

Bloomberg Crypto Outlook

Bitcoin Maturation Leap

- Born From the Financial Crisis, Bitcoin Maturation Accelerating
- Stock-Market Shakeout Accelerates Bitcoin's Gold-Like Transition
- Bitcoin Futures Taming Bull Calf Toward Digital Version of Gold
- Bitcoin and Gold Showing Convergence With Endurance
- Covid-19 Supporting Bitcoin On-Chain Indicators, Dominance
- Covid-19 May Give Libra Life, Spur Fed's Digital Currency Spirit

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Data and outlook as of April 2, 2020

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[BI COMD](#) (the commodity dashboard)

Note - Click on graphics to get to the Bloomberg terminal

Born From the Financial Crisis, Bitcoin Maturation Accelerating

Performance: Bloomberg Galaxy Crypto Index (BGCI)

March -33%, 2020 to April 2 +2%, One-year -12%

Bitcoin March -28%, 2020 -6%, One-year +41%

(Bloomberg Intelligence) -- The stock market's shakeout will temporarily drag on Bitcoin, in our view, but with an outcome more reminiscent of gold's after the 2008 financial crisis. Coming into existence in 2009, the first-born crypto is faring relatively well, down less than a quarter as much as the S&P 500 in 2020 despite being almost 5x as risky on a volatility-weighted basis. Bitcoin's 24/7 price transparency, and the lack of limits, interruptions or third-party oversight, is an accomplishment for an asset just a decade old.

This year marks a key test for Bitcoin's transition toward a quasi-currency like gold, and we expect it to pass. Unlike the stock-market reset but similar to gold's, Bitcoin had its shakeout, stabilizing the foundation amid unprecedented global monetary stimulus and increasing adoption.

Market Risk With Equities

Post-Shakeout Discounts Solidify Bitcoin and Gold Foundations.

Pricing resets for the primary quasi-currencies, and this year's shakeout in equities, support Bitcoin and gold-price appreciation, in our opinion. Bitcoin and gold appear to be consolidating bull markets that are backing into support zones vs. stocks, less than two months removed from record highs.

Bitcoin a Resting Bull Amid Equity Plunge



Previous Reset Firms Bitcoin Foundation.

On sounder footing after its previous shakeout, Bitcoin is gaining relative fuel as stocks reset, if history is a guide. Our graphic depicts the 2020 crypto decline holding above its 2018 low, which was about an 80% drawdown from the peak. A little over a month since its all-time high, the S&P 500 has dropped below the similar bottom from two years ago. The global-demand destruction from coronavirus risk is akin to equity backups in 2008-09 and 2000-02, which were much greater in duration and on a year-over-year basis.

Bitcoin and gold also stand to be primary beneficiaries of the unprecedented monetary stimulus that's accompanied by a mean-reverting stock market.

Covid-19 Distinguishes Bitcoin From Rest of Cryptos.

The macroeconomic effects of the coronavirus accelerate Bitcoin's process of gaining value relative to other cryptos. Most of the speculative spurt in the Bloomberg Galaxy Crypto Index (BGCI) to start 2020 has dissipated, and on a one-year basis, Bitcoin is up almost 40% to April 2 vs. about a 13% decline in the BGCI. Our graphic depicts the Bitcoin-to-BGCI ratio recovering from a dip below its upward-sloping 52-week moving average, along with what looks like a more enduring decline for other cryptos.

Bitcoin Set to Continue Advancing vs. Rivals



Initially pulled lower by the ebbing stock-market tide, Bitcoin's correlation to gold has increased to all-time highs. Unprecedented quantitative easing supports the quasi-currencies.

Zero, Negative Base Rates Boost Gold. Conditions favor advancing gold prices, in our view. The primary risks to derail the quasi-currency's bull market are conditions prevalent during much of the past decade -- rapidly advancing stocks, a strengthening dollar and rising real rates. Such conditions came on the aftermath of gold reaching an all-time high in 2011. With base rates at zero or negative, and the Federal Reserve embarking on seemingly unlimited monetary stimulus akin to 2008, we see gold extending its \$1,900-ounce peak as the next in a stair-step recovery process.

