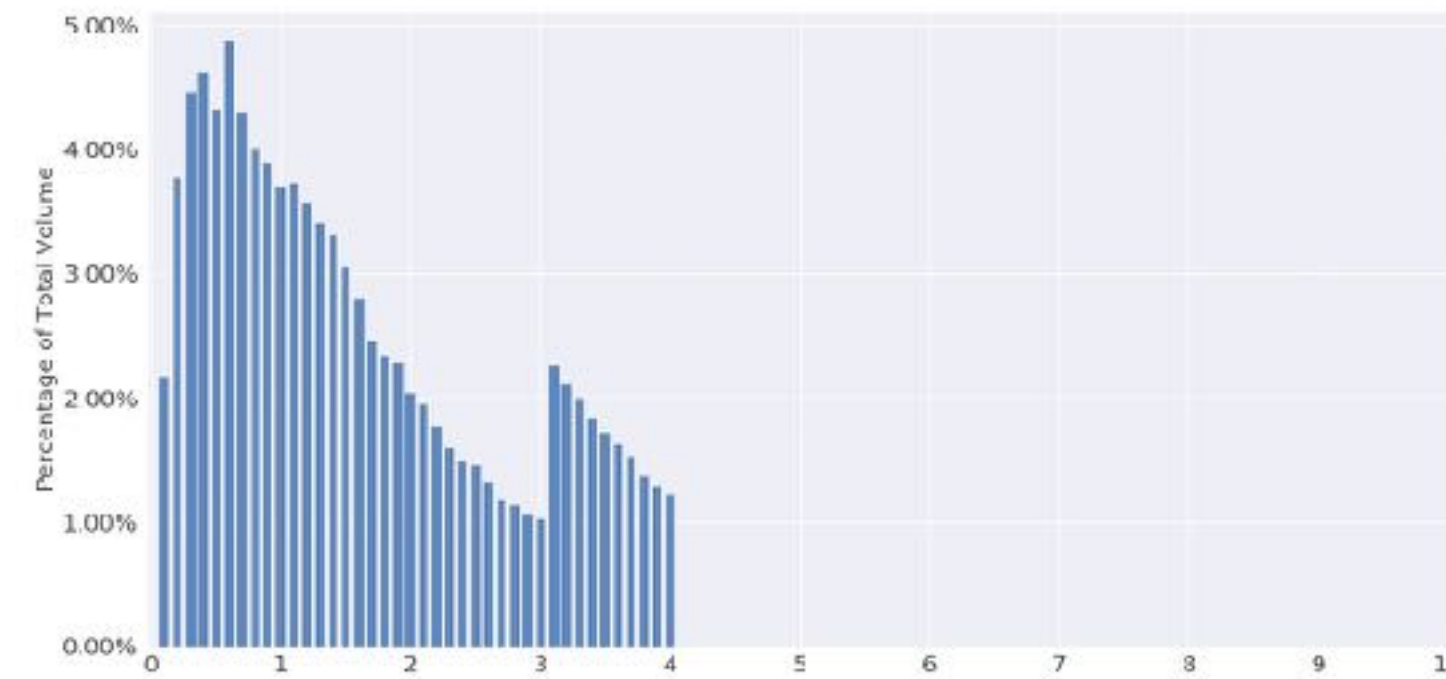
IDAX

WEEK 1



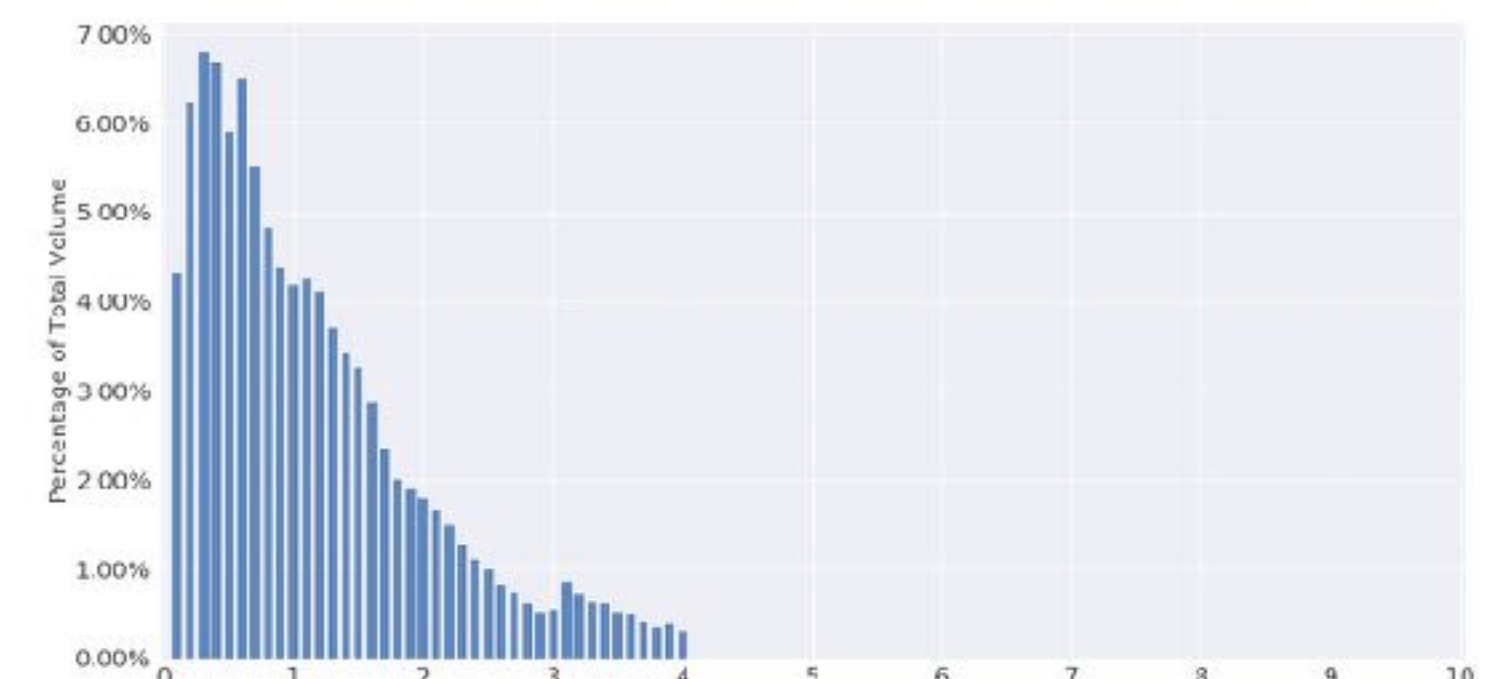
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WEEK 2

