PRASOS

QUARTERLY REPORT

Q3 2019

in collaboration with dcresearch

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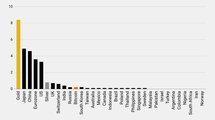
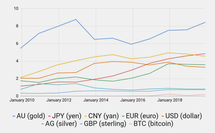
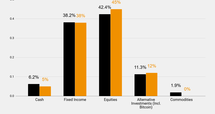
BITCOIN AS GLOBAL ASSET CLASS

By comparing bitcoin with other global currencies, the leading digital currency can be listed as 11th biggest global base money, excluding gold and silver, bitcoin's ranking would be 9. Bitcoins are limited by the protocol to an eventual 21 million in supply by the year 2140. Bitcoins may circulate as base money of the future.

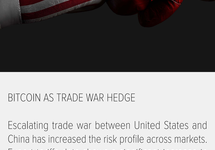




The supply of bitcoins will only grow at 0,1% per year, or double every ~500 years. And it gets even more unique, as the bitcoin protocol won't allow that doubling to happen, as it's supply will cap at 21 million in 2140. There has been no other money in history with bitcoin's unique features.



Bitcoin belongs to every investment portfolio. Q3 end recommendation by Swiss Falcon Private Bank, indicates an optimal 11,3% allocation to alternative investments, like bitcoin. Falcon has been recommending digital asset allocation to its client base before as well. In the tail-end of third quarter, Bakkt's futures launch was expected to be a bullish catalyst, but has so far fallen short of expectations with low traded volumes. However bitcoin's fundamentals remain adamant and investor sentiment is still relatively optimistic.



BITCOIN AS TRADE WAR HEDGE

Escalating trade war between United States and China has increased the risk profile across markets. Export tariffs data shows a significant increase in tariffs on both sides.

Chinese export tariffs for US products were 8% in January 2018, while US tariffs for Chinese were 3,1%. In July 2018 US raised their export tariffs to 3,8%. October 2018 saw a huge increase in both as China raised their number to 18% and US to 12,4%, respectively.

Tariffs were lowered briefly in June 2019 as China decreased their tariffs to 17% and US to 12,3%. The tariffs will be incrementally increased again in November 2019, when Chinese tariffs will rise to 26% and US to 24,3% [1].

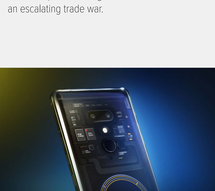
The trade (technology, and currency) war between the United States and China escalated significantly during the second quarter of 2019. The said trade war does not only involve basic goods between the nations but additionally technology on a broader scale. National (fiat) currencies are also involved in the flux.

"In an age of unlimited fiat currency printing, all value flows to scarce assets – and bitcoin is the scarcest liquid asset in history."

- Robert Breedlove

Developing trade war will have an increasing effect on global macro-level trade. As the US and China combined represent more than $35 billion in annual GDP, tariffs and restrictions will radiate to virtually every economy on a global scale. S&P 500 Index took a substantial hit during May 2019, dropping close to -7% amid rising trade war tensions.

Bitcoin, as a non-correlated asset class, offers definitive protection against threat scenarios like an escalating trade war.

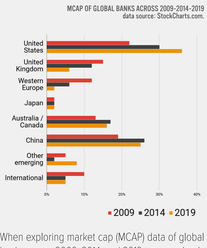


A SMARTPHONE WITH BITCOIN FULL NODE

Taiwanese electronics company HTC announced the launch of their newest smart device with cryptocurrency features. The EXODUS 1s will include a cryptocurrency wallet and has the capability to run a full bitcoin node. These qualities will help HTC to get an edge in competitive smartphone market, as it's currently the only manufacturer with products aligned to crypto user segment.

BITCOIN AND SYSTEMIC RISK

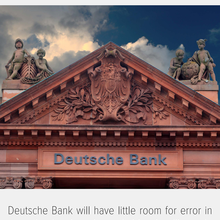
Especially European banks are in a bad shape, increasing systemic risk in the eurozone area. Weak data from the leading European banks is even more remarkable considering we've seen almost 10 years of real GDP growth.



When exploring market cap (MCAP) data of global banks across 2009, 2014, and 2019, we can clearly see the escalating growth of US and Chinese banking sector. However the MCAP of banks in Western Europe and UK has diminished substantially.