Next Step in Gold Recovery: Breaching \$1,900 Peak



If following the script from the 2008-09 financial crisis, the term "recovery" portends new highs for gold. About \$1,000 was the initial threshold then. In today's climate, it's comparable to \$1,900.

The 2020 Bitcoin Maturity Test

Stock-Market Shakeout Accelerates Bitcoin's Gold-Like Transition. This year will confirm Bitcoin's transition from a risk-on speculative asset to the crypto market's version of gold, in our view. From a volatility perspective, declines in Bitcoin's reading and the rise for the stock market's shifts performance favor toward the crypto asset.

Bitcoin Divorcing Equities, Joining Gold. Increasing risk-asset betas to the rapidly declining S&P 500 firm the price foundation for Bitcoin and strengthen the cryptos' relationship with gold, in our view. The benchmark crypto's backup, like gold's, appears temporary. Our graphic depicts the 52-week correlation of Bitcoin to gold jumping to the highest in our database since 2010. Despite spikes in most betas to stocks', Bitcoin's relationship with gold is about twice that of equities. Bitcoin's maturation process from speculative appreciation toward a store-of-value mechanism akin to gold should continue.

Bitcoin Transition to Gold Bull From S&P Bear



Bitcoin has returned to its prime consolidation area of 2018 (about \$6,000) and appears to be marking time before following the gold bull market.

Cryptos Performance on BI COMD

Name	11	1	3	YTD	11	2
	(\$)	Mth % Change	Mth % Change	% Change	Yr % Change	Yr % Change
Bloomberg Galaxy Crypto Index						
Bloomberg Galaxy Crypto Index (BGCI)	346	-26.9	1.7	4.9	-18.1	-52.7
USD Cross						
Bitcoin (BTC)	347	-20.1	-4.0	-2.5	31.8	-5.7
Ethereum Classic (ETC)	215	-38.5	14.7	16.7	-14.2	-65.3
Ethereum (ETH)	358	-35.1	9.8	13.4	-18.4	-64.9
Monero (XMR)	753	-18.1	7.1	20.4	-25.5	
Bitcoin Cash (BCH)	368	-27.4	9.3	17.6	-29.9	-66.1
Dash (DASH)	215	-21.3	59.7	69.2	-49.3	-79.4
Ripple (XRP)	217	-22.4	-5.2	-4.6	-51.1	-66.1
Zcash (ZEC)	214	-34.9	16.6	18.5	-56.7	
Litecoin (LTC)	324	-32.4	-1.3	-0.4	-57.3	-69.2
EOS (EOS)	325	-34.8	-10.0	-8.2	-59.4	
MVIS CryptoCompare Indices						
Single Asset Indices						
Bitcoin OTC (BTC)	347	-20.2	-4.0	-2.5	35.6	-6.0
Bitcoin (BTC)	348	-20.2	-4.6	-2.9	35.4	
Ethereum Classic (ETC)	324	-37.9	14.0	16.3	-15.5	-65.4
Ethereum (ETH)	368	-35.2	9.0	12.5	-17.1	-63.2
Monero (XMR)	651	-19.0	4.9	19.0	-25.9	-71.3
Bitcoin Cash (BCH)	368	-27.5	8.6	17.4	-28.0	-52.8
NEO (NEO)	555	-37.3	-18.4	-16.8	-46.4	-86.0
Dash (DASH)	315	-21.6	58.5	68.7	-47.7	-78.7
Ripple (XRP)	217	-22.4	-5.6	-4.8	-50.8	-65.7
NEM (XEM)	117	-28.8	17.8	15.7	-51.2	-84.9
Litecoin (LTC)	324	-32.5	-1.3	-0.6	-57.1	-67.6
Zcash (ZEC)	313	-34.7	16.0	18.5	-57.9	-84.0
Iota (MIOTA)	445	-31.2	-8.1	-3.6	-59.6	-86.2
Multi-Asset Indices						
Digital Assets 100 Large Cap	347	-22.9	-2.2	-0.2	4.2	-35.3
Digital Assets 100	347	-23.1	-2.0	-0.1	-0.2	-40.7
Digital Assets 5	347	-27.0	1.8	4.4	-11.8	-46.5
Digital Assets 10	347	-27.6	2.7	5.1	-19.4	-50.4
Digital Assets 25	326	-29.3	6.5	9.1	-32.5	-62.2
Digital Assets 100 Mid Cap	264	-24.7	6.6	8.6	-40.9	-79.7
Digital Assets 100 Small Cap	245	-29.7	-8.8	-8.5	-63.8	-87.5
MVIS IP owned by Van Eck, distributed by ...						
Bitwise Crypto Indices						
Multi-Asset Indices						
Bitwise 100 Total Market Crypto Index			-5.4	-3.0	-0.1	-40.5
Bitwise Hold 10 Large Cap Crypto In...	347	-27.0	1.8	4.4	-11.8	-46.5
Bitwise 20 Mid Cap Crypto Index			5.9	8.9	-42.3	-80.0
Bitwise 70 Small Cap Crypto Index			-12.1	-10.3	-62.7	-85.3
Bitwise IP Owned by Bitwise Asset Manage...						
BTC Cross						
Ethereum Classic (ETC)	-	-22.8	19.7	19.9	-34.8	
Ethereum (ETH)	61	-25.1	5.6	7.1	-43.0	
Monero (XMR)	314	2.6	11.5	23.5	-43.5	
Bitcoin Cash (BCH)	61	-17.5	3.2	10.2	-51.9	
Ripple (XRP)	61	12.0	13.9	12.8	-57.2	
Dash (DASH)	-	-1.5	66.5	73.6	-61.5	
Zcash (ZEC)	-	-18.5	21.4	21.4	-67.2	
Litecoin (LTC)	-	-15.3	3.3	2.4	-67.6	
EOS (EOS)	61	-18.1	-6.1	-5.7	-69.1	