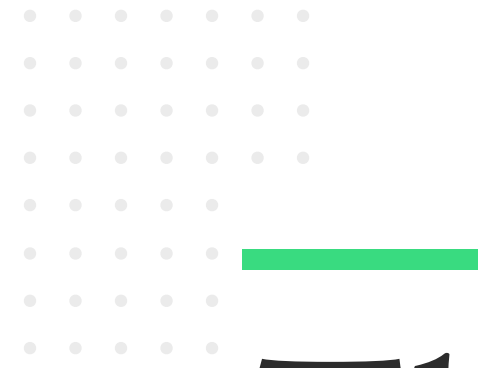


5/26/19-6/2/19

WEEK 3



6/2/19-6/9/19

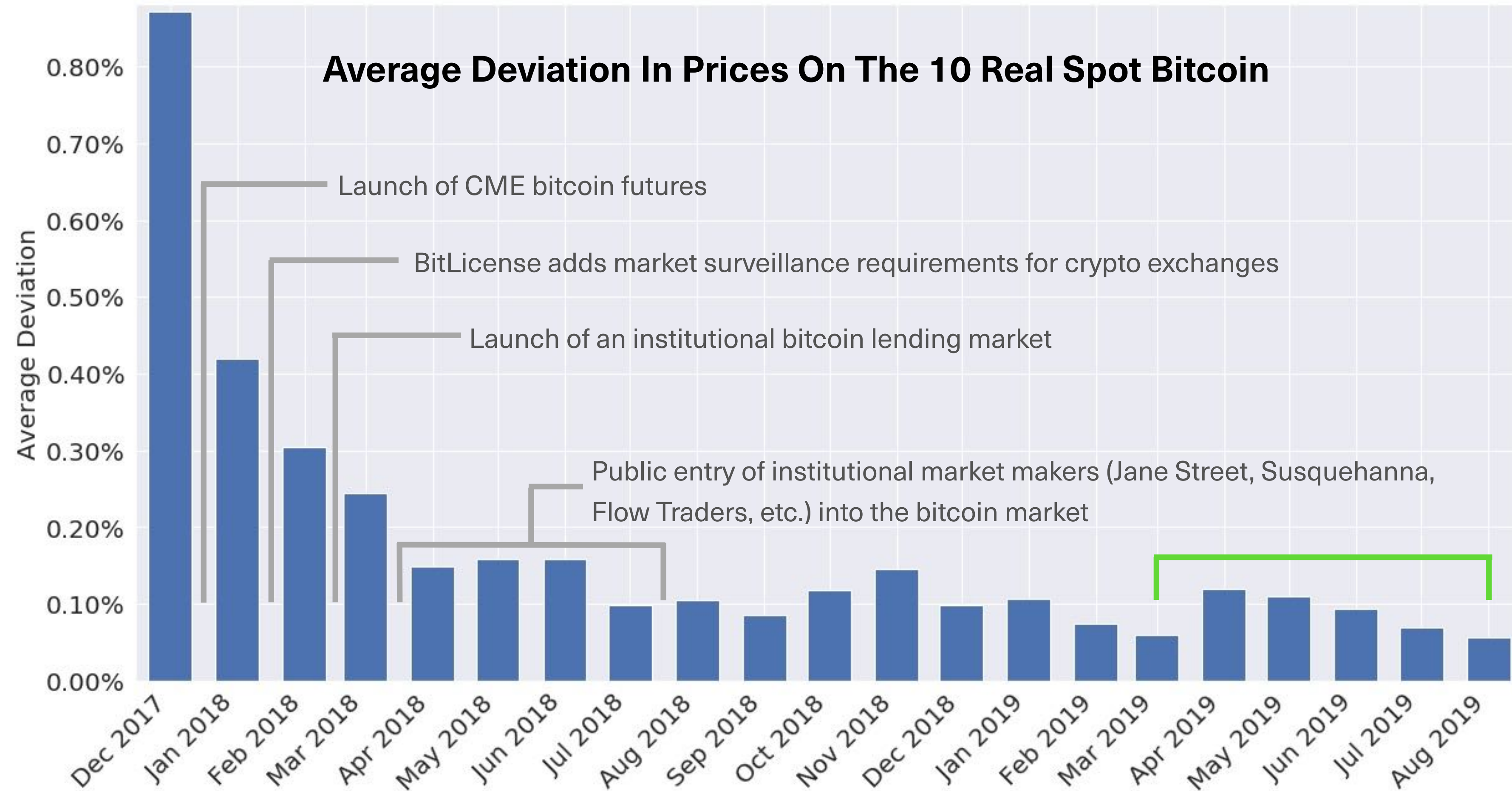


The presence of widespread fake volume in reported bitcoin trading data is now widely understood.



How has the real bitcoin market evolved since *March*?