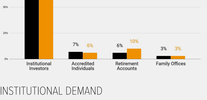
12-year cumulative returns are not looking promising either with Deutsche Bank recording -91,58%. As a huge contrast, J.P. Morgan Chase & Co from US displays 250% positive cumulative return for the exactly same time period.

From an investors perspective, $10000 invested in Deutsche Bank 5 years ago is now worth ~$2000. Deutsche Bank's (DB or DBK) performance has been poor throughout the last 5 years. More remarkably the last 5 years have been a season of growth within the global macroeconomy, making the uniquely poor performance even more out of scale.



Deutsche Bank will have little room for error in executing its plans. Its capital levels will remain stretched and barely sit above the regulatory minimums in coming years. DB will be facing mandatory reorganization and cost-cutting plans.

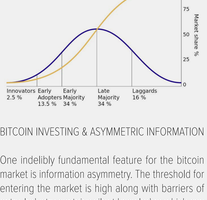
Deutsche Bank said that it expected to report a loss for the second quarter of 2,8 billion EUR, or 3,1 billion USD, after subtracting the costs involved in carrying out the plan. Shareholders will not receive a dividend for 2019 and 2020, the bank said.



INSTITUTIONAL DEMAND

Grayscale LLC, among others, reported escalating institutional demand during third quarter of 2019. According to Grayscale's data, institutions accounted for 84 percent of their total inflows during Q3.

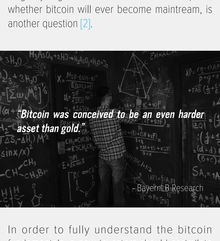
The institutional growth in third quarter is part of a longer trend which only gained more momentum during last three months. The institutional clients for Grayscale are reportedly mostly US hedge funds.



BITCOIN INVESTING & ASYMMETRIC INFORMATION

One indelibly fundamental feature for the bitcoin market is information asymmetry. The threshold for entering the market is high along with barriers of entry. Industry contains silent knowledge which can only be acquired by empirical experience. Diffusion of innovations theory, developed by Everett Rogers, shows adopter groups for a new technology can be divided into: Innovators, early adopters, early majority, late majority, and laggards.

With each following segment, the market share eventually reaches saturation point, after the last segment, laggards, have entered the market. After bitcoin's first ten years of existence, we're still in innovators, or early adopters segment. Bitcoin has a long way to go towards real mainstream adoption, whether bitcoin will ever become mainstream, is another question [2].



In order to fully understand the bitcoin fundamentals, a new investors should assimilate following entities:

Block reward halving
Decentralized systems
Game theory
Mining
Supply cap
Value and scarcity

Information asymmetry gives an edge to already established institutions and operators in the industry, making them valuable partners for parties wanting to increase their exposure in the field.

BITCOIN'S VALUE PROPOSITIONS TO INVESTORS

GROWTH

The pioneering blockchain industry is developing with escalating pace and new projects are constantly gaining traction. The mass adoption in bitcoin & blockchain tech and tokenization in general will continue to evolve rapidly in coming years.

DIVERSIFICATION

Bitcoin with a low historical correlation to traditional markets, is an emerging asset class to consider as a part of the portfolio diversification. Even just 1-5% allocation to bitcoin has been historically impacting portfolio performance favorably.

HEDGE

Bitcoin can be seen as a potential hedge to traditional asset classes. Built-in features like 21 million hard cap, inflation-free structure, and antifragile blockchain make bitcoin a store of value.

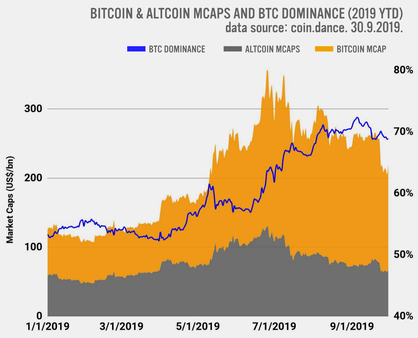
DECENTRALIZED VALUE

Global, decentralized, censorship-resistant & programmable asset with proven 10-year track record, showing outstanding staying power. With 99,98% uptime since inception, every subsequent day online makes bitcoin more robust, secured by built-in incentive structure.

INDUSTRY OUTLOOK

MARKET CAPITALIZATIONS

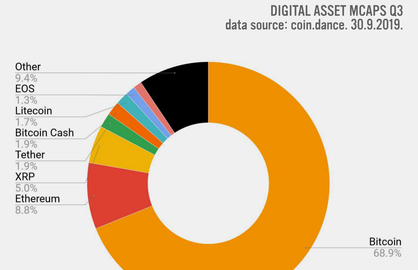
Bitcoin's market cap continued its incremental growth in third quarter, rising from early July 62% to September >70%.