(8am NY, April 2)

Volatility Tilts Favor Toward Bitcoin. Stock-market volatility on the rise vs. a decreasingly volatile Bitcoin may tilt performance bias toward the crypto, if history is a guide. Despite Bitcoin annualized volatility that's averaged about 5x that of the S&P 500 in the past year, the crypto is down only about 5% in 2020 vs. almost 22% for the stock index. For more-established assets, this would be considered a sign of divergent strength. For the nascent crypto, it's also an indication of a transition toward gold-like adoption, maturity and performance.

Volatility More Beneficial to Bitcoin Than Stocks



Our graphic shows declining 260-day volatility in Bitcoin vs. a S&P 500 measure hindered by wobbly equities. Lows in this volatility spread have coincided with Bitcoin appreciation periods vs. the S&P 500.

Gold, Bitcoin Have Passed Shakeouts. A primary price-appreciation benefit of gold and Bitcoin, in our view, is they are on the back ends of significant shakeouts. The 2020 mean-reversion process in the stock market -- with a worthy catalyst in Covid-19 -- may be more enduring, if history is a guide, yet the initial drag on the quasi-currencies should be temporary. They've had their resets. Our graphic depicts the stronger foundations for gold and Bitcoin after having corrected about 40% and 80%, respectively, and remaining well below their peaks.

Bitcoin, Gold have Reset, Equities Turn



It was only a bit over a month ago that the S&P 500 reached an all-time high, which distorts drawn-down analysis due to the virus crisis. On a 52-week basis, the index decline of about 14% is minor historically. In 2000-01 and 2008, the S&P dropped over 35%.

Futures Taming the Bitcoin Bull

Bitcoin Futures Taming Bull Calf Toward Digital Version of Gold.

The advent of listed futures helped tame the raging Bitcoin bull market, and we believe is part of the gold-like transition process in the benchmark crypto. Increasing futures open interest and volume represent adoption -- key for the nascent digital asset with limited supply.

Futures Helping to Tame the Bitcoin Bull.

Increasing Bitcoin futures open interest represents mainstream adoption, which will continue pressuring volatility while buoying prices, in our view. Limited supply points to demand and adoption as the primary price determinants for the benchmark crypto. Our graphic depicts the upward-sloping trend in Bitcoin futures open interest and the price-taming process. The swiftest stock-market decline in a generation has pressured Bitcoin back to its most widely traded price area since the inception of futures, just below \$7,000.

