

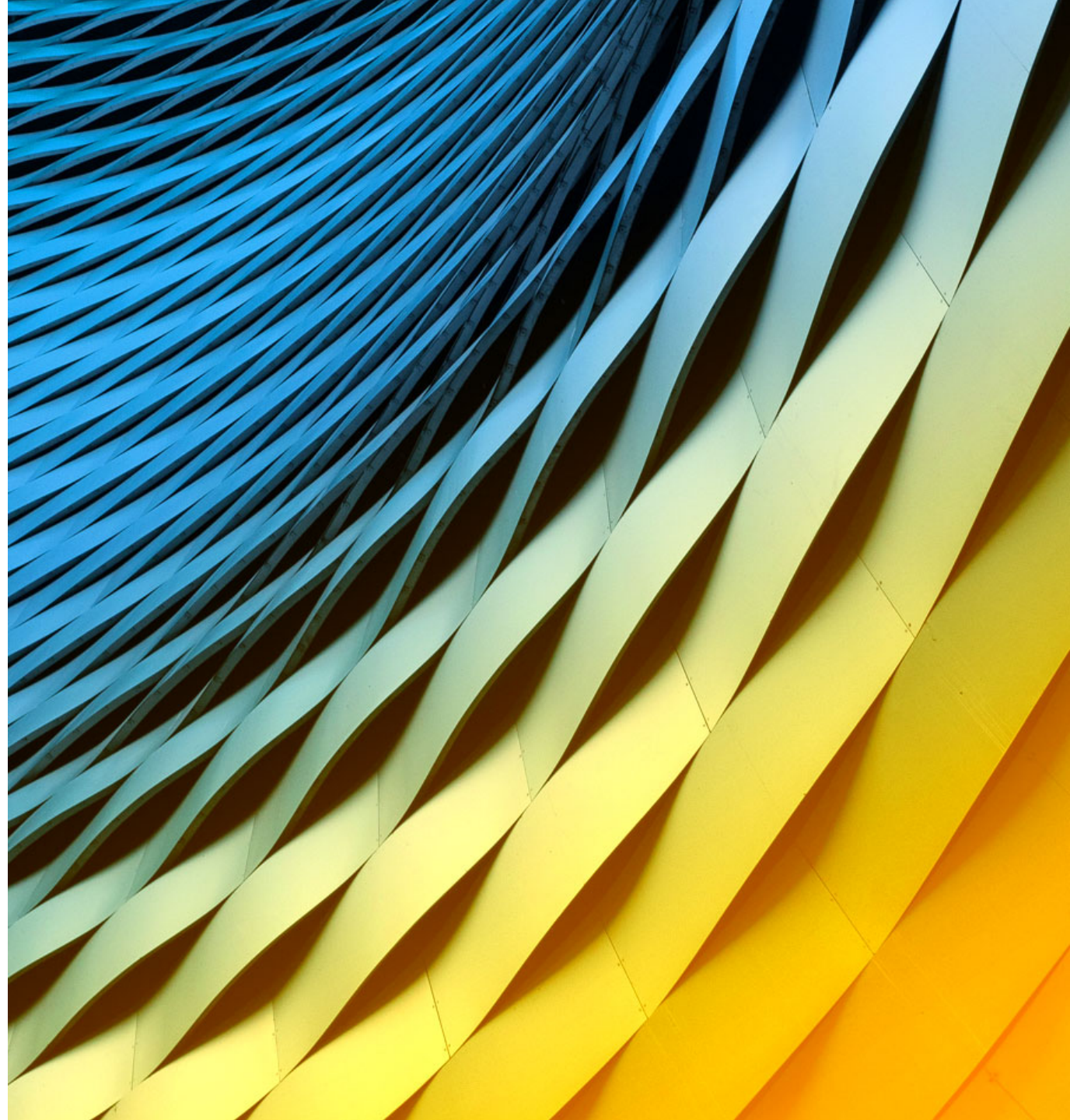
CME Group – Getting Started with Micro Bitcoin Futures

Craig Bewick,
CME Group

May 4, 2021



Exchange and Industry Sponsored Webinars are presented by unaffiliated third parties. Interactive Brokers LLC is not responsible for the content of these presentations. You should review the contents of each presentation and make your own judgment as to whether the content is appropriate for you. Interactive Brokers LLC does not provide recommendations or advice. This presentation is not an advertisement or solicitation for new customers. It is intended only as an educational presentation.



Disclosures

Options involve risk and are not suitable for all investors. For information on the uses and risks of options, you can obtain a copy of the Options Clearing Corporation risk disclosure document titled [Characteristics and Risks of Standardized Options](#) by calling (312) 542-6901.

Futures are not suitable for all investors. The amount you may lose may be greater than your initial investment. Before trading futures, please read the [CFTC Risk Disclosure](#). For a copy visit [interactivebrokers.com](#).

Security futures involve a high degree of risk and are not suitable for all investors. The amount you may lose may be greater than your initial investment. Before trading security futures, please read the [Security Futures Risk Disclosure Statement](#). For a copy visit [Interactivebrokers.com](#).

There is a substantial risk of loss in foreign exchange trading. The settlement date of foreign exchange trades can vary due to time zone differences and bank holidays. When trading across foreign exchange markets, this may necessitate borrowing funds to settle foreign exchange trades. The interest rate on borrowed funds must be considered when computing the cost of trades across multiple markets.

The Order types available through Interactive Brokers LLC's Trader Workstation are designed to help you limit your loss and/or lock in a profit. Market conditions and other factors may affect execution. In general, orders guarantee a fill or guarantee a price, but not both. In extreme market conditions, an order may either be executed at a different price than anticipated or may not be filled in the marketplace.

There is a substantial risk of loss in trading futures and options. Past performance is not indicative of future results.

Any stock, options or futures symbols displayed are for illustrative purposes only and are not intended to portray recommendations.

IRS Circular 230 Notice: These statements are provided for information purposes only, are not intended to constitute tax advice which may be relied upon to avoid penalties under any federal, state, local or other tax statutes or regulations, and do not resolve any tax issues in your favor.

Interactive Brokers LLC is a member of [NYSE](#) [FINRA](#) [SIPC](#)

Introducing Micro Bitcoin Futures

April 2021

Craig Bewick



Disclaimer

CF Benchmarks Ltd., Chicago Mercantile Exchange Inc. (including each of their respective subsidiaries and affiliates), their respective officers, directors, employees, agents, consultants and licensors shall not be liable to any person for any losses, damages, costs or expenses (including, but not limited to, loss of profits, loss of use, and direct or indirect, incidental, consequential or punitive damages), arising from any errors or inaccuracies made in connection with the calculation or distribution of the CME CF Cryptocurrency Indices. The foregoing limitation of liability shall apply whether a claim arises in contract, tort, negligence, strict liability, contribution or otherwise and whether the claim is brought directly or as a third party claim. Furthermore, there is no guarantee the continuity of the composition of the CME CF Cryptocurrency Indices, nor the continuity of their calculation, nor the continuity of their dissemination, nor the continuity of their calculation.

Neither futures trading nor swaps trading are suitable for all investors, and each involves the risk of loss. Swaps trading should only be undertaken by investors who are Eligible Contract Participants (ECPs) within the meaning of Section 1a(18) of the Commodity Exchange Act. Futures and swaps each are leveraged investments and, because only a percentage of a contract's value is required to trade, it is possible to lose more than the amount of money deposited for either a futures or swaps position. Therefore, traders should only use funds that they can afford to lose without affecting their lifestyles and only a portion of those funds should be devoted to any one trade because traders cannot expect to profit on every trade.

CME Group, the Globe Logo, CME, Globex, E-Mini, CME Direct, CME DataMine and Chicago Mercantile Exchange are trademarks of Chicago Mercantile Exchange Inc. CBOT is a trademark of the Board of Trade of the City of Chicago, Inc. NYMEX is a trademark of New York Mercantile Exchange, Inc. COMEX is a trademark of Commodity Exchange, Inc. All other trademarks are the property of their respective owners.

