

State of the Cryptocurrency Market

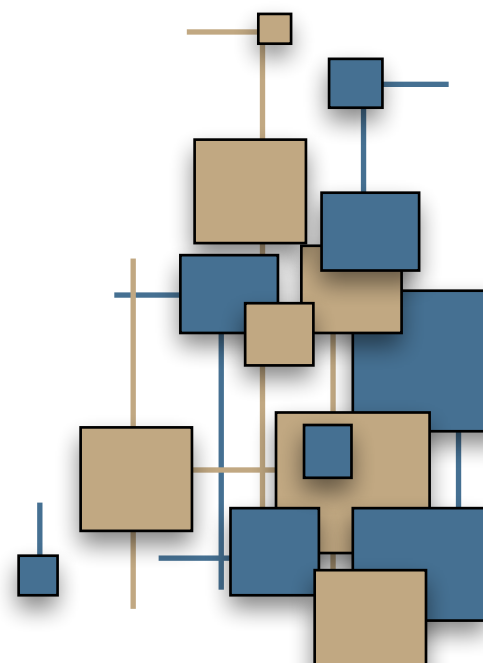
October 2019



FAS

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News Review

October 1st to October 7th

Finance and Regulations

SEC has reached \$24 million settlement over unregistered ICO with Block.one, parent company of EOS.

Ohio Treasury has suspended ohiocrypto.com website which allowed businesses to pay their taxes with Bitcoin.

Members of the United States House of Representatives Financial Services Committee are raising concerns regarding US' competitiveness in light of many digital fiat currencies rising.

Japan's Financial Regulator Issues Draft Guidelines for Funds Investing in Crypto.

The number of investigations into cryptocurrency firms by the U.K.'s financial regulator, the Financial Conduct Authority (FCA), have increased by 74% compared to the previous year.

Business

Coinbase announced that it will allow USD Coin holders on their platform to earn 1.25% yield annually.

John McAfee launches his own decentralized exchange running on Ethereum. The beta release is scheduled for 7th of October.

Revolut partners with Visa to expand their services to North America, South America and Asia, adding 24 new markets.

Morningstar Credit Ratings plans to evaluate debt securities which were issued in the form of tokens on blockchain in order to provide more credibility to investors.

Market

Revolut partners with Visa to expand their services to North America, South America and Asia, adding 24 new markets.

Blockchain Transparency Institute (BTI) has stated that global wash trading has decreased by more than 35% in September.

Patrick Harker, President of Philadelphia Federal Reserve Bank, stated that issuing of central bank digital currencies is "inevitable".



Technology

Samsung Pay partners with Finabl, member of RippleNet, to offer cross-border payments.

KB Kookmin Bank, major South Korean bank, is planning to implement Blockchain technology to provide a spectrum services, such as funding, issuance of digital tokens, custodial services and etc.

BitTorrent's Decentralized File Sharing Protocol BTFS Launches Its Mainnet.

Stellar (XLM) plans to remove inflation altogether in the next update, since it is no longer serves its purpose.

RCS Global, Berlin-based blockchain company, provides solutions to fight against "blood diamonds" in the Democratic Republic of Congo.

October 8th to October 14th

Finance and Regulations

United Kingdom Central Bank has stated that Facebook's Libra has to comply with all of their regulations in order to be operational in UK.

Thailand has approved its first ICO portal operator which targets \$98 million Token Offering.

The United States Internal Revenue Service added a question about cryptocurrency ownership for the upcoming tax season.

US SEC, FinCEN, CFTC release a joint statements regarding cryptocurrency holders to be mindful of AML and CFT.

US SEC has stopped Telegram's digital token offering.

Binance has started to accept Wechat and Alipay services to pay for fiat deposits on the exchange.

Business

Hdac Technology, blockchain branch of Hyundai Motor Group, plans to set up blockchain investment fund for \$10 million in 2019.

Valdis Dombrovkis, EU's finance commissioner, pledged to propose unified rules for European Union to regulate cryptocurrencies, such as Libra.

Market

Binance has launched peer to peer trading in Chinese yuan (CNY) against BTC, ETH and USDT.

Alipay stated that it will ban all transaction related to cryptocurrencies.

Report from G7 states that global stablecoins pose threat to international financial stability.

The Department of Economic Development of Dubai has revealed plans to create blockchain based business registry platform.