Increasing Futures Open Interest, Adoption



Increasing futures open interest, declining volatility and relative outperformance despite the stock-market shakeout indicates Bitcoin is maturing from a speculative crypto asset toward a digital version of gold. On a one-year basis, Bitcoin is up about 40% vs. a 15% decline for the S&P 500.

Rising Futures Volume and Bitcoin Maturation.

Increasing Bitcoin futures volume represents taming of the highly speculative bull market, in our view. Up about 120% year-over-year in 1Q, the increase in CME Bitcoin futures contracts traded reflects a maturing market. The first-born crypto has recovered from the depths of the bear market over a year ago, and the advent of listed options trading indicates more mainstream adoption. Our graphic depicts the 30-day average of futures volume stabilizing with the Bitcoin price at

April 2020 Edition
 Bloomberg Crypto Outlook
 about its most widely traded price, supporting our view of a
 consolidating bull market.

Futures Settling Bitcoin Into Range-Bound Market



Bitcoin, Gold Convergence

Bitcoin and Gold Showing Convergence With Endurance.

Divergent volatility readings have historically supported Bitcoin price appreciation. The first-born crypto trend is toward gold-like price action, unlike its much more volatile early days. Declining Bitcoin volatility vs. rising readings for the metal signal stronger companionship.

Bitcoin Volatility Converging With Gold. Rising gold vs. declining Bitcoin volatility should support the crypto's price. Our graphic shows Bitcoin's declining 180-day volatility vs. an increase in gold's reading, similar to 2015, when the Bitcoin-to-gold ratio bottomed and commenced the bull market to the 2017 peak. Natural maturity should continue to pressure the first-born crypto's volatility. Yet when volatility bottoms, it typically coincides with recovering prices.

Volatility Falling in Bitcoin, Rising in Gold



Gold volatility is on the rise from the two-decade low in 2019, along with advancing prices, giving it fuel for potential continuation. Bitcoin volatility should continue declining toward gold's. The 180-day measure is significant, as its all-time low for Bitcoin in October 2015 (about 40%) marked the beginning of the bull market.

Bitcoin Becoming Less of a Risk-On Asset. Bitcoin price pressure from plunging stocks will prove temporary, in our view. When the S&P 500 declined almost 14% in 4Q18, Bitcoin declined about 45%, and both bottomed about the same time. Indicating the first-born crypto is still susceptible to the receding stock-market tide, but in more of a bullish divergent condition, Bitcoin remains up about 9% in 2020 and is hovering near its \$8,000 support level, despite about a 20% S&P 500 correction. Our graphic depicts the spiking nature of the correlation between Bitcoin and the S&P 500, notably when equities decline swiftly.

Bitcoin More Robust Than 2018 Equity Swoon



Favorable Bitcoin On-Chain Indicators

Covid-19 Supporting Bitcoin On-Chain Indicators, Dominance. Bitcoin on-chain indicators remain price supportive, and the coronavirus is accelerating the first-born's outperformance vs. the broader crypto market. Metrics including addresses used and adjusted transactions show a firming Bitcoin foundation. Cutting the daily mining supply in half in May will provide another price tailwind, in our view.

Bitcoin Discount vs. On-Chain Indicators. Bitcoin appears to be discounted vs. its primary on-chain indicators. Representing adoption, the 30-day average of active addresses has stabilized closer to \$9,000 vs. about \$6,600 on April 2. We find the 10-day average of transactions to be a more robust trading proxy, and it's about even with the price on an autoscale basis since 1Q18. These blockchain measures from Coinmetrics support a key price determinant of the limited-supply crypto benchmark -- increasing adoption.

Increasing addresses support Bitcoin's transition toward a digital version of gold, and we believe margin-call-related selling should be a temporary headwind to both quasi-currencies.