The information within this communication has been compiled by CME Group for general purposes only. CME Group assumes no responsibility for any errors or omissions. Additionally, all examples in this communication are hypothetical situations, used for explanation purposes only, and should not be considered investment advice or the results of actual market experience. All matters pertaining to rules and specifications herein are made subject to and superseded by official CME, CBOT, NYMEX and COMEX rules. Current rules should be consulted in all cases concerning contract specifications.

Copyright © 2021 CME Group Inc. All rights reserved

Agenda

PART ONE: Crypto and Crypto futures background

- Why Micro Bitcoin now
- Crypto as part of the financial ecosystem
- Evolution of Crypto futures at CME Group
- Price and volume trends

PART TWO: Futures fundamentals/benefits of Micro Bitcoin futures

- How to trade futures
- Some differences between futures and spot crypto trading
- Micro Bitcoin futures characteristics/specifications

PART THREE: Trading Micro Bitcoin futures

- “Scaling” example
- Implied volatility characteristics
- Customer types and potential use cases

Conclusion/resources

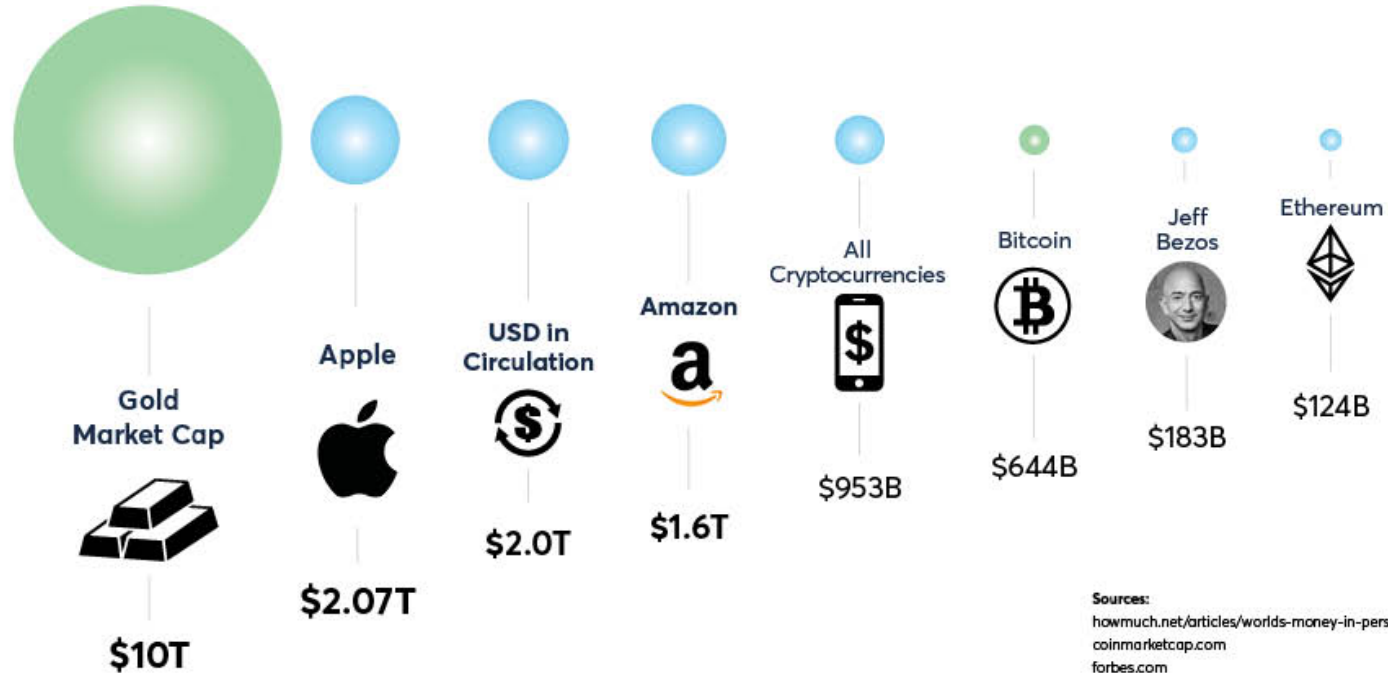
PART ONE:

Crypto and Crypto futures background

Bitcoin and Bitcoin futures—what's the narrative?

- Very low interest rates and massive monetary stimulus are chasing money into “alternatives”
- Rapidly earning a reputation as digital gold – and Gold is stuck in a range
- Adoption by giant firms like Fidelity, Blackrock, Goldman, several corporations as well as ultra high net worth individuals.
- Underlying blockchain technology gaining widespread acceptance
- Astronomical returns in 2020 and 2021 and substantial volatility attracting investors and traders
- And CME Group's Crypto futures complex allows for risk management on a regulated exchange with a clearing house posting over 170 years of operating history

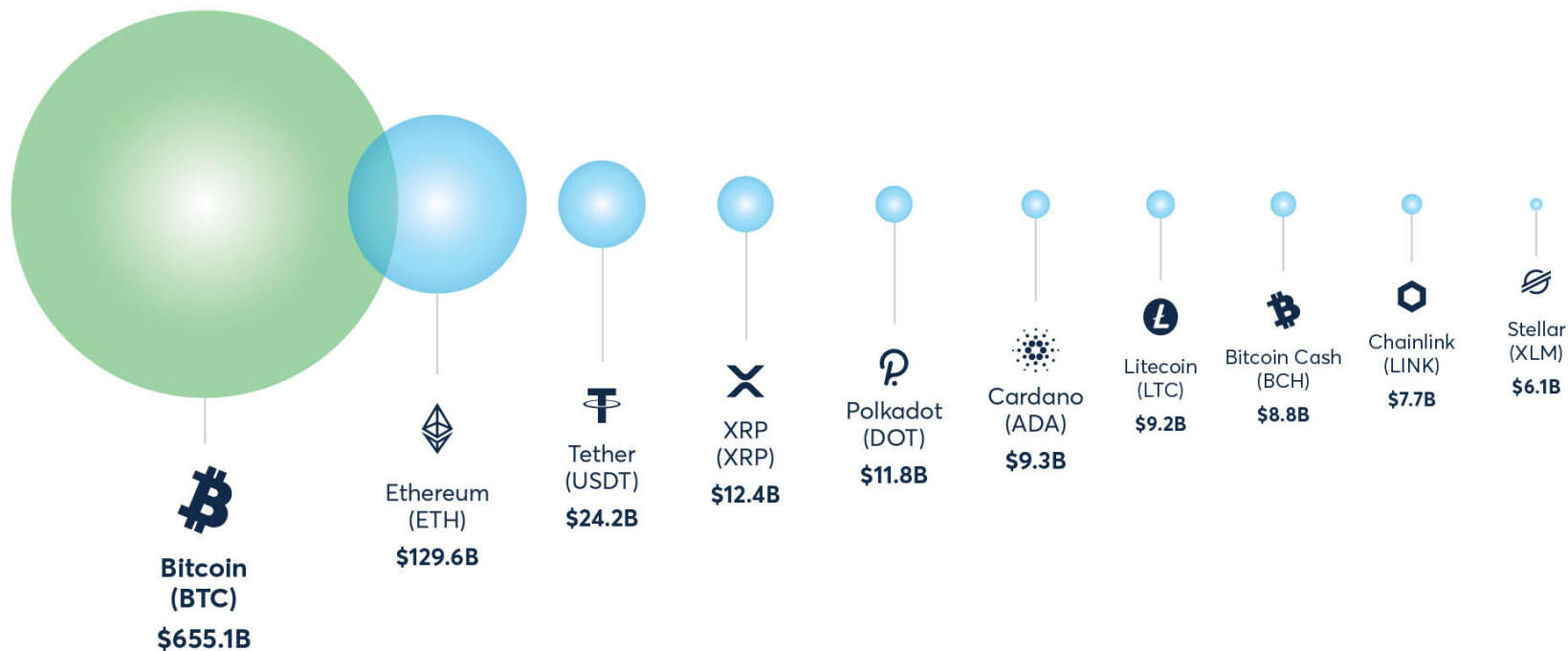
Cryptocurrency landscape in relation to other assets



Sources:
howmuch.net/articles/worlds-money-in-perspective
coinmarketcap.com
forbes.com
federalreserve.gov
cia.gov
CME Group
World Gold Council

Updated January 2021

Top 10 cryptocurrencies by market cap



Sources:

CME Group
coinmarketcap.com

Updated January 2021

Evolution of cryptocurrency products at CME Group

The History of Cryptocurrency at CME Group

2016

BRR

BITCOIN REFERENCE RATE

Standardized pricing index to track the spot price of bitcoin

2017

BTC

BITCOIN FUTURES

5.6M+ contracts traded, BTC provides price discovery, and an efficient tool to manage bitcoin exposure.