Bitcoin acts as the source of liquidity to the market, consequently we see bitcoin's dominance continuing to grow in long-term future. Why are the altcoins and token losing MCAP?

One fundamental reason is that the market is maturing, institutional investors were accumulating during Q1 & Q2 bullish trend. Another reason is capitulation among ERC-20 projects. ERC-20 ICOs raised significant amount of money during 2017 ICO hype, however two years later most projects are suffering from poor track record. The ICO projects need to sell assets, usually Ethereum, to cover running costs. Additionally ICO investors are likely frustrated with the poor performance and are exposed to capitulation.

When exploring the market cap data we should always remember that MCAP is only a relevant metric when it's supported by volume relative to MCAP, and when volume comes from a broad group of participants that are representative of market demand. Many altcoins don't fit the criteria above, so the real (organic) bitcoin dominance is well over the said percent.



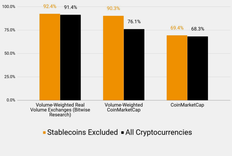
During Q3 2019 bitcoin's market share, also known as "Dominance Index" decreased slightly to 68,9% level after reaching as high as 72% during the third quarter. The relative weakness for majority of most altcoins continued across the third quarter.

DOMINANCE AND LIQUIDITY

The CoinMarketCap sourced bitcoin dominance index is a bit controversial topic within the industry. By calculating the market capitalization of a coin, its price multiplied with its circulating supply, and dividing it by the total market capitalization of all coins.

The CoinMarketCap approach can be easily biased by e.g. a project with 1 billion pre-mined digital units. If each unit would trade for 1 USD each, the nominal MCAP of the project would be 3 billion USD.

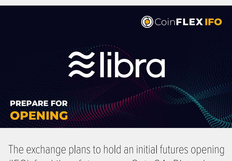
BITCOIN MARKET DOMINANCE & LIQUIDITY
data source: Arcane Research.



Arcane Research wanted to align volume with market cap, using data by Bitwise Research. By weighing real volume and excluding stablecoins (which are often pegged to USD), we have a more clarified view on bitcoin's dominance.

STABLECOINS

CoinFLEX, a cryptocurrency derivatives exchange, is planning to launch physically settled futures contracts for Libra, the Facebook's proposed stablecoin.



The exchange plans to hold an initial futures opening (IFO) for Libra futures on Oct. 24, Bloomberg reported Monday. The futures will allow traders to bet on whether Libra will be live by Dec. 30, 2020 [3].

Futures investors will either receive Libra tokens or nothing at all by the date, based on their long and short positions.

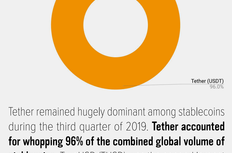
TETHER (USDT)

The global volume for stablecoin Tether (USDT) keeps growing, China ascended to leading position in Tether volume during 2019. China's increase in USDT volume has been occuring at the same time with declining US volume.

USDT ON-CHAIN VOLUME BY EXCHANGE LOCATION
data source: Diar

Tether has found a new escalating market in Russia-China cross-border trade as entities prefer it over cryptocurrencies for it's alleged stability and low volatility [4].

STABLECOIN VOLUMES
data source: Messari. 30.9.2019.

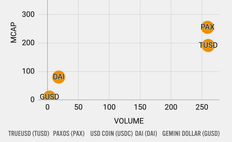


Tether remained hugely dominant among stablecoins during the third quarter of 2019. **Tether accounted for whopping 96% of the combined global volume of stablecoins**. TrueUSD (TUSD) was the second largest stablecoin in volume terms, with 1,6% of global transactional volume [5].

STABLECOIN MCAPS
data source: Messari. 30.9.2019.

When comparing market cap (MCAP) data, the stablecoins are bit more evenly distributed. Tether's dominance is 81%, while USDC's MCAP has accumulated to 8,4%. Paxos (PAX) is also increasing its market share with 5% of the current control group. TrueUSD takes the fourth place within 3,7% of global MCAP.