Tron and Stellar have created a new alliance which will provide university students with educational materials in blockchain.

Technology

New reward system for tokens built by Enterprise Ethereum Alliance is being backed by Microsoft and Intel.

FC Bayern Munich has announced to release digital collectibles of its players to increase fan engagement.

BMW, Fenerbahce, Ford, Renault and Honda are planning to start testing phase for blockchain identification and payment system in the United States.

Singapore Shipping Association is working towards blockchain based identification for ship registration and renewal process.

October 15th to October 21st

Finance and Regulations

Bermuda is the first government that allows its citizens to pay taxes in cryptocurrency (USDC).

Market

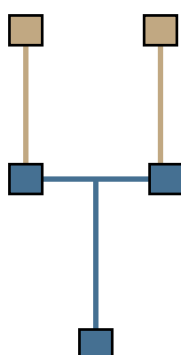
Binance has launched its physically backed Binance Coin on Swiss stock exchange.

Oxford English Dictionary has added "Satoshi", as Bitcoin's smallest subunit.

Changpeng Zhao, The CEO of Binance, stated that Russian Ruble will be the first fiat-crypto trading option.

Bitmain has opened the largest Bitcoin mining farm in Rockdale, Texas

Nasdaq has created CIX100, AI powered index based on top 100 cryptocurrencies' data.



Business

Ripple partners with Finastra, third largest fintech company in the world, to provide access to RippleNet for Finastra's customers.

Fidelity Investments has launched its custody service for cryptocurrencies.

Binance joins governance council of Klaytn, blockchain project from Kakao.

Technology

The Sacramento Kings, NBA basketball team, partners with CryptoKaiju in order to launch crypto-collectibles.

eToro launches cryptocurrency portfolio weighted by Twitter mentions, which are analyzed by AI algorithm.

HTC will soon release a blockchain smartphone capable of running a full bitcoin node.

The University of Malta now offers Master's in Blockchain and Distributed Ledger Technology.

October 22nd to October 31st

Finance and Regulations

Lithuania's CB considers IBM and Tieto for developing LBChain DLT platform.

Bahama is planning to release its own cryptocurrency in order to be relieved from burden of dependency on physical cash.

China is considering blockchain and AI for cross border financing.

China is being favorable towards blockchain technology, planning to release "crypto law" in January 2020.

Market

Alfred F. Kelly, CEO of Visa, stated that they are still considering collaboration with Libra Foundation.

Business

IBM, TBCASoft and SoftBank announced a release of telecom blockchain payment system.

OKEx joins Klaytn blockchain, developed by Kakao, South Korean Internet Giant.

Samsung incorporates Tron support to its DApp Store, Blockchain Keystore.

Mark Zuckerberg stated that Facebook would withdraw from Libra Association if it didn't comply to all of the regulations.

Coinbase has gathered nearly \$2 billion in transaction fees since 2012.

Technology

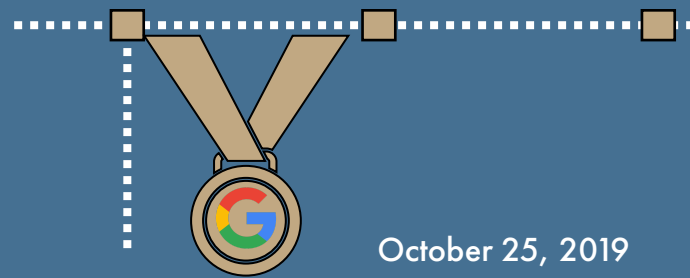
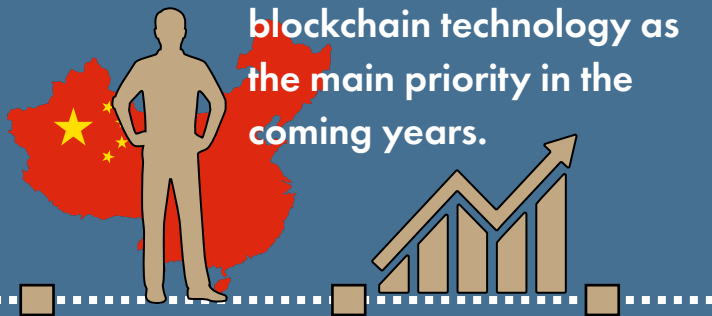
Changpeng Zhao, CEO of Binance, claims that WeChat uses blockchain to record financial transactions.