Date as of April 7, 2021

CME Group

ETHER-DOLLAR REFERENCE RATE

Regulated and robust reference rate to track the underlying spot price of ether.

ETHUSD_RR

2018

CME Group

BITCOIN OPTIONS

42K+ contracts traded, Bitcoin options offer greater flexibility to hedge bitcoin price risk.

2020

Date as of April 7, 2021

CME Group

2021

ETH

ETHER FUTURES

A new way to manage exposure to the rapidly growing ether cryptocurrency is here.

CME Group

2021

MBT

MICRO BITCOIN FUTURES

COMING MAY 3¹

At 1/10 the size of one bitcoin, these contracts provide an efficient new way to fine-tune bitcoin exposure.

¹Subject to regulatory review.

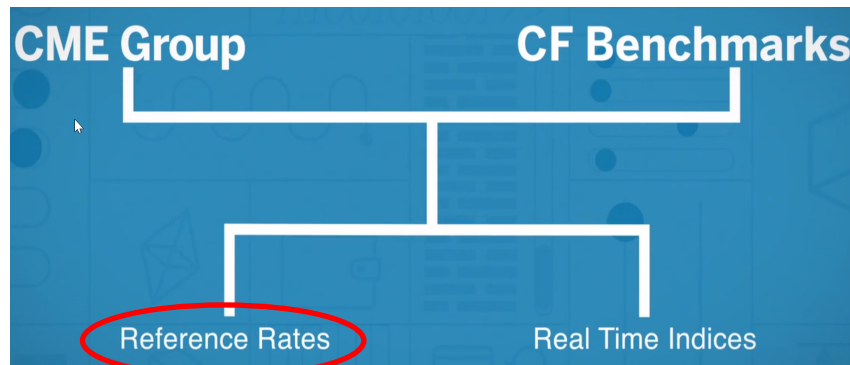
Pending Regulatory Review

FOIA Confidential Treatment Requested
Confidential Treatment Requested by Chicago Mercantile Exchange Inc.
Pursuant to 17 CFR 145.9

Bitcoin Reference Rates and Real-Time Indices

Underlying pricing related to Micro Bitcoin futures

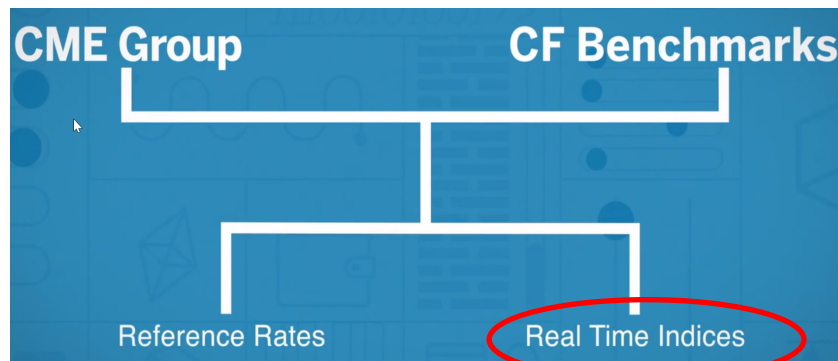
The BTC Reference Rate aggregates the trade flow of major Bitcoin spot exchanges during a specific calculation window into a once-a-day reference rate of the U.S. dollar price of bitcoin. Calculation rules are geared toward maximum transparency and real-time replicability in underlying spot markets. The BTC RR will be published between 4 p.m. and 4:30 p.m. London time every day, including weekends and holidays.



Bitcoin Reference Rates and Real-Time Indices

Underlying pricing related to Micro Bitcoin futures

The Bitcoin Real Time Indices aggregates global demand to buy and sell Bitcoin into a consolidated order book that reflects the fair, instantaneous U.S. dollar price of bitcoin. It is geared toward low latency and timeliness and is based on forward-looking input data. The RTI will be published approximately once per second of every day, including weekends and holidays.



Bitcoin Reference Rates and Real-Time Index

Underlying pricing related to Bitcoin futures



Bitcoin



Reference Rate

\$57671.80

Last Updated 08 Apr 2021 10:01:01 am



Real-Time Index

\$58189.62

Last Updated 09 Apr 2021 09:28:38 am



Historical Prices:

07 Apr \$56773.76

06 Apr \$57816.33

05 Apr \$58624.13

04 Apr \$58147.78

But first, a progress report on Bitcoin futures and options

Q1 2021

Bitcoin futures adoption rising

ADV: 13,469 contracts
(67,345 bitcoin equiv)

Average daily OI: 10,385 contracts
(51,925 bitcoin equiv)

Ether futures ADV 850/day
off to good start

Full Year 2020

ADV: 8,782 contracts
(43,910 equiv bitcoin),
up 38% compared to 2019

Average daily OI: 8,648
contracts (43,240 equiv
bitcoin), up 110% compared
to 2019

Other highlights

Trades originating from
outside U.S.
Futures: 36% (90 countries)
Options: 19% 15 countries