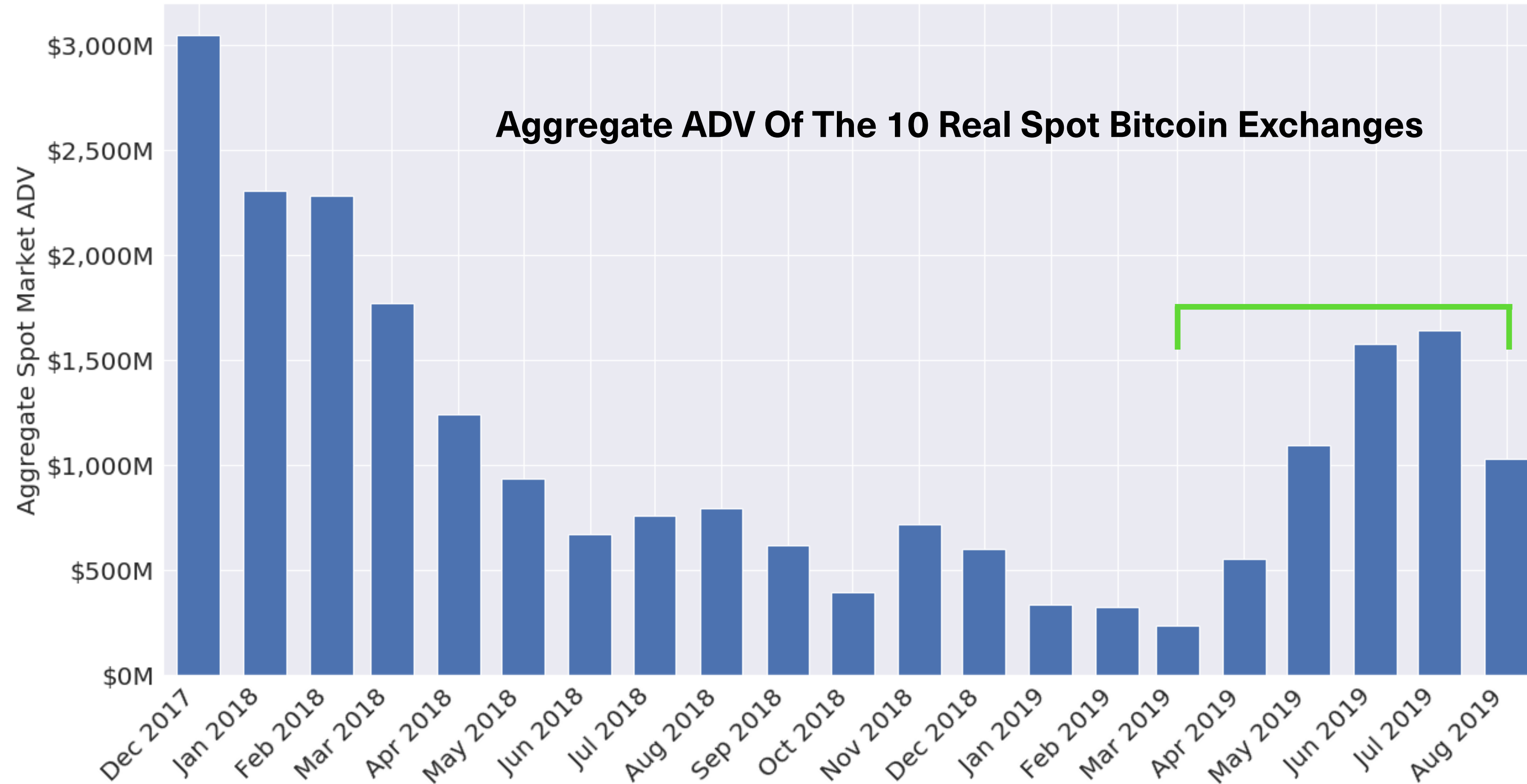
The real market is remarkably efficient ... and has been for the past year



* Source: Kaiko. Data as of August 31, 2019. Chart shows average price deviation on a second-by-second basis, averaged over the course of each month, on the prices on each of the 10 real spot