Upward Trends - Transactions, Addresses



Blockchain Topic Primer: Outlook

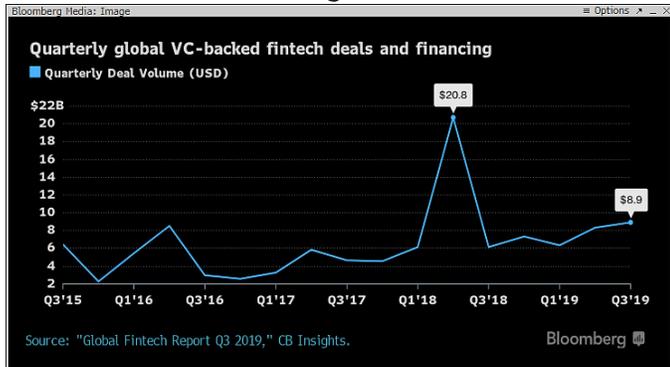
Covid-19 May Give Libra Life, Spur Fed's Digital Currency
 SpiritContributing Analysts Ben Elliott (Government)

Covid-19 may highlight vulnerabilities in cash-based transactions and markets built on outdated technology, driving the Fed to reconsider issuing a digital currency, giving Facebook's Libra new life and prompting mortgage lenders like Wells Fargo, Truist and U.S. Bank to seek tech upgrades. A Fed digital currency or payments app may undercut banks' efforts.

Virus Highlights Tech Gaps, Gives Rise to Opportunity.

The coronavirus may narrow investors' focus to new blockchain technologies that address vulnerabilities that arise during this outbreak. Even with heavy investment, there's been a conspicuous lack of commercial results in blockchain, but the mass work-from-home experiment of early 2020 could catalyze new developments. Investment in the space tends to exhibit circular logic where money chases addressable markets that are already well-served or protected by a regulatory moat.

VC-Backed Fintech Financing

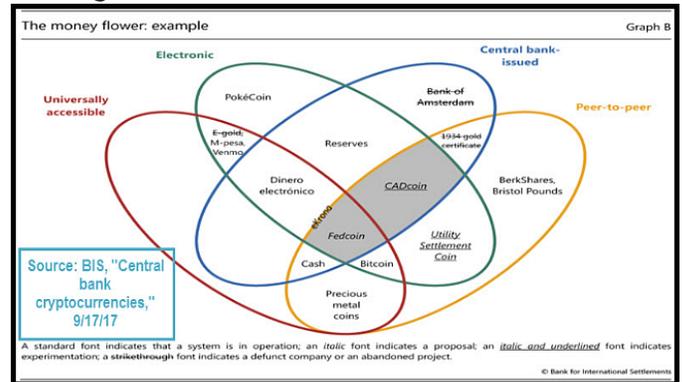


We see the mortgage market as potential fertile ground, given stresses that arose as investors began to consider possible widescale forbearance and a grinding halt in originations. Contactless transactions (not just payment) and the primacy of data ownership may also come into focus.

Central Bank Cryptos May Compete With Libra.

Commercial banks would likely play a key role if the Fed and other central banks decide to go cashless by issuing a digital currency. If nonbanks could access central bank money directly, it could create unintended consequences for the Fed and disintermediate commercial banks' role as credit creators and maturity transformation machines. The coronavirus-induced economic slump may spark the Fed's interest in a tool that could provide more direct stimulus beyond just financial markets, though legislation would likely be required.

BIS Diagrams Bitcoin's Place In Global Finance

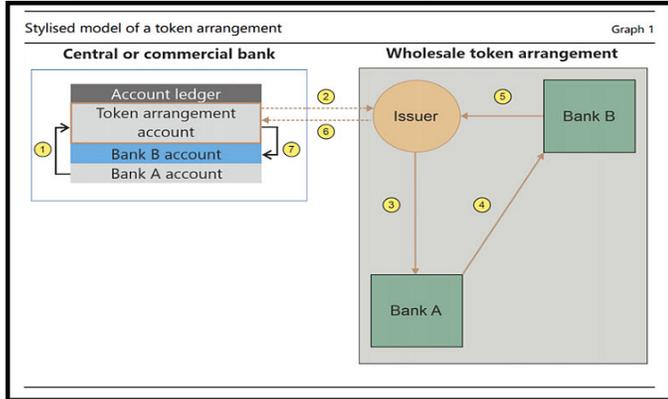


Central banks may also adjust their strategy if private, permissioned ledgers, such as Facebook's Libra, begin to gain steam. The Fed may need to be more open to regulated private money if alternatives such as bitcoin come through the coronavirus crisis stronger than before.

Wholesale Digital Tokens May Reshape Bank Liquidity.