Accounts Trading
Futures \approx 7,200
Options \approx 190

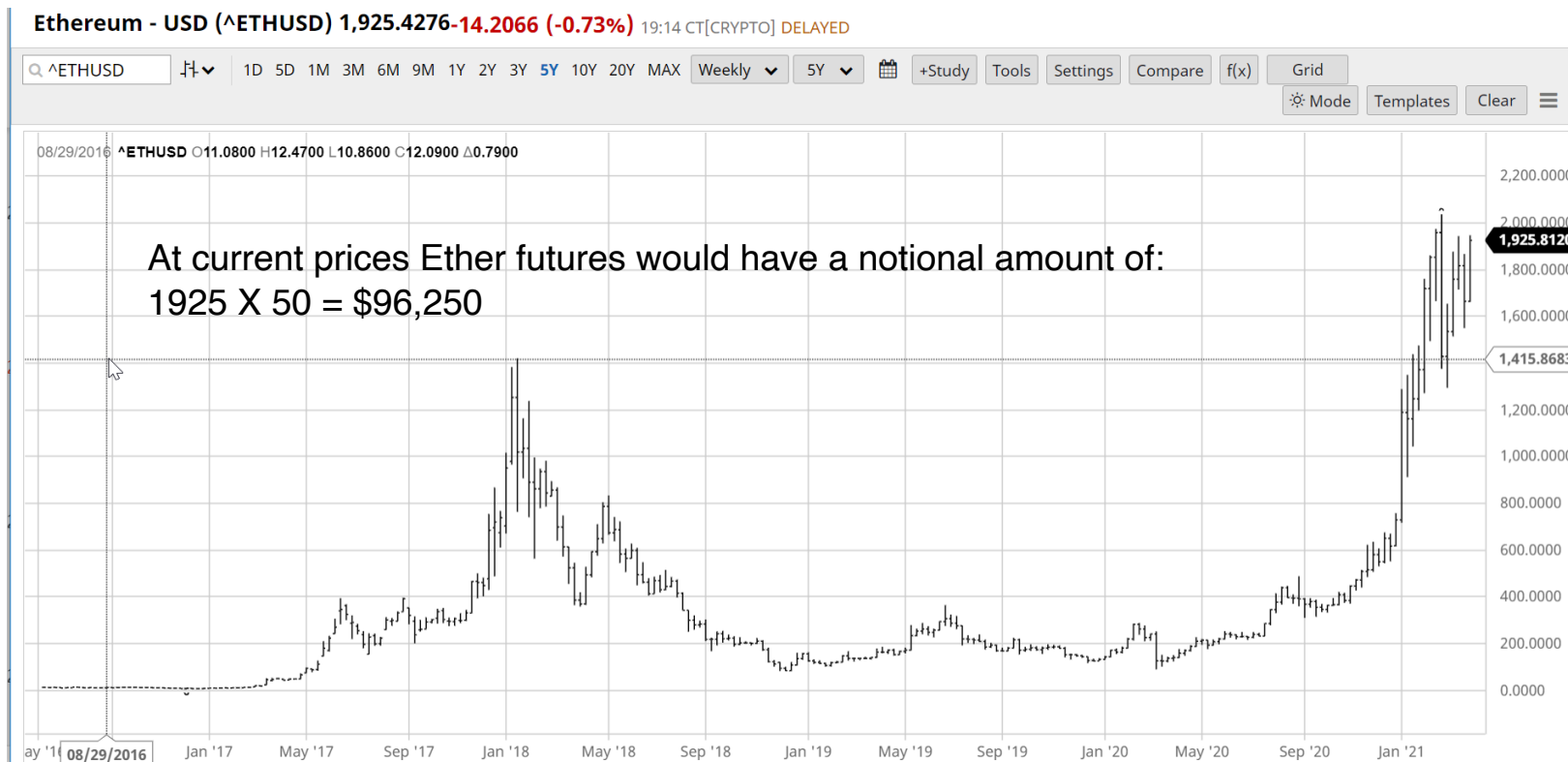
We look to duplicate this success with Micro Bitcoin futures too.

Bitcoin price action, five years ending March 31, 2021



Source: Barchart.com

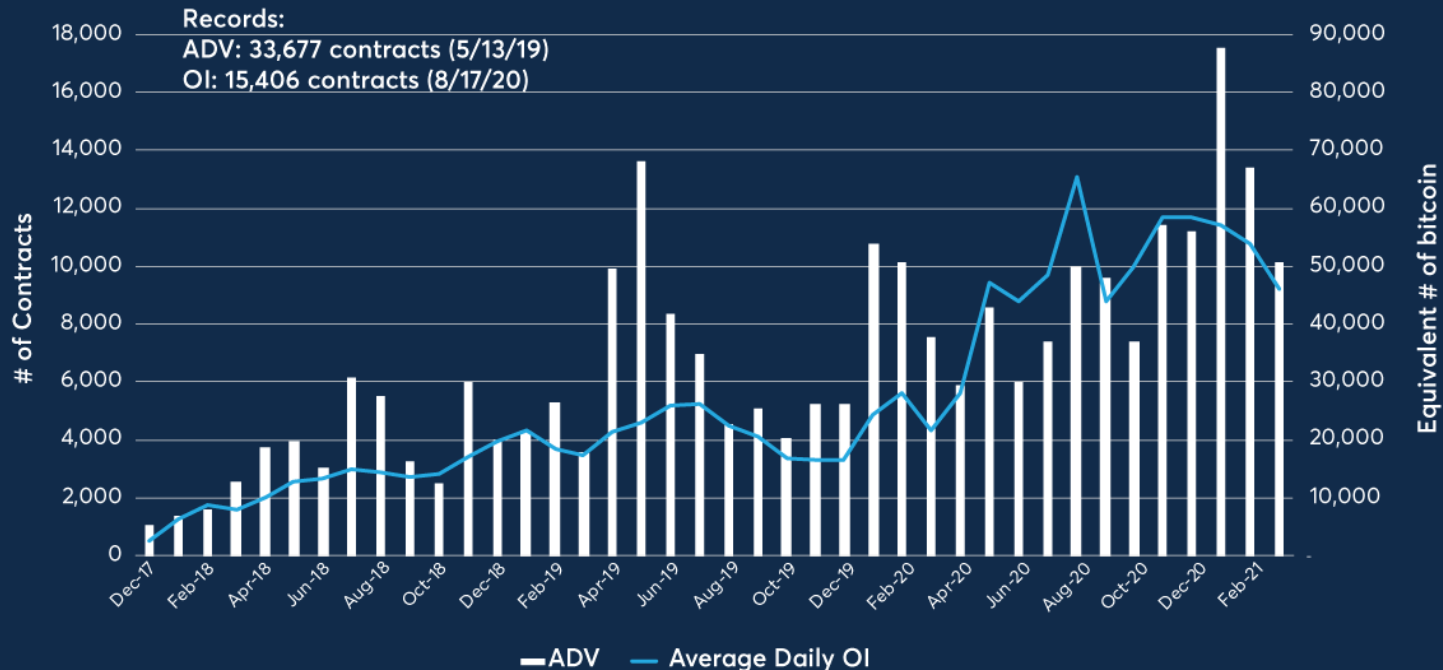
Ether futures: price action, six months ending March 31, 2021



Source: Barchart.com

The growth of Bitcoin futures

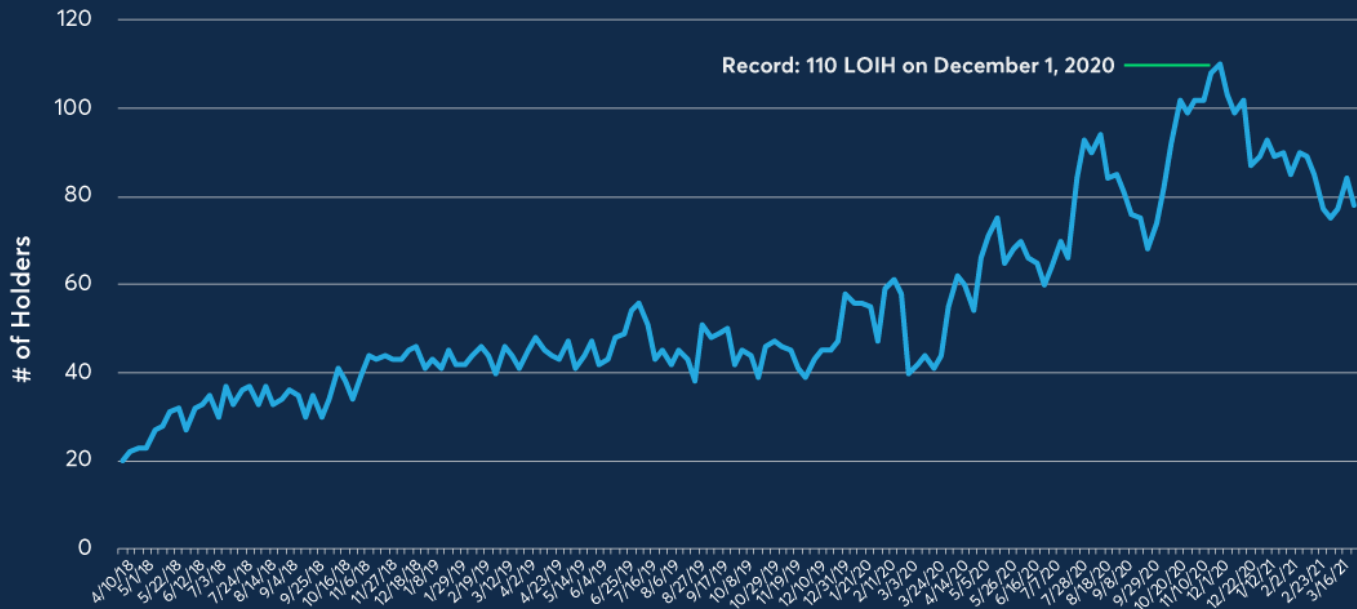
CME Bitcoin Futures Average Daily Volume (ADV) and Open Interest (OI)