TON's investors voted against refund in order to uphold their claims until April 30th

Bitcoin had the largest surge since 2011 in terms of % growth

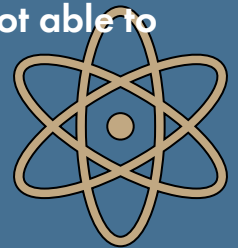
October 23, 2019

Xi Jinping, President of China, urges to accelerate development of blockchain technology as the main priority in the coming years.



October 25, 2019

Google claims to have achieved quantum supremacy, in other words, it is capable of what other supercomputers are not able to achieve.



PayPal, Visa, Mastercard, eBay and Stripe have announced their withdrawal from Libra Association led by Facebook.

October 4-14, 2019

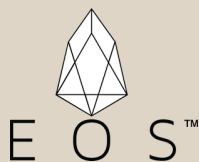
A new report published by the German ministry of Finance on October 11 and titled "First National Risk Analysis" suggests that Europe could join Korea at banning privacy coins from exchanges"



October 15-21, 2019

Top-25 Market Performances

[Check the Online Dashboard](#)



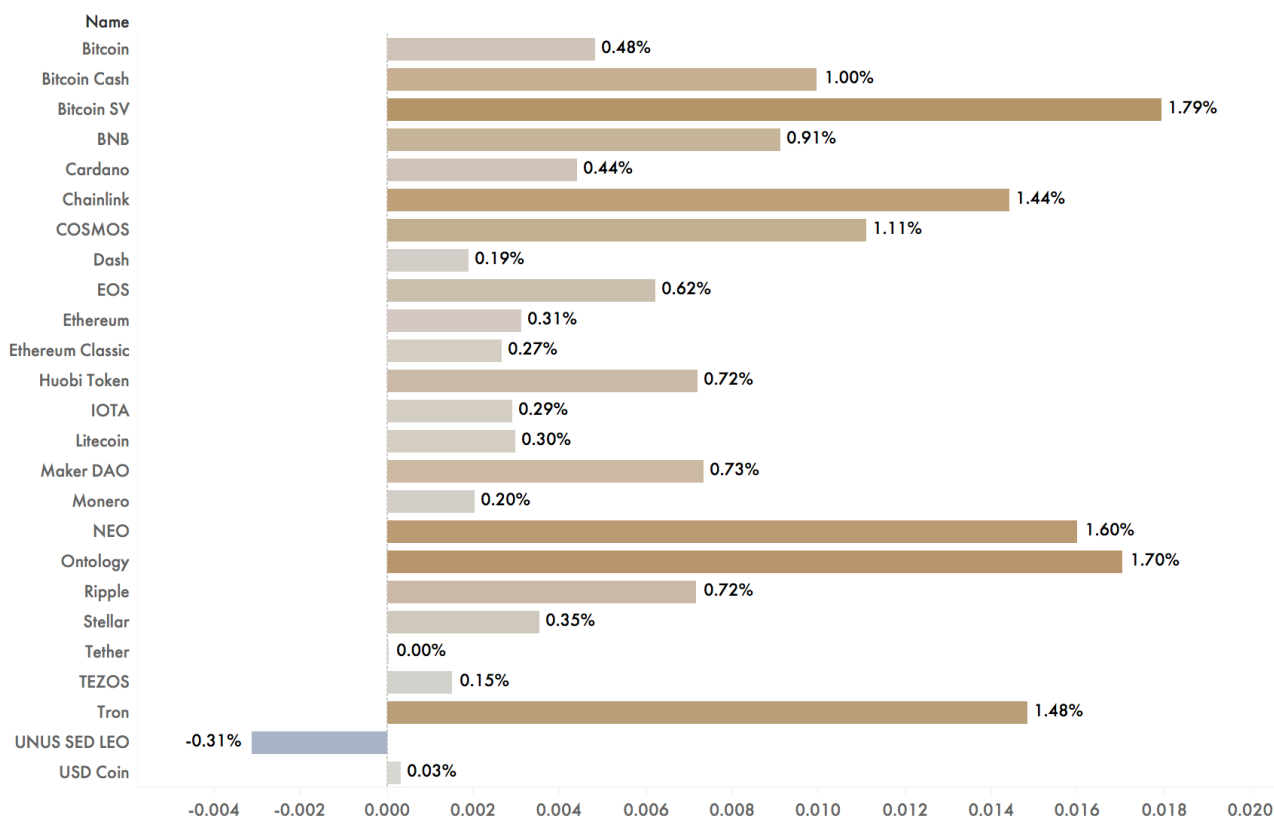
Daily Average Returns to BTC (DARBTC)