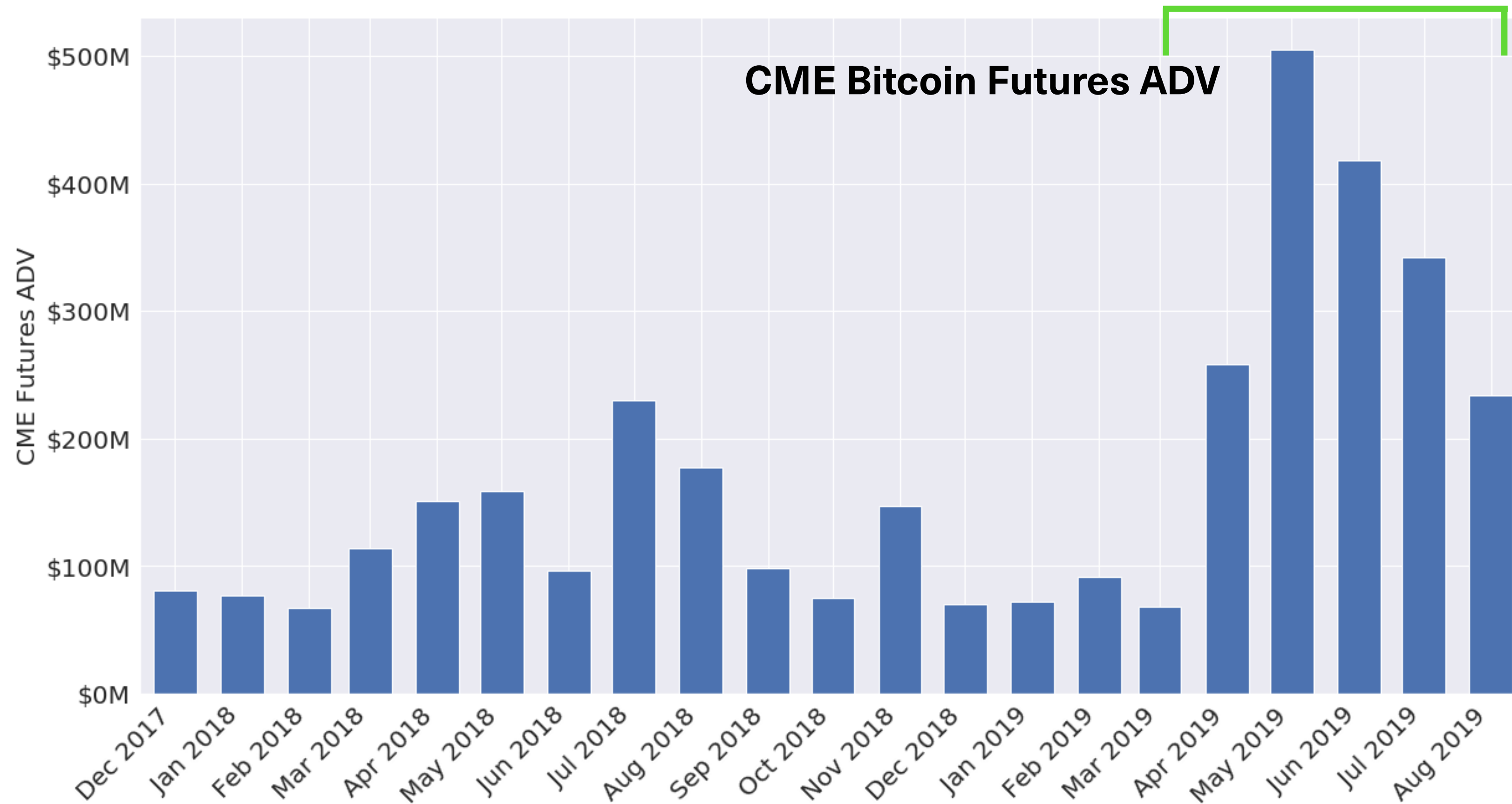
Volume has increased substantially



* Source: Kaiko. Data as of August 31, 2019



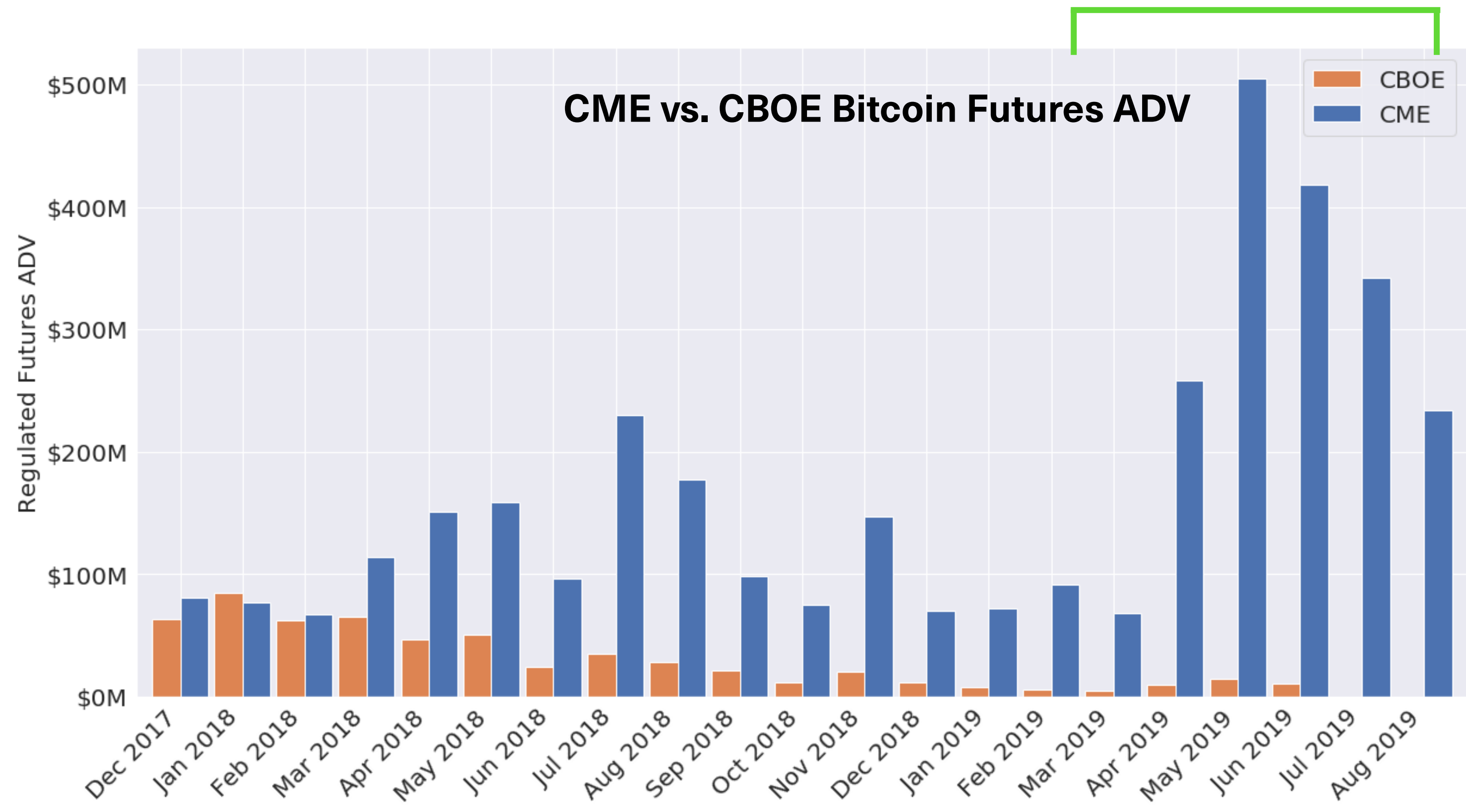
The CME's regulated bitcoin futures volume has increased substantially as well



* Source: CME Group. Data as of August 31, 2019.