Wholesale digital tokens based on blockchain -- like JPMorgan's proposed JPM Coin -- could transform interbank payments in 2020. Once better understood, the liquidity issues experienced during the coronavirus outbreak, especially in mortgages, might be addressed using some application of blockchain. A first-mover advantage likely exists for a large bank to create a dominant settlement platform that's more efficient and less costly. To the extent wholesale tokens represent claims on haven assets like U.S. dollars, central bank reserves, or Treasuries, we think regulators will encourage technological innovations in the coming years.

BIS Stylized Model of a Token Arrangement



Wells Fargo, JPMorgan, Bank of America, US Bancorp, Truist and Citizens are among the top 20 mortgage lenders and might benefit from blockchain mortgage tech.

Market Infrastructure May Finally Be Revamped.

Blockchain project announcements were everywhere in recent years, yet the hype failed to pay off. Ripple Labs' 2019 partnership with MoneyGram suggests markets still see potential for disruption in cross-border payments, yet Ripple's exposure to its own cryptocurrency threatens its enterprise software venture. The project's investors, including Mastercard, Visa, Capital One, Citigroup and Bank of America, are likely just hedging. Microsoft and IBM - backed by JPMorgan and Wells Fargo - are competing to bring blockchain to markets infrastructure.

Key Points:

Key Points:

- Few projects are poised to replace existing infrastructure.
- Distributed ledger implementation more likely to come from internal R&D efforts.
- Governance, scalability, standardization, and security concerns provide healthy moat around existing infrastructure, such as SWIFT.
- Real-time payments, securities clearing and settlement, cross-border payments, and less liquid markets may get blockchain updates

Additional Reading:

- Facebook Libra White Paper
- "SWIFT on distributed ledger technologies," SWIFT Institute, April 2016.
- Ripple Technical Papers

Central bank wholesale payment systems tend to act like blockchains, but are in need of an update. SWIFT was breached in 2016 using just a fax machine. Nasdaq, Intercontinental Exchange, CME Group and other exchanges, which operate as centralized ledgers, won't be unseated.

Blockchain a Dull, Regulated Financial-Market Utility?

Common standards and platforms are essential for banks and exchanges to use blockchain technology for large-scale clearing, settlement and payments, but any new system would attract withering scrutiny from government regulators. The U.S. Treasury Department and Federal Reserve closely monitor financial markets' infrastructure and designate key systems as Financial Market Utilities under Dodd-Frank. FMUs are regulated so stringently they become quasi-governmental utilities or are mutually owned by participants.

Key Points:

Key Points:

- A blockchain-based clearing, settlement, or payments network could be designated a Financial Market Utility.
- FMU regulation includes Fed rules on risk-management, examinations and enforcement actions, and special Federal Reserve account status.

Additional Reading:

- Federal Reserve's list of designated FMUs
- Financial Stability Oversight Council's rationale for designating existing FMUs

Private enterprises interested in creating stablecoins reserved by safe government assets have a long way to go, in our view, to overcome bank regulators' concerns about the creation of money-like assets outside of the commercial banking system that are susceptible to runs.

{CRYPT} Page on the Bloomberg Terminal (8am NY, April 2)