Source: CME Group

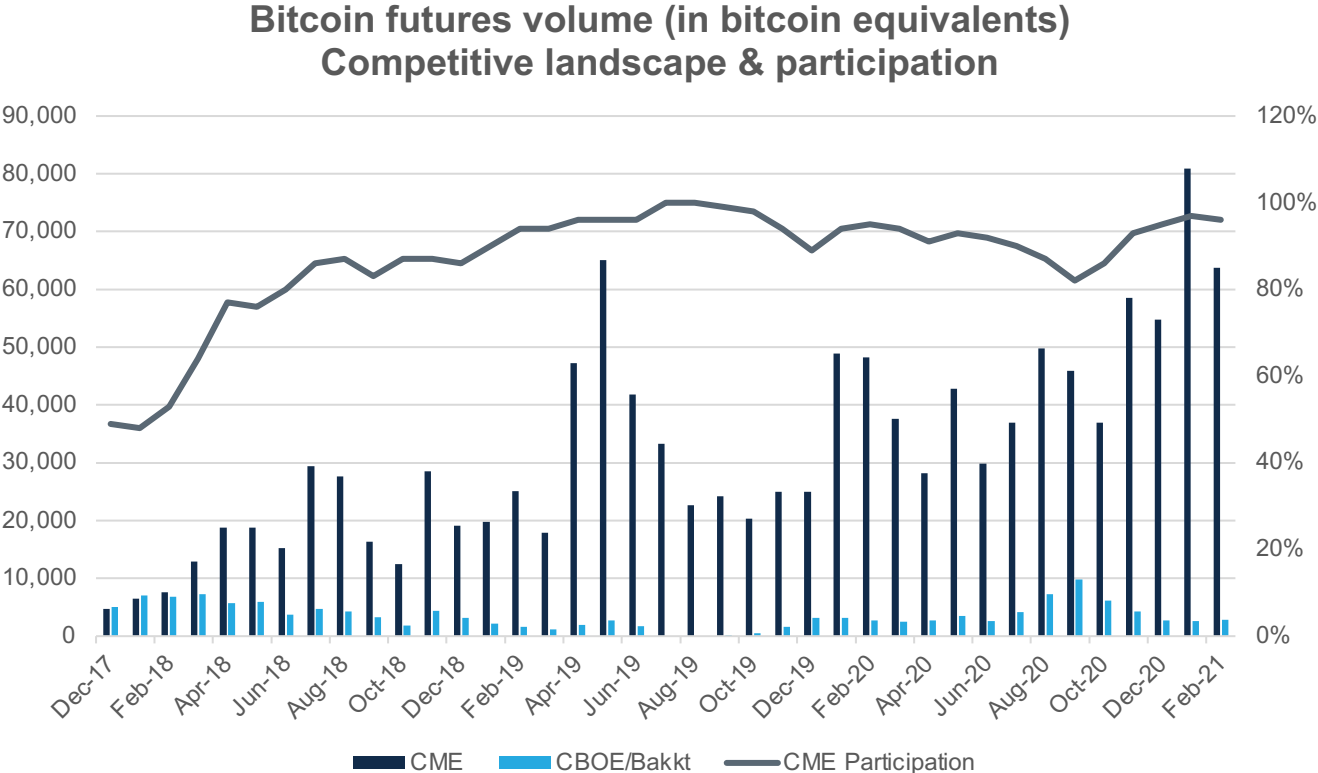
Bitcoin futures institutional interest and accounts expanding fast

CME Bitcoin Futures Large Open Interest Holders (LOIH)



Source: CME Group (Large Open Interest Holders are those that hold greater than 25 contracts)

Bitcoin competitive landscape



Source: CME Group

PART TWO:

Futures fundamentals/ benefits of Micro Bitcoin futures

Basic futures fundamentals

EXPIRATIONS

- As opposed to physical crypto trading, futures have expiration dates
- Most trading occurs in the “Front Month”

X	CC	Product	Description	Status	+	Imp	Qty	Bid	Ofr	Qty	Imp	Pin	Qty	Bid	Ofr	Qty	Last	Change	Volume
- Bitcoin Future																			
x	BTC	Bitcoin Future	Apr21	Open	+		3	63,080	63,130	1		<input type="checkbox"/>					↑ 63,090	+690	3,432
x	BTC	Bitcoin Future	May21	Open	+		1	63,530	63,610	1		<input type="checkbox"/>					↑ 63,550	+665	408
x	BTC	Bitcoin Future	Jun21	Open	+		2	63,970	64,080	2		<input type="checkbox"/>					↑ 63,920	+635	84
x	BTC	Bitcoin Future	Jul21	Open	+		2	64,420	64,565	2		<input type="checkbox"/>					64,400	+730	2
x	BTC	Bitcoin Future	Aug21	Open	+		2	64,830	65,025	1		<input type="checkbox"/>							
x	BTC	Bitcoin Future	Sep21	Open	+		1	65,205	65,615	1		<input type="checkbox"/>							
x	BTC	Bitcoin Future	Dec21	Open	+		1	64,440	70,290	1		<input type="checkbox"/>							
x	BTC	Bitcoin Future	Apr21/May21	Open	+		1	451	479	1		<input type="checkbox"/>					↓ 462	-23	101
x	BTC	Bitcoin Future	Apr21/Jun21	Open	+		1	888	952	1		<input type="checkbox"/>					↓ 881	-4	2
x	BTC	Bitcoin Future	Apr21/Jul21	Open	+		1	1,321	1,445	2		<input type="checkbox"/>							

Source: CME Direct 4/15/2021 10:50 AM Central Time

What happens when futures expire?

Because Micro Bitcoin futures are “cash settled,” you will not receive physical bitcoin when the futures expire

A Trader has two options as expiration approaches:

1. Allow the futures contract to expire
 - The future will expire and the position will settle with a cash transaction (based on the BRR)
 - The trader will no longer have a position nor exposure to bitcoin
2. “Roll” the futures position