Name			
Ethereum	-0.2%	Tron	1.0%
Ripple	0.2%	Huobi Token	0.2%
Bitcoin Cash	0.5%	IOTA	-0.2%
Tether	-0.5%	Dash	-0.3%
Litecoin	-0.2%	Chainlink	1.0%
EOS	0.1%	TEZOS	-0.3%
BNB	0.4%	NEO	1.1%
Bitcoin SV	1.3%	Ethereum Classic	-0.2%
Stellar	-0.1%	COSMOS	0.6%
UNUS SED LEO	-0.8%	Maker DAO	0.3%
Cardano	0.0%	USD Coin	-0.4%
Monero	-0.3%	Ontology	1.2%

Average returns are mostly positive this month (0.53% in average) at the exception of LEO (Bitfinex's native token) posting a negative return at -0.17%. CHAIN, BSV and ONT being top performers with a DAR at +1.51%, +1.47% and +1.44% respectively.

Compared to Bitcoin (DAR +0.4%), ETH, LTC, XLM, XMR, MIOTA, DASH, XTZ, LEO and ETC are all underperforming (excluding USDC/USDT). EOS shows similar return than BTC when the remaining top crypto (XRP, BCH, BNB, TRX, HT, LINK, NEO, ATOM, MKR and ONT) over perform the market leader.

Daily Average Return (DAR)









100 Richest Wallets Dominance

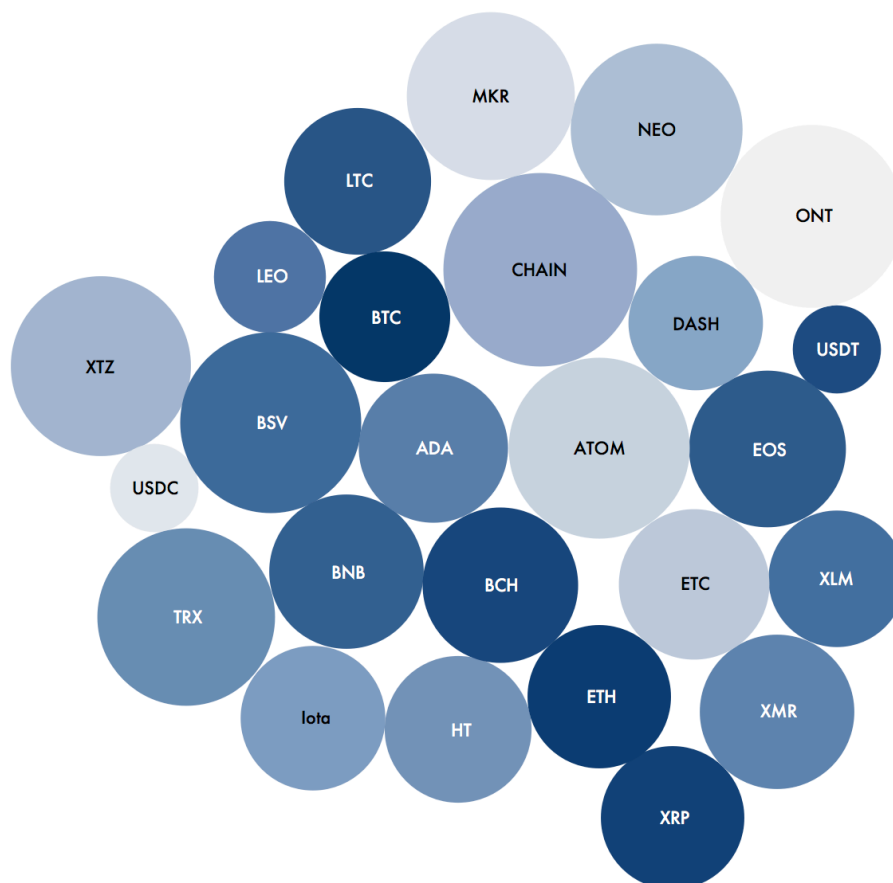
(% of total supply)

Wealth distribution among main addresses remains heavily centralized, driven (but not only) by top exchanges cold wallets.
Bitcoin is on a wealth aggregation trend overall (+23,8% wealth allocated to top 100 addresses since last year) when Dash and BCH tend to follow the opposite direction (-15,1% and -9,6%, respectively).