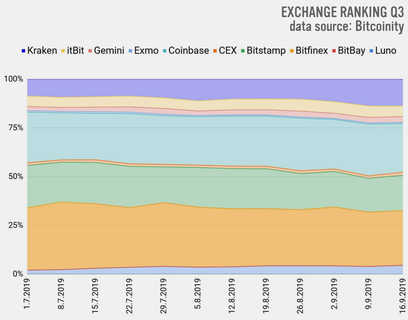
STABLECOIN VOLUMES AND MCAPS IN MILLIONS (EXCLUDING USDT)
data source: Messari. 30.9.2019.



When excluding Tether from the control group, we can follow the competition of smaller stablecoins more closely. **USD Coin (USDC) has the highest market cap, close to 430 million** USD. Paxos (PAX) and TrueUSD (TUSD) increased in volume during thrird quarter, both >250 million USD. MCAP and volumes stayed relatively low for smaller ones like Dai, Gemini dollar.

EXCHANGES

When exploring exchange rankings by Bitcoinity data, we can distinctively notice the **increase of Kraken's volume**. Kraken's share in the control group grew from early July **8,6 percent to 13,6%** in the tail end of third quarter.



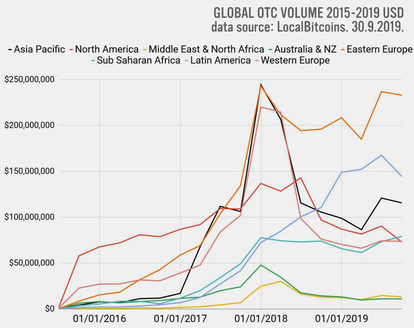
The European **Bitstamp exchange also grew in comparison, from 21,7% to 23,1%** during third quarter.

Notably, the orderbook based share of Bitfinex contracted from 32 percent to 25,4% by the end of Q3.

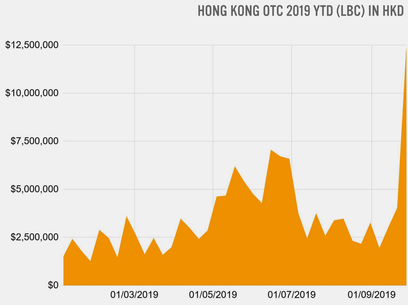
Bitcoinity analyses exchange data by weighing orderbook data instead of the default typical volume data. Bitcoinity weighs on open orders based on how long time ago the given price was achieved.

PEER-TO-PEER MARKET

Scoping global OTC data (LBC 2015-2019) gives us relevant insights on the state of bitcoin OTC market. **Latin America saw all-time high trading volume during late second quarter of 2019**, Eastern Europe's volume has been increasing in escalation and Russia was the second biggest market for LocalBitcoins in 2018 [6].



Sub Saharan OTC volume has been steadily climbing while volumes in Western Europe, Asia Pacific, and North America have decreased. The OTC market data confirms the hypothesis that most bitcoin adoption occurs in less-developed environments. While the volume in western countries rocketed during Q3-Q4 2017 and since diminished, the organic demand seems to be in third world countries.



The OTC volume in Hong Kong went off the charts in late third quarter, as tensions escalated between local political groups. Hong Kong will likely be facing increasing geopolitical risk, potentially ending its era as one of the favourite investment locations in Asia.

CURRENCIES

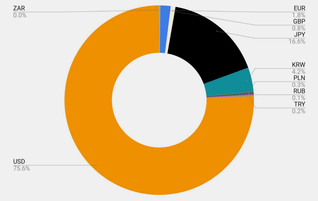
USD was the most dominant global national currency traded for bitcoin in September 2019, counting for **75,6%** of the volume.

Second most traded fiat was Japanese yen (JPY) with 16,6% of global volume.

Third largest fiat currency by volume was Korean KRW, with 4,2% share.

Euro (EUR) was fourth with only 1,8% of the total volume.

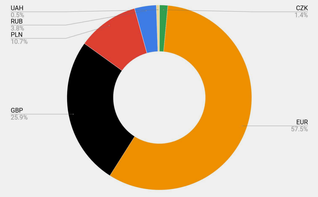
MOST TRADED GLOBAL NATIONAL CURRENCIES FOR BITCOIN
data source: Coinhills. 30.9.2019.



The huge trading volume shows USD's dominance in bitcoin trading. Despite the general talks against USD's position as global reserve currency, dollar still shows its strength and is incrementally supported by weakening EM and third world national currencies.

Euro (EUR) continued to showcase most volume among European national currencies traded for bitcoin.

MOST TRADED EUROPEAN NATIONAL CURRENCIES FOR BITCOINdata source: Coinhills. 30.9.2019.