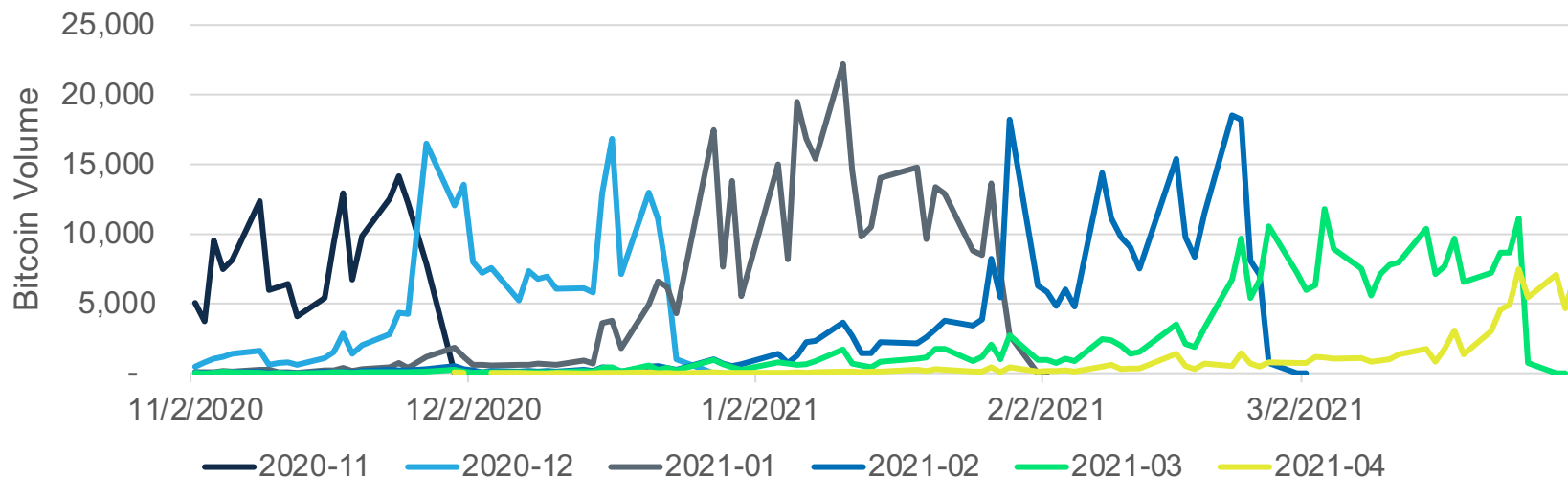
Basic futures fundamentals

“Rolling” the futures position

Micro Bitcoin futures expire on the last Friday of the Expiration month

As expiration approaches, volume will shift from the expiring month to the next sequential month

Bitcoin Volume By Expiration Month



Source: CME Group

Basic futures fundamentals

“Rolling” the futures position

If a trader desired to maintain a long or short position in Micro Bitcoin after the expiration, they would simply execute a spread transaction involving Buying (Selling) the expiring month and Selling (Buying) the next contract month

X	CC	Product	Description	Status	+	Imp	Qty	Bid	Ofr	Qty	Imp	Pin	Qty	Bid	Ofr	Qty	Last	Change	Volume
- Bitcoin Future																			📈 📉 🔄 R
x	BTC	Bitcoin Future	Apr21	Open	+		3	63,080	63,130	1		☐					📈 63,090	+690	3,432
x	BTC	Bitcoin Future	May21	Open	+		1	63,530	63,610	1		☐					📈 63,550	+665	408
x	BTC	Bitcoin Future	Jun21	Open	+		2	63,970	64,080	2		☐					📈 63,920	+635	84
x	BTC	Bitcoin Future	Jul21	Open	+		2	64,420	64,565	2		☐					64,400	+730	2
x	BTC	Bitcoin Future	Aug21	Open	+		2	64,830	65,025	1		☐							
x	BTC	Bitcoin Future	Sep21	Open	+		1	65,205	65,615	1		☐							
x	BTC	Bitcoin Future	Dec21	Open	+		1	64,440	70,290	1		☐							
x	BTC	Bitcoin Future	Apr21/May21	Open	+		1	451	479	1		☐					📉 462	-23	101
x	BTC	Bitcoin Future	Apr21/Jun21	Open	+		1	888	952	1		☐					📉 881	-4	2
x	BTC	Bitcoin Future	Apr21/Jul21	Open	+		1	1,321	1,445	2		☐							

Spread Market

Source: CME Direct 4/15/2021 10:50 AM Central Time

Basic futures fundamentals

X	CC	Product	Description	Status	+	Imp	Qty	Bid	Ofr	Qty	Imp	Pin	Qty	Bid	Ofr	Qty	Last	Change	Volume			
- Bitcoin Future																						
x	BTC	Bitcoin Future	Apr21	Open			1	63,175	63,225	2		<input type="checkbox"/>					↑ 63,240	+840	3,492			
x	BTC	Bitcoin Future	May21	Open			2	63,625	63,700	1		<input type="checkbox"/>					↑ 63,740	+855	414			
x	BTC	Bitcoin Future	Jun21	Open			2	64,070	64,175	2		<input type="checkbox"/>					↑ 64,020	+735	85			

Why the Difference?

Bitcoin

Reference Rate
\$62839.98
Last Updated 15 Apr 2021 10:01:01 am

Real-Time Index
\$62754.06
Last Updated 15 Apr 2021 11:02:41 am

Historical Prices:

14 Apr **\$63175.28**

13 Apr **\$62865.57**

12 Apr **\$60149.22**

11 Apr **\$59432.19**

Futures implied financing

Source: CME Direct 4/15/2021 11:02 AM Central Time

Basic futures fundamentals

How much is one Micro Bitcoin futures contract worth?

Because one contract represents 1/10 of a Bitcoin, at the current prices, it would represent about \$6,300 worth of Bitcoin exposure.

What does “margin” mean in futures?

Unlike, for example, a margin account in stocks, wherein a trader can borrow money from their broker to purchase stocks, “margin” in futures is, essentially a performance bond.

Can I “short” Micro Bitcoin futures?

One of the benefits of trading futures is the ease with which a trader can “go short” the market. There are no locate requirements nor borrow costs in futures as exist in the equity markets. If a trader desires to short the market, they simply sell it and can buy the contract(s) back at any time to “flatten” their position.

Benefits of Micro Bitcoin futures at CME Group



TRADE A SLICE OF BITCOIN FUTURES

Get the same features as the larger five-bitcoin contract, at 1/50 of its contract size, settled to the regulated **CME CF Bitcoin Reference Rate (BRR)**.



PRICE DISCOVERY AND TRANSPARENCY

Trade on a regulated exchange and enjoy the price discovery of transparent futures, where all participants see the same prices and quotes.



PRECISELY SCALE BITCOIN EXPOSURE

Add more control over the amount of bitcoin exposure in your trading strategies.



CAPITAL EFFICIENCY IN CRYPTO TRADING

Save on potential margin offsets with **Bitcoin futures and options** and **Ether futures**, plus add the efficiency of futures contracts.

Source: CME Group

Bitcoin and Micro Bitcoin futures contract specs

	MICRO BITCOIN*	BITCOIN
Contract Size	0.10 bitcoin	5 bitcoin
Ticker	MBT	BTC
Notional Value	$\$59,000 \times 0.10 = \$5,900$	$\$59,000 \times 5 = \$295,000$
Min. Price Fluctuation	\$5 per bitcoin = \$0.50/contract	\$5 per bitcoin = \$25.00/contract
Trading Hours	Sunday - Friday 5:00 p.m. - 4:00 p.m./ CT with a 60-minute break each day beginning at 4:00 p.m. CT	
Listing Cycle	Six consecutive contracts inclusive of the nearest two December Contracts	
Final Settlement	Cash settled to final settlement price = to CME CF Bitcoin Reference Rate	
Termination of Trading	4 p.m. London time on the last Friday of contract month	

Full contract specs: <https://www.cmegroup.com/trading/micro-bitcoin-futures.html#contract-specifications>
https://www.cmegroup.com/trading/equity-index/us-index/bitcoin_contract_specifications.html

**subject to regulatory review*

Ether futures: contract specifications

Contract unit	50 Ether
Ticker Symbol	ETH
Price Quotation	U.S. Dollars and cents per ether
Trading Hours	CME Globex: Sunday-Friday 5:00 pm -4:00 pm CT with a 60 minute break each day beginning at 4:00pm CT CME Clearport: Sunday 5:00 p.m. - Friday 5:45 p.m. CT with no reporting Monday - Thursday 5:45 p.m. – 6:00 p.m. CT
Minimum Price Fluctuation (tick)	Outrights: \$0.25 per ether = \$12.50 per contract Calendar Spreads: \$0.05 per ether = \$ 2.50 per contract
Listed Contract	Six consecutive month contracts inclusive of the nearest two Dec contracts
Final Settlement Method & Final Settlement Day	Financially settled last day of trading in the last Friday of contract month Trading in expiring futures terminates at 4:00 pm London time on last day of trading
Final Settlement Price	Delivery is by cash settlement by reference to the final settlement price equal to the CME CF Ether dollar Reference Rate on the last day of trading

Bitcoin margins vs. Micro Bitcoin margins

BITCOIN CONTRACT	MAINTENANCE MARGIN BTC*	MAINTENANCE MARGIN MBT*
April 2021	106,989	1/50 th BTC (2,139)
May 2021	107,673	1/50 th BTC
June 2021	108,462	1/50 th BTC
July 2021	109,260	1/50 th BTC

Source: CME Group

* Exchange Minimum Margins subject to change by CME Clearing.