Cryptocurrency Monitor									
Index	Last	Net Chg	% Chg	OpenYest Clo..	2D Chart	30D Rng	Time		
1) BGCI Bloomberg Galaxy	292.79	+8.92	3.14%	285.69	283.87		08:27		
● Bid/Ask Data ● Network Data (Supplied by Mosaic) Base USD									
Coins	Last	Net Chg	% Chg	Circ	Supp.	Market	Vol.	USD Volu..	Time
1) Bitcoin	6979.94	+230.57	3.42%	18.30M	127775.21M	0.0968M	671.08M	08:27	
2) Ethereum	145.565	+4.930	3.51%	110.36M	16064.63M	0.5631M	80.64M	08:27	
3) XRP	0.1824	+0.0052	2.93%	50391.02M	9191.32M	271.9112M	48.95M	08:27	
4) Bitcoin Cash	239.83	+7.79	3.36%	18.37M	4404.52M	0.1139M	27.05M	08:27	
5) Litecoin	41.080	+1.255	3.15%	64.71M	2658.71M	0.4721M	19.35M	08:27	
6) EOS	2.3655	+0.0804	3.52%	918.17M	2174.33M	3.1481M	7.52M	08:27	
7) Monero	54.262	+3.884	7.71%	17.51M	950.01M	0.0222M	1.16M	08:27	
8) Dash	69.803	+1.653	2.43%	9.42M	657.97M	0.0178M	1.24M	08:27	
9) Ethereum Classic	5.216	+0.118	2.31%	118.89M	620.11M	0.4010M	2.10M	08:27	
10) Zcash	33.053	+0.905	2.82%	9.67M	319.75M	0.0399M	1.32M	08:27	
Futures	Last	Net Chg	Volume	Open	Settle	2D Chart	30D Rng	Time	
2) CME Bitcoin	7020	+155	1499	6890	6865		08:27		
Cryptocurrency News More »									
41	✓ Born From the Financial Crisis, Bitcoin Maturation Accelerating	BT	06:51						
42	Be Wary of Coronavirus-Related Scams, Philippines SEC Says	BN	00:35						
43	Bitcoin's Ethereum Rivalry Could Be Assuaged With tBTC Bridge	BN	04:02						
316	Cryptovest: Can Luxury and Blockchain Save Investors During The Covid-19 Pandemic?	WES	08:27						
319	Daily Bitcoin: Bithumb Global Launches Margin Trading for Bitcoin and Ether Pairs with Tether	WEP	08:27						
44	Daily Bitcoin: Nationwide Lockdown: Indian Cryptocurrency Exchanges See Signups and Trade Volu..	WEP	08:23						
49	Inside Bitcoins: Binance Set To Launch Bitcoin Options Amid Many Other Developments	NSL	08:22						
46	Cointelegraph: Bithumb Global Launches Margin Trading for Bitcoin and Ether Pairs with Tether	NSL	08:22						
47	Inside Bitcoins: Bityard Launches Bitcoin Casino with 258 USD/ Free Bonus	NSL	08:19						