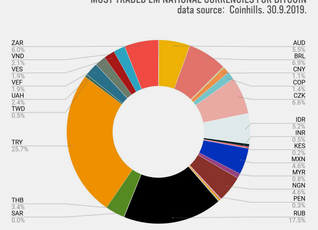


The second most significant fiat currency traded for bitcoin in Europe was pound sterling (GBP), accounting for 25,9%.

Surprisingly Polish zloty took the third position among most used national currencies for bitcoin in Europe.

By Coinhill's data, Russian ruble takes the fourth position with 3,8% share. Coinhill uses exchange data, which greatly affects these numbers. Hypothetically if OTC volume would be included, the RUB percentage would be a lot higher. Russia was the single most largest market area for bitcoin OTC platform LocalBitcoins in 2018.

MOST TRADED EM NATIONAL CURRENCIES FOR BITCOIN
data source: Coinhills. 30.9.2019.



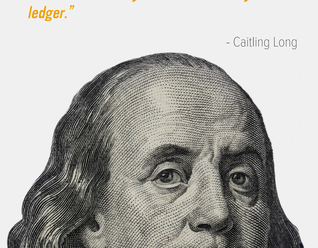
We also gathered emerging markets data for most traded national currencies for bitcoin. Turkish lira (TRY) leads the control group with 25,7 percent share.

Russian ruble (RUB) comes as second with 17,5% share. Coinhills only tracks exchanges so OTC data is not included. If over-the-counter data would be included here, RUB would likely be dominant.

Third place goes for Brazilian real (BRL) with 6,9 percent share. Bitcoin's popularity has been rising in South American countries like Brazil and Argentina.

"Bitcoin is history's first universally honest ledger."

- Caitling Long

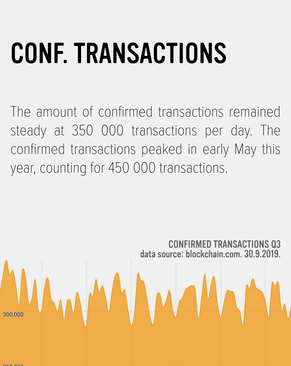


ASSET SUMMARY

UNIQUE ADDRESSES

The number of unique bitcoin addresses used in Q3 2019 remained steady, at close proximity to 500 000 addresses.

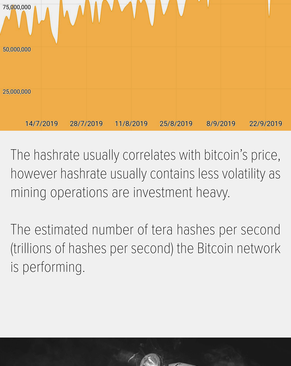
NUMBER OF UNIQUE ADDRESSES USED DURING Q3 2019
data source: blockchain.com 30.9.2019.



CONF. TRANSACTIONS

The amount of confirmed transactions remained steady at 350 000 transactions per day. The confirmed transactions peaked in early May this year, counting for 450 000 transactions.

CONFIRMED TRANSACTIONS Q3
data source: blockchain.com. 30.9.2019.



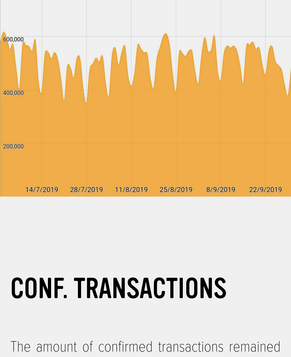
NETWORK HASHRATE

Bitcoin hashrate has been growing across 2019, from early January 40M TH/s, to late third quarter 82 million. Bitcoin's hashrate peaked on 26th September, indicating 108 million TH/s. The indicator also saw a "flash crash", dropping briefly from 100M level to 67M within 24 hours.

HASHRATE Q3
data source: blockchain.com. 30.9.2019.

The hashrate usually correlates with bitcoin's price, however hashrate usually contains less volatility as mining operations are investment heavy.

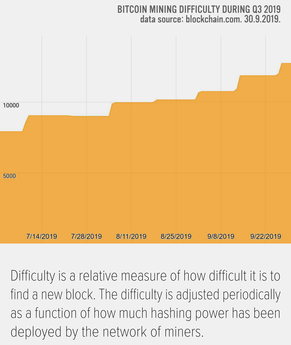
The estimated number of tera hashes per second (trillions of hashes per second) the Bitcoin network is performing.



MINING DIFFICULTY

Bitcoin difficulty increased has been increasing steadily since January 2019. Mining difficulty adjusted upwards during the third quarter along with the increase in the hashrate.