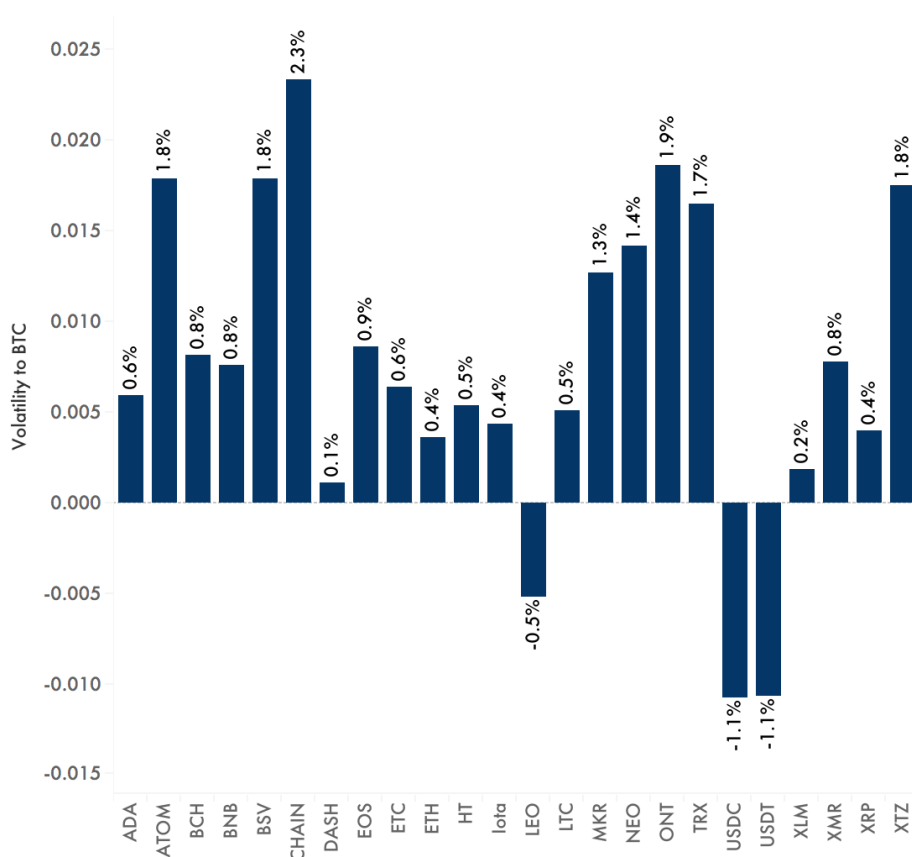
% of addresses	BTC	BCH	LTC	BSV	DASH	BTG
Top 10	5.4%	9.4%	10.4%	7.2%	18.7%	18.7%
Top 100	14.5%	27.2%	42.1%	24.1%	33.6%	33.6%
Top 1,000	34.5%	49.1%	62.3%	46.4%	51.1%	51.2%
Top 10,000	57.5%	69.5%	76.4%	69.3%	68.6%	68.7%

	monthly average	m-o-m change	y-o-y change
	BTC 14.59%	0.3%	23.8%
	BCH 27.2%	-1.3%	-9.6%
	LTC 42.1%	-0.5%	5.5%
	BSV 24.1%	3.0%	
	DASH 33.6%	-0.2%	-15.1%
	BTG 33.6%	-0.5%	0.7%

Daily Average Volatility (DAV)



Daily Average Volatility to BTC (DAVBTC)