Micro Bitcoin minimum price increments/tick

MICRO BITCOIN TICK INCREMENTS	
	57,270
	57,265
	57,260
	57,255
57,250	
57,245	
57,240	
57,235	

**1 tick or
\$0.50 per contract**

Source: CME Group

Bitcoin and Ether futures vs. spot comparison

	BITCOIN/MICRO BITCOIN & ETHER FUTURES	BITCOIN & ETHER ON SPOT MARKET
Wallet requirement	No	Yes
Capital efficiencies (leverage)	Yes	No
Regulated Market	Yes	Somewhat
Potential Tax efficiencies	Yes	No
Clearinghouse risk mitigation	Yes	No
Underlying Exchange Business Experience	170+ years	Less than a decade
Ability to go short	Easy	Not as easy

Source: CME Group

Bitcoin spot vs. futures transaction costs

Traders should compare the cost of buying/selling 1 futures contract at their FCM vs. the cost of the equivalent notional amount of 1 micro bitcoin (MBT notional is about \$6,200 at current prices) at other crypto exchanges.

Remember the difference between the bid/offer spread is a major “cost” as well.

SAMPLE TRANSACTION FEES AT A CRYPTOCURRENCY EXCHANGE	
.1 bitcoin	
Cash price ≈	\$62,000 / BTC
Purchase ≈	\$6,200
Crypto Exchange fee ≈	\$92.00
Total ≈	\$6,292

Data as of 16 April 2021, 4:30pCT

Source: CME Group

PART THREE:

Trading Micro Bitcoin futures

Trade illustration using Micro Bitcoin futures

Trader is bullish on bitcoin

Decides to get long (buy) micro bitcoin futures on May 3.

MICRO BITCOIN FUTURES PRICE ON MAY 3, 2021	
Trader buys one May MBT future on May 3	\$59,000
Notional Value at 59,000: $(59,000 \times .10)$	\$5,900
May 4 Micro bitcoin futures price	\$61,000
Traders sells (offsets) on May 4 at	\$61,000
Notional value at \$61,000: $(\$61,000 \times .10)$	\$6,100
Profit/loss: $\$2,000 \times .10 =$	\$ 200
Margin required	TBD

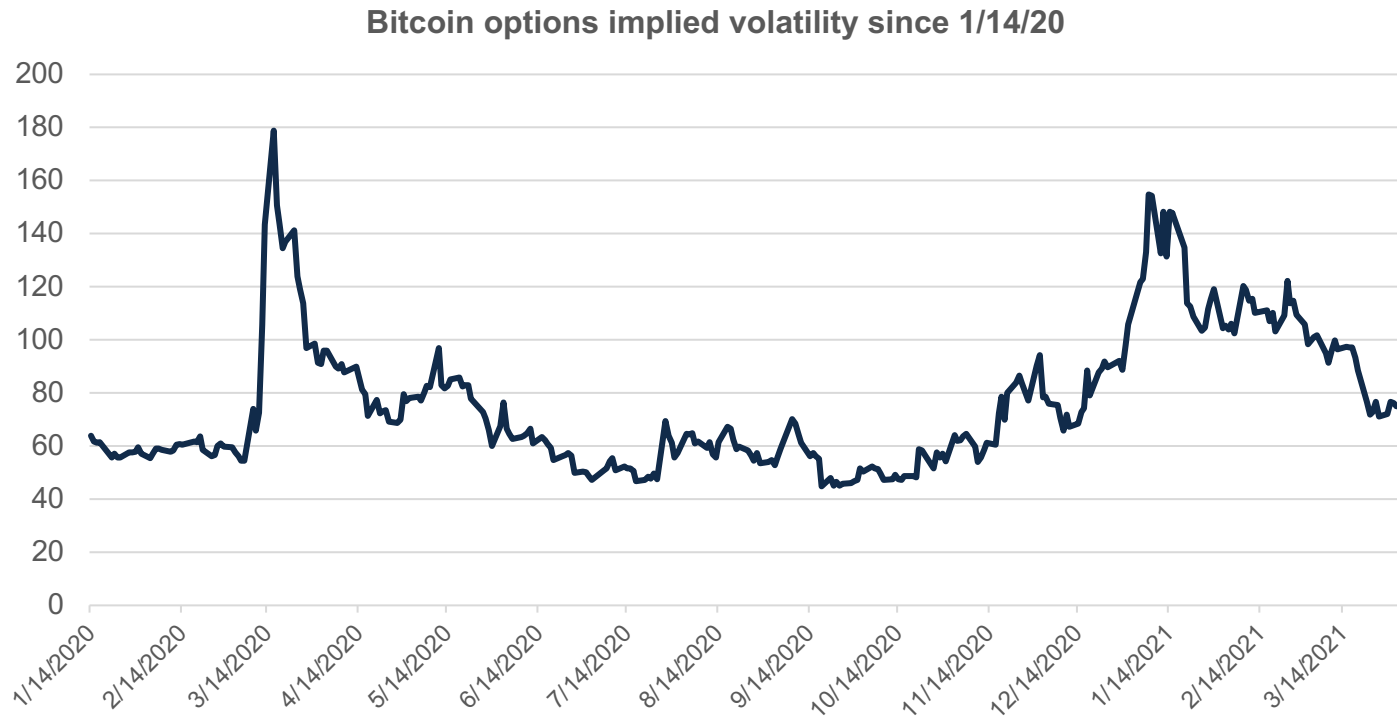
Source: CME Group

Trade illustration: Micros allow scaling in/out of positions



Source: CME Group Trading Simulator

Bitcoin options implied volatility since launch



Source: QuikStrike

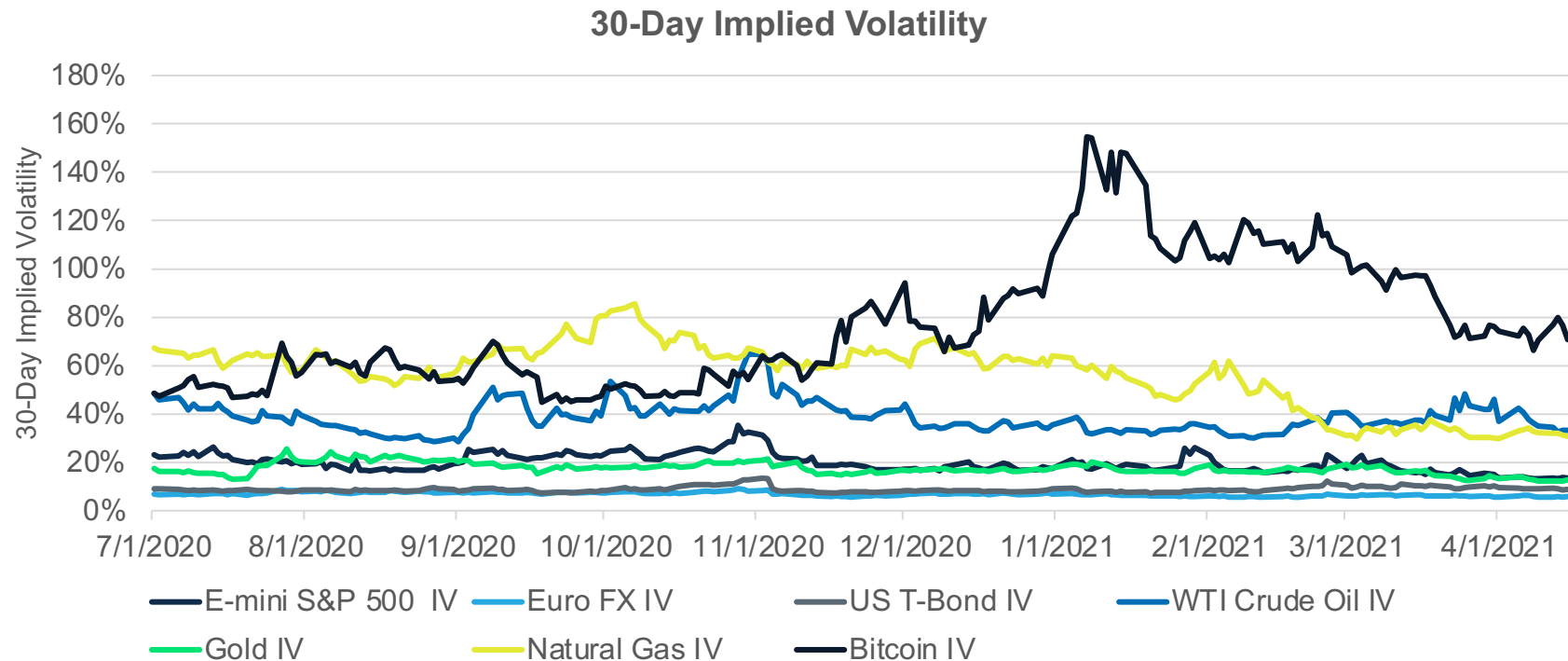
Bitcoin volatility and daily price movement (with price at 60,000)