BITCOIN MINING DIFFICULTY DURING Q3 2019
data source: blockchain.com. 30.9.2019.



Difficulty is a relative measure of how difficult it is to find a new block. The difficulty is adjusted periodically as a function of how much hashing power has been deployed by the network of miners.

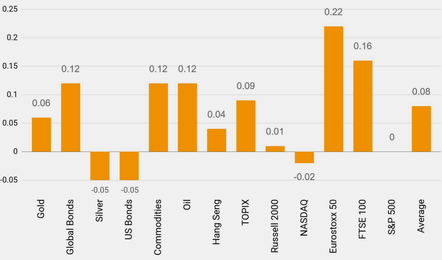
CORRELATIONS

The correlation data from Q2 2016 to Q2 2019 confirms the bitcoin hypothesis as a non-correlated asset class.

Correlation with S&P500 has been extremely close to 0, correlation with NASDAQ -0,02.

Bitcoin has a moderately positive correlation with gold.

BITCOIN'S CORRELATION WITH ASSET CLASSES Q2 2016 - Q2 2019
3y weekly return correlations
data sources: Binance, Bloomberg.



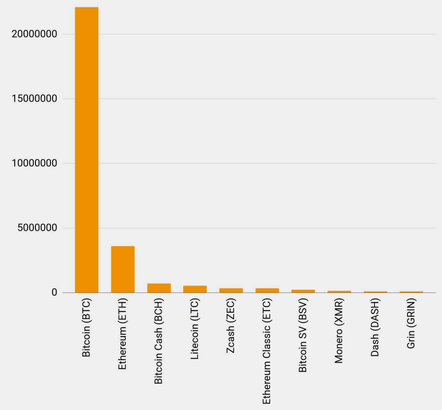
Surprisingly, bitcoin was most correlated with Eurostoxx 50 in this comparison.

Average correlation with asset classes in the control group: 0,08 [7].

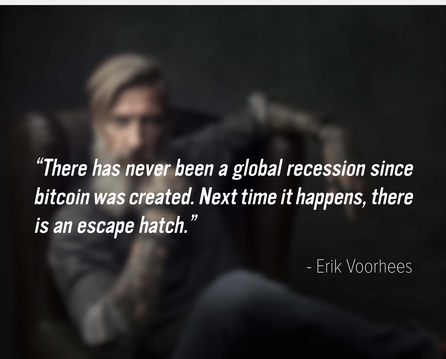
BITCOIN ANTIFRAGILITY

Bitcoin is, as a decentralized system, antifragile, and robust against outside attacks. Implemented 51% attack for 24H would cost approximately 1,4 billion USD.

24H ATTACK COST FOR MAJOR CRYPTOASSETS
data source: Messari



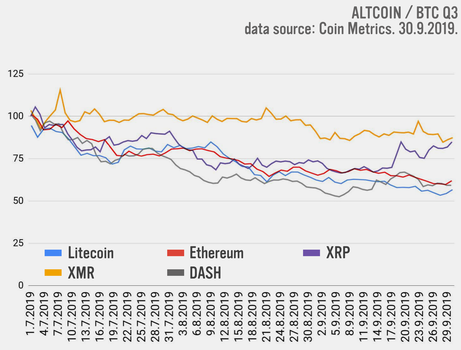
However, smaller altcoins and small cap tokens are more vulnerable to attacks. The structure of these assets is usually centralized. The teams of altcoin projects are public by default, with some exceptions, and consequently are a single point of failure.



"There has never been a global recession since bitcoin was created. Next time it happens, there is an escape hatch."

- Erik Voorhees

ALTCOIN / BTC PAIRS



Litecoin was launched by Charlie Lee in October 2011 as an attempt to make bitcoin more scalable and faster.

Litecoin's price compared with bitcoin dropped drastically at the end of 2019's second quarter, peaking at 0,018 in May, dropping to 0,01 in June. Litecoin's price continued to slide during Q3 against BTC, when bitcoin dominance index reached new highs.

Ethereum is a public, open-source, blockchain-based distributed software platform, that allows developers to create and deploy decentralized applications.

The platform's currency is called ether. Ethereum's price has stayed in the 0,3 range, dropping to 0,026 in late June. Ethereum's price dropped against bitcoin, again, during the third quarter of 2019.

Ripple is known as a Real Time Gross Settlement System, the currency traded is known as XRP and transfer times are immediate.