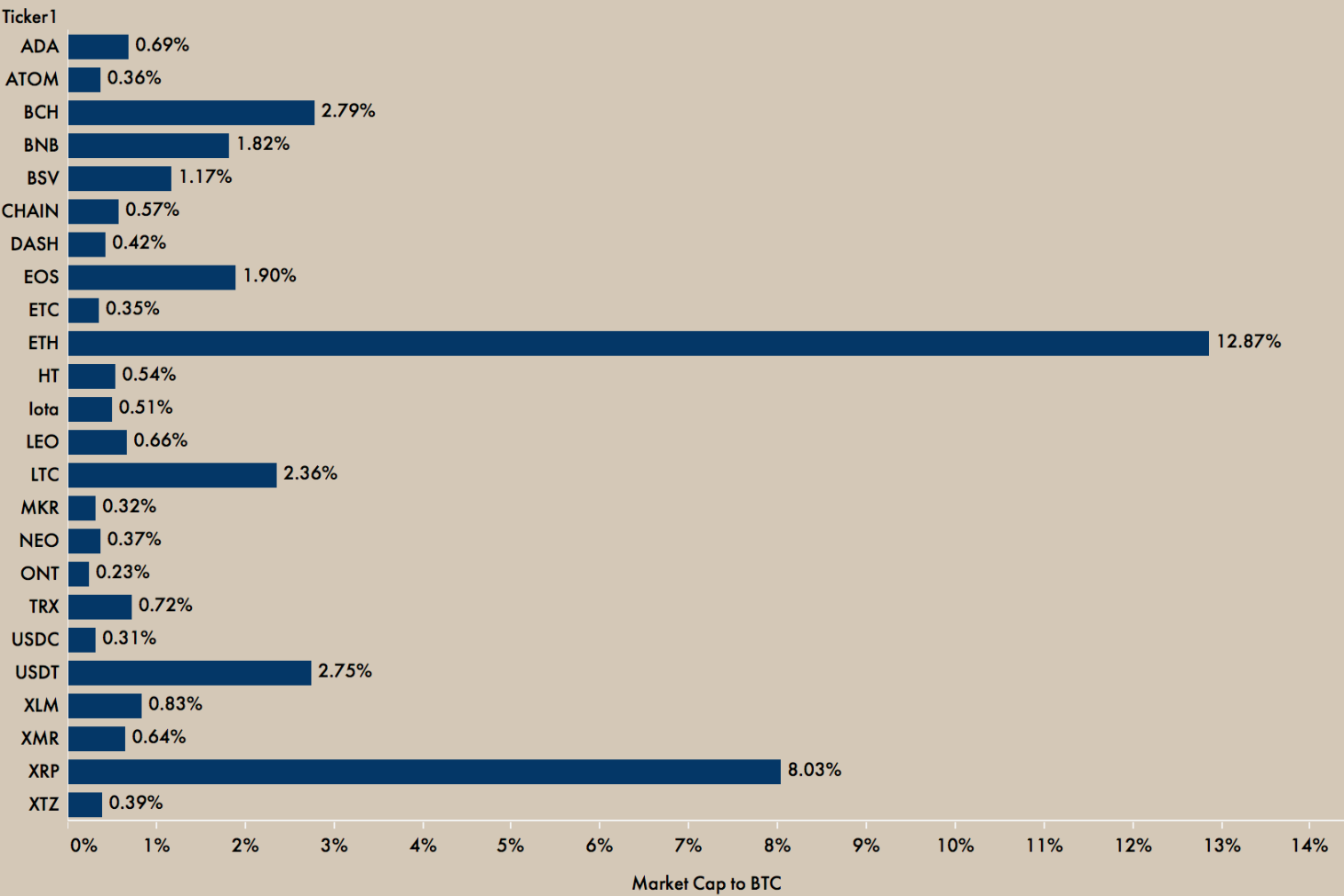
Daily Average Volatility

The daily average volatility in October was at 2.7% in average for the top 25 cryptocurrencies, a similar level than in September (2.8%). Chainlink has experienced the highest level of DAV (4.3%) when LEO posted the lowest (1.5%) if excluding USDT/USDC. LEO, USDT and USDC being the only ones with a smaller DAV than Bitcoin this month.

Name	DAV	Name	DAV
Bitcoin	1.9%	Monero	2.7%
Ethereum	2.3%	UNUS SED LEO	1.5%
Ripple	2.3%	Huobi Token	2.5%
Bitcoin Cash	2.8%	Chainlink	4.3%
Tether	0.9%	IOTA	2.4%
Litecoin	2.5%	NEO	3.4%
BNB	2.7%	Dash	2%
EOS	2.8%	COSMOS	3.6%
Bitcoin SV	3.7%	TEZOS	3.7%
Stellar	2.1%	Ethereum Classic	2.6%
Tron	3.5%	Maker DAO	3.2%
Cardano	2.5%	Ontology	3.8%
		USD Coin	0.9%

Market Cap to BTC