VOLATILITY PERCENTILE RANKING*	ANNUALIZED VOLATILITY AT %TILE	CONVERTED TO DAILY VOLATILITY %	1 S.D. MOVE	2 S.D. MOVE	3 S.D. MOVE
High	178.80%	11.18%	6708	13416	20124
90 th %tile	113.00%	7.06%	4236	8472	12708
75 th %tile	90.05%	5.62%	3372	6744	10116
50 th %tile	66.66%	4.16%	2496	4992	7,488
25 th %tile	57.17%	3.57%	2142	4282	6426
10 th %tile	50.74%	3.17%	1902	3804	5706
Low	44.84%	2.80%	1680	3360	5040

Source: QuikStrike

*data range 1/14/20 to 4/1/21 (annualized vol/16 = daily volatility)

Implied volatility – different CME Group products



Source: QuikStrike

Risk mitigation and CME Clearing

With tremendous volatility, some investors are curious about risk mitigation. In a sentence, CME Clearing is well equipped to handle risk. For over 170 years, CME Group has been assessing and mitigating risks associated with financial markets.

Crash of 1987, Russian debt crises, failures of Lehman Bros. and Bear Stearns, the crises of 2008. Brexit and a host of other major stresses in the financial markets.

CME Group has the power to assess additional margin and change margins on a moments notice. The SPAN margining system is used by dozens of exchanges throughout the world.

Moreover, our Globex trade matching system has built in safeguards such as velocity and stop logic Which are activated during times of market turbulence. The exchange also has dynamic price limits in place to help mitigate extreme price volatility risk that the markets sometimes exhibit.

MBT and BTC Investors will also enjoy margin offsets.

Bitcoin & ether investor ecosystem and potential uses for futures

In addition:

Lending/Borrow Platforms -
hedging; position management

.....

DeFi (decentralized finance)

.....

Cash management

	PRIMARY USE	SECONDARY
Pension funds	Asset allocation diversification	Hedge holdings
Hedge funds	Long/short strategies	Hedging
Prop firms	Market making	Long/short
Retail active trader	Long short	In combination with options
Options Traders	Long/short	Income strategies options writing
Bitcoin Miners	Hedge strategies	Long/short
Corporate	Hedge bitcoin receivables	Treasury Mgt

Source: CME Group

The ecosystem is growing!

The all-time high in Bitcoin and gold correlation was seen at the same time when Microstrategy, the world's largest business intelligence firm, bought \$250 million in Bitcoin, making the asset its primary treasury reserve. This is seen as a major sign of institutional interest."

Source: Cointelegraph, August 2020

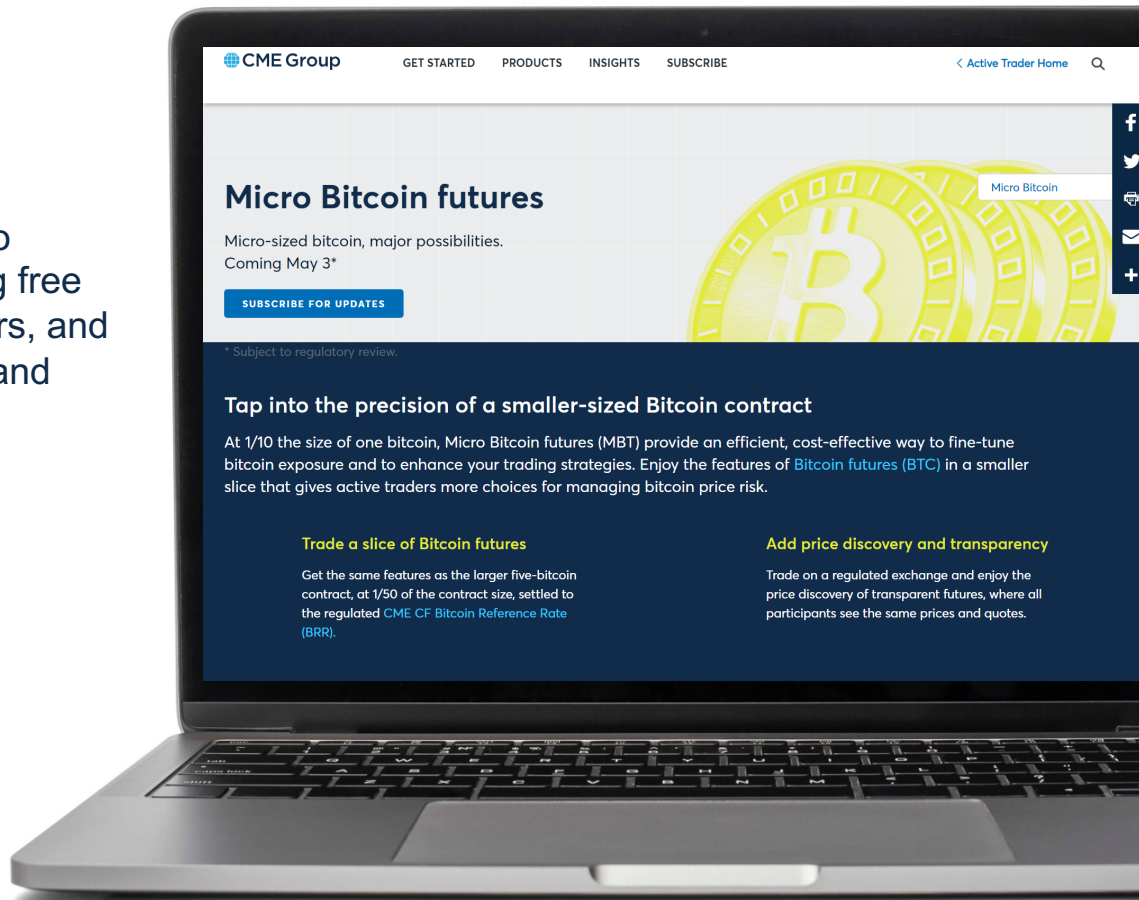
"In a survey, done by America's leading money manager, Fidelity Investments shows a third of large institutional investors owning crypto assets."

Source: Nairametrics, June 2020

Learn more

We have a variety of resources about Micro Bitcoin futures and trading futures including free online classes, resources, trading simulators, and other tools to help you sharpen your skills and deepen your knowledge.

Visit cmegroup.com/at-Microbitcoin



Thank you for listening