Market Access data on BI COMD

Name	2020 Q1	2019 Q4	2019 Q3	2019 Q2	2019 Q1	2018 Q4	2018 Q3	2018 Q2	2018 Q1	2017 Q4
Assets/Market Cap (BTC)	98,914.5	94,573.3	94,695.7	105,988.7	93,255.4	90,139.7	77,425.5	87,639.1	81,159.6	84,576.9
ETPs (BTC)	79,179.5	78,643.3	78,030.7	76,033.7	74,860.4	74,474.7	64,715.5	74,019.1	72,654.6	80,936.9
Bitcoin Tracker EUR	35,659.7	34,793.2	34,969.0	33,000.4	30,166.6	28,834.3	27,463.8	26,651.6	28,048.4	28,158.0
Bitcoin Tracker One - SEK	24,927.3	28,430.6	28,571.7	26,530.1	25,915.0	27,404.2	24,143.7	22,729.0	25,440.7	33,890.2
XBT PROVIDER ETHEREUM ETN - EU	7,989.3	6,584.8	7,745.9	9,979.1	11,298.8	10,777.1	8,115.0	14,961.2	11,686.2	11,279.5
XBT PROVIDER ETHEREUM ETN - SE	3,743.9	3,150.4	3,987.2	4,853.7	5,876.4	5,846.8	4,993.1	9,677.4	7,479.3	7,609.1
Amun Binance Coin ETP	2,111.0	2,102.1								
Amun Crypto Basket Index ETP	1,153.8	1,019.3	1,016.1	1,009.5	970.7	1,612.4				
Amun Bitcoin Cash BCH ETP	881.6	766.2	720.2							
Amun Tezos ETP	879.5	349.0								
WisdomTree Bitcoin	686.8	139.0								
Amun Bitcoin Crypto Single Tra	609.7	616.8	483.7	249.5	312.1					
Amun Ripple XRP ETP	186.5	153.3	181.9	76.2						
Amun Bitcoin Suisse ETP	106.6	61.3								
Amun Bitwise Select 10 Large C	80.5	90.3	57.5	84.7						
Amun Ethereum Crypto Single Tr	77.8	239.7	297.5	250.4	320.9					
Amun Sygnum Platform Winners I	68.1	147.2								
21Shares Short Bitcoin ETP	17.6									
Inverse ETPs										
Futures Open Interest (BTC)	19,735.0	15,930.0	16,665.0	29,955.0	18,395.0	15,665.0	12,710.0	13,620.0	8,505.0	3,640.0
CME Bitcoin Futures	19,735.0	15,930.0	16,665.0	29,955.0	18,395.0	15,665.0	12,710.0	13,620.0	8,505.0	3,640.0
Other (BTC)										
Assets (Underlying NAV)	317,553.5	271,790.1	241,626.9	212,206.0	215,235.0	210,815.6	202,502.1	195,426.5	205,123.2	179,297.3
Grayscale Bitcoin Trust BTC	295,857.4	262,740.7	233,557.2	209,801.8	213,590.5	209,074.4	200,970.7	192,299.8	202,919.0	178,398.7
Grayscale Ethereum Trust	21,696.1	9,049.4	8,069.7	2,404.2	1,644.5	1,741.3	1,531.5	3,126.7	2,204.1	898.5
Market Cap (Price)	343,049.3									
Grayscale Bitcoin Trust BTC	137,791.3									
Grayscale Ethereum Trust										
Bitcoin Price	6,481.4	7,158.3	8,240.9	12,212.7	4,072.2	3,674.2	6,643.4	5,899.6	6,852.5	14,310.9
Assets/Market Cap (\$)	666.6	679.0	783.1	1,307.2	379.9	330.6	514.5	516.8	560.4	1,211.2
ETPs (\$ Millions)	537.8	562.9	643.0	928.6	304.8	273.6	429.9	436.7	497.9	1,158.3
Bitcoin Tracker EUR	243.6	249.1	288.2	403.0	122.8	105.9	182.5	157.2	192.2	403.0
Bitcoin Tracker One - SEK	168.7	203.5	235.5	324.0	105.5	100.7	160.4	134.1	174.3	485.0
XBT PROVIDER ETHEREUM ETN - EU	54.5	47.1	63.8	121.9	46.0	39.6	53.9	88.3	80.1	161.4
XBT PROVIDER ETHEREUM ETN - SE	25.5	22.6	32.9	59.3	23.9	21.5	33.2	57.1	51.3	108.9
Amun Binance Coin ETP	13.7	15.0								
Amun Crypto Basket Index ETP	7.6	7.3	8.4	12.3	4.0	5.9				
Amun Tezos ETP	6.0	2.5								
Amun Bitcoin Cash BCH ETP	5.8	5.5	5.9							
WisdomTree Bitcoin	4.8	1.0								
Amun Bitcoin Crypto Single Tra	4.0	4.4	4.0	3.0	1.3					
Amun Ripple XRP ETP	1.2	1.1	1.5	0.9						
Amun Bitcoin Suisse ETP	0.7	0.4								
Amun Bitwise Select 10 Large C	0.5	0.6	0.5	1.0						
Amun Ethereum Crypto Single Tr	0.5	1.7	2.5	3.1	1.3					
Amun Sygnum Platform Winners I	0.4	1.1								
21Shares Short Bitcoin ETP	0.1									
Inverse ETPs										
Futures Open Interest (\$ Millions)	128.9	116.1	140.1	378.6	75.1	56.9	84.6	80.1	62.5	52.9
CME Bitcoin Futures	128.9	116.1	140.1	378.6	75.1	56.9	84.6	80.1	62.5	52.9
Other (\$ Millions)										
Assets (Underlying NAV)	2,058.2	1,945.5	1,991.2	2,591.6	876.5	774.6	1,345.3	1,152.9	1,405.6	2,565.9
Grayscale Bitcoin Trust BTC	1,917.6	1,880.8	1,924.7	2,562.2	869.8	768.2	1,335.1	1,134.5	1,390.5	2,553.1
Grayscale Ethereum Trust	140.6	64.8	66.5	29.4	6.7	6.4	10.2	18.4	15.1	12.9
Market Cap (Price)	2,223.4									
Grayscale Bitcoin Trust BTC	893.1									
Grayscale Ethereum Trust										

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