RP isn't made up of a blockchain but rather a "hash tree" and its currency can't be mined because there are a finite number of coins, one billion. XRP weakened relatively little compared with bitcoin during the third quarter.

Monero was created in 2014. Monero utilizes senders' unique ring signatures, confidential, recipient addresses and Ring Confidential Transactions to enable privacy and prevent coins being spent more than once at a time.

Monero's performance against bitcoin was relatively stable during the quarter, but ended up dropping -13% as a result of the weakness in the latter part of Q3.

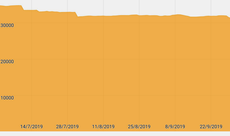
Dash, a derivative of litecoin (and bitcoin), was introduced in 2014. A unique feature of dash, is that it has masternodes that stake at least 1000 DASH in order to have the ability to instantly confirm transactions. The price of dash lost its momentum against bitcoin.

LIGHTNING NETWORK (LN)

Lightning network is becoming an essential part of bitcoin ecosystem, **in less than two years, LN has grown to 32 000 total channels, 4000 nodes with active channels, and reaching a total capacity of 8,6 million US dollars.**

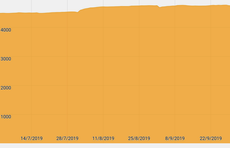
Within its early days, the LN network is still relatively centralized though, In June 2018, 10 largest LN nodes had 53% of the network's capacity, in January they had 38% and currently it's about 32%.

LN CHANNELS IN Q3
data source: Bitcoin Visuals. 30.9.2019.

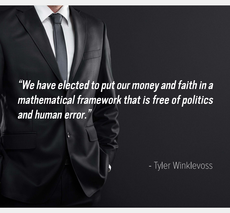


LN channels dropped slightly during third quarter of 2019, from early July 34 788 channels to tail-end 31 371 channels. However LN fundamentals still look bright.

LN NODES Q3
data source: Bitcoin Visuals. 30.9.2019.



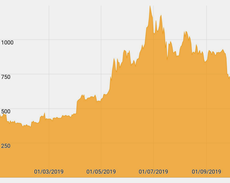
Meanwhile as the LN channels dropped slightly, **the amount of LN nodes increased** from 4495 to 4758 throughout third quarter of Q3. We're expecting a steady increase in lightning adoption within nearby years.



INDICES

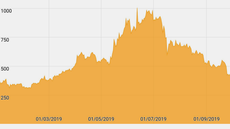
Bletchley Indexes, acquired by CoinMetrics during second quarter of 2019, provide an assortment of indices for tracking different areas of the digital asset market. Bletchley Indexes will be rebranded to CoinMetrics Bletchley Indexes (CMBI), TBA in upcoming months. Bletchley Indexes are an unique tool for evaluating and understanding the digital asset environment [8].

BLETCHLEY 10 2019 YTD



Bletchley 10 index is usually highly correlated with bitcoin, dropping relatively little during the retracement at the tail end of 3rd quarter.

BLETCHLEY 20 2019 YTD



Bletchley 20 index suffered more during late quarter drop.

BLETCHLEY 40 2019 YTD

Bletchley 40 index composed of 40 small-sized digital assets retraced deeply in relation to Bletchley 10. Smaller-sized digital assets suffer from lack of liquidity compared with bitcoin and top 10 digital assets.

BLETCHLEY METHODOLOGY

Bletchley 10 index → Market cap weighted index composed of 10 of most valuable digital assets by nominal MCAP.

Bletchley 20 index → Market cap weighted index composed of 20 medium-sized digital assets by nominal MCAP.

Bletchley 40 index → Market cap weighted index composed of 40 small-sized digital assets by MCAP.

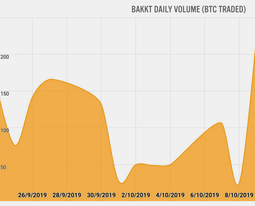
The market capitalization of each asset in indexes is calculated off of the expected total supply in 2050, using OnChainFX data.

DERIVATIVES

BITCOIN FUTURES: CASH VERSUS PHYSICAL SETTLEMENT

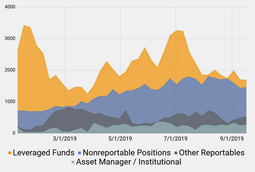
The long anticipated Bakkt had a modest launch volume, compared to market's expectations. However volume started to spike during early fourth quarter. Bakkt's fundamental difference to e.g. CME bitcoin derivatives is that they're physically settled, i.e. the company will pay out in real bitcoin upon settlement [9].