CBOE's decision to cede the bitcoin futures market to CME has not impacted this trend

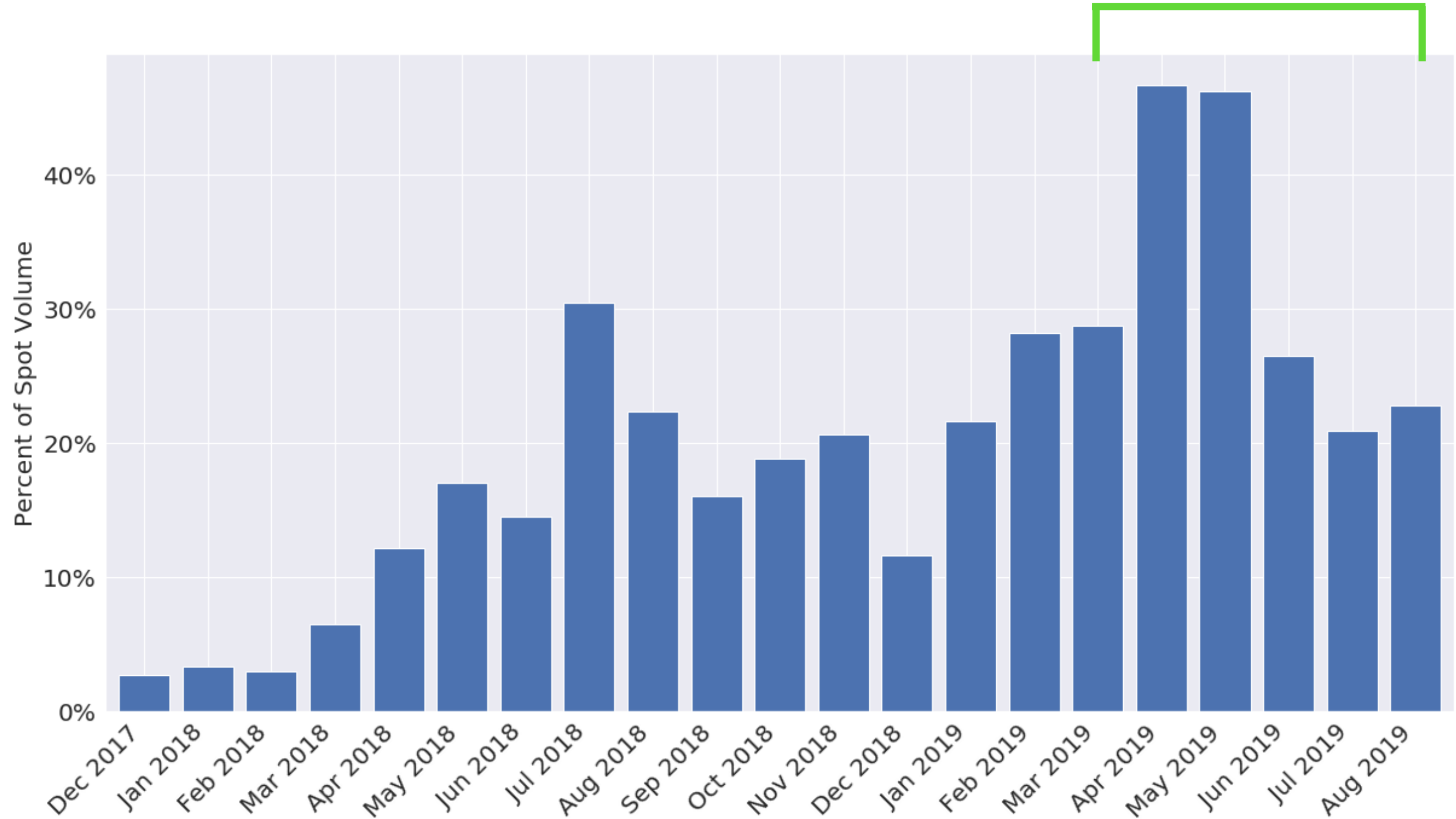


* Source: CME Group, CBOE. Data as of August 31, 2019.