BAKKT DAILY VOLUME (BTC TRADED)



CME's products are cash-settled, meaning they'll exclusively use USD for transactions. While CME has longish experience within the industry and a proven product, the cash-settlement has been provoking controversy among bitcoiners, as it transacts with "paper bitcoins".

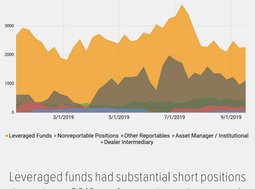
CME LONG POSITIONS 2019-YTD



When exploring CME BTC futures COT data, starting from 1st of January 2019, it's clear that leveraged funds had significant long positions during early quarter 2019 reaching 3417 contracts on January 15th. Leveraged funds reached new highs again in July 2nd, gaining 3253 contracts. Nonreportable positions (banks) were another segment with sizeable long positions, accumulating through first, second, and third quarters. Asset managers increased their long positions during Q2-Q3 after a quiet first quarter.

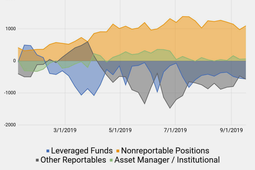
In addition to current BTC futures, CME plans to launch options on bitcoin futures during first quarter of 2020 [10].

CME SHORT POSITIONS 2019-YTD



Leveraged funds had substantial short positions throughout 2019 so far, peaking during early July (9.7) with 3730 contracts. Nonreportable and asset manager short positions were relatively low, respectively. Other reportables peaked on June 25th with 1967 contracts.

CME NET POSITIONS 2019-YTD



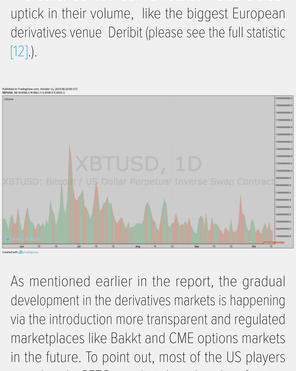
Notably the net positions data shows nonreportable positions (banks) having noticeably bullish positions on bitcoin, recording well above 1000 contracts from early Q2 to the present day. However leveraged funds and other reportables remained quite heavily net short. Asset managers were relatively bullish during late Q2 and early Q3, peaking at 359 contracts on June 11th.

VOLATILITY

Q3 was yet another active quarter after the significant pick up with the activity during the second quarter. The BTC price peaked at the end of June, thereafter retreating to the trading range of 10-12K USD for the most part of the third quarter. On 24th September there was a big sell off to 8K USD level and price stabilized around that level towards the end of the quarter. 30 realized rolling volatility decreased from beginning of July to around 45%, but jumped following sudden price moves during the last week of the quarter.

BitMEX price volatility is computed as the standard deviation of log-returns for the past 30 days, scaled by the square root of 365 to annualize, and expressed as a percentage. Source: BitMEX 30 day Historical Volatility Index (.BVOL Index) [11].

LIQUIDITY



Bitcoin spot trading volumes across reported exchanges were volatile in the beginning of the quarter during the price peak. At the end of the second quarter we saw daily trading volumes of around 40 billion USD.

Early July we witnessed peak volumes above 30 billion USD and then gradually stabilizing the a range of 10-25 billion USD on a daily basis. Bitcoin's so called turnover ratio remained also relatively high, meaning around 10% worth of outstanding bitcoins changed hands every day in the spot markets during the last quarter (see chart).

BITCOIN LIQUIDITY

Another chart shows us the trading volume of BTC perpetuals swap volumes in BitMEX marketplace. The volume peaked at around 14 billion USD notional value in late June and normalized to a range of 2-8 billion USD on a daily basis thereafter. (Source: Bitmex)
The other derivatives markets saw also a clear uptick in their volume, like the biggest European derivatives venue Deribit (please see the full statistic [12].).

As mentioned earlier in the report, the gradual development in the derivatives markets is happening via the introduction more transparent and regulated marketplaces like Bakkt and CME options markets in the future. To point out, most of the US players are already CFTC regulated as the classification of the instruments has been clearer. Basically all US based trading venues like CME and Bakkt, and the smaller ones like LedgerX and ErisX are under CFTC regulation. The development towards more regulated trading venues and reclassification of crypto related instruments is likely to happen in Europe as well, once the regulatory framework catches up. Please find a comprehensive view of the crypto derivatives market here [13].

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