CME bitcoin futures represent a significant portion of the real bitcoin market

Bitcoin Futures Volume Expressed As A Percentage Of Total Bitcoin Spot Volume

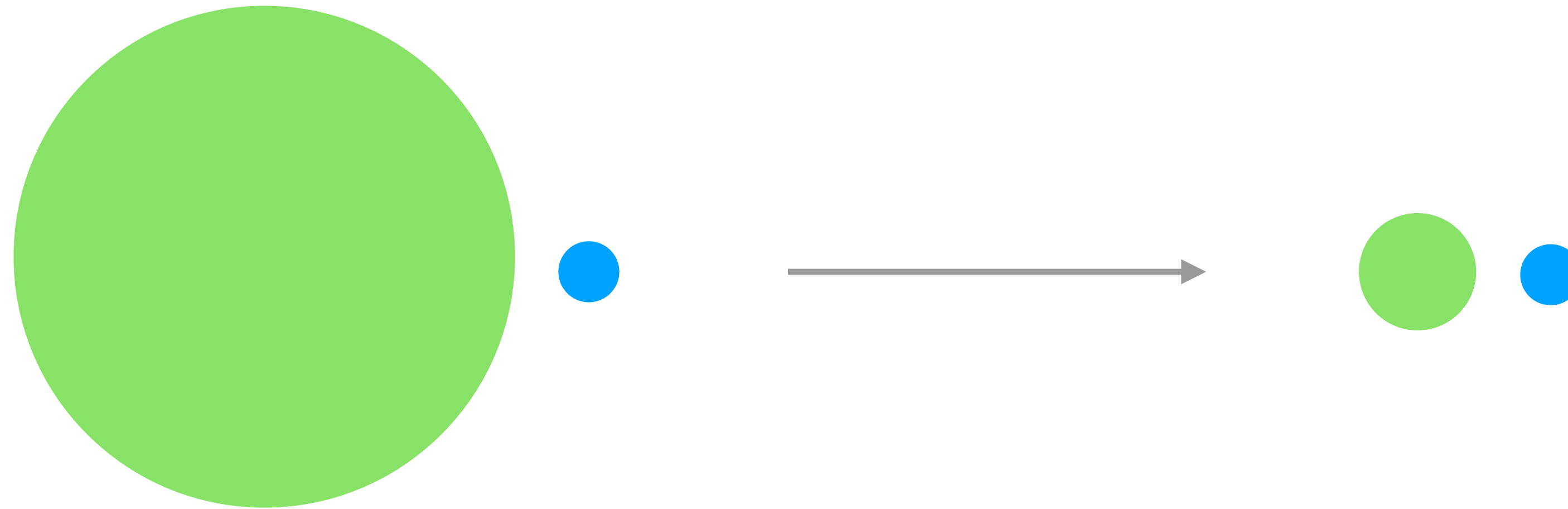


The average daily volume for bitcoin futures on the CME in August 2019 was \$234,385,300.

* Source: CME Group, Kaiko. Data as of August 31, 2019. Chart shows average daily volumes for CME bitcoin futures expressed as a percentage of the ADV of all ten of the significant spot bitcoin markets around the world.



We believe the CME bitcoin futures market is a regulated market of significant size (figures updated for August 2019).



Reported Spot Volume: ~\$17B

Futures Volume: \$234M

* Source: CoinMarketCap, CME Group. August 1-31, 2019

Actual Spot Volume: \$1B

Futures Volume: \$234M

* Source: Kaiko, CME Group. August 1-31, 2019

Thank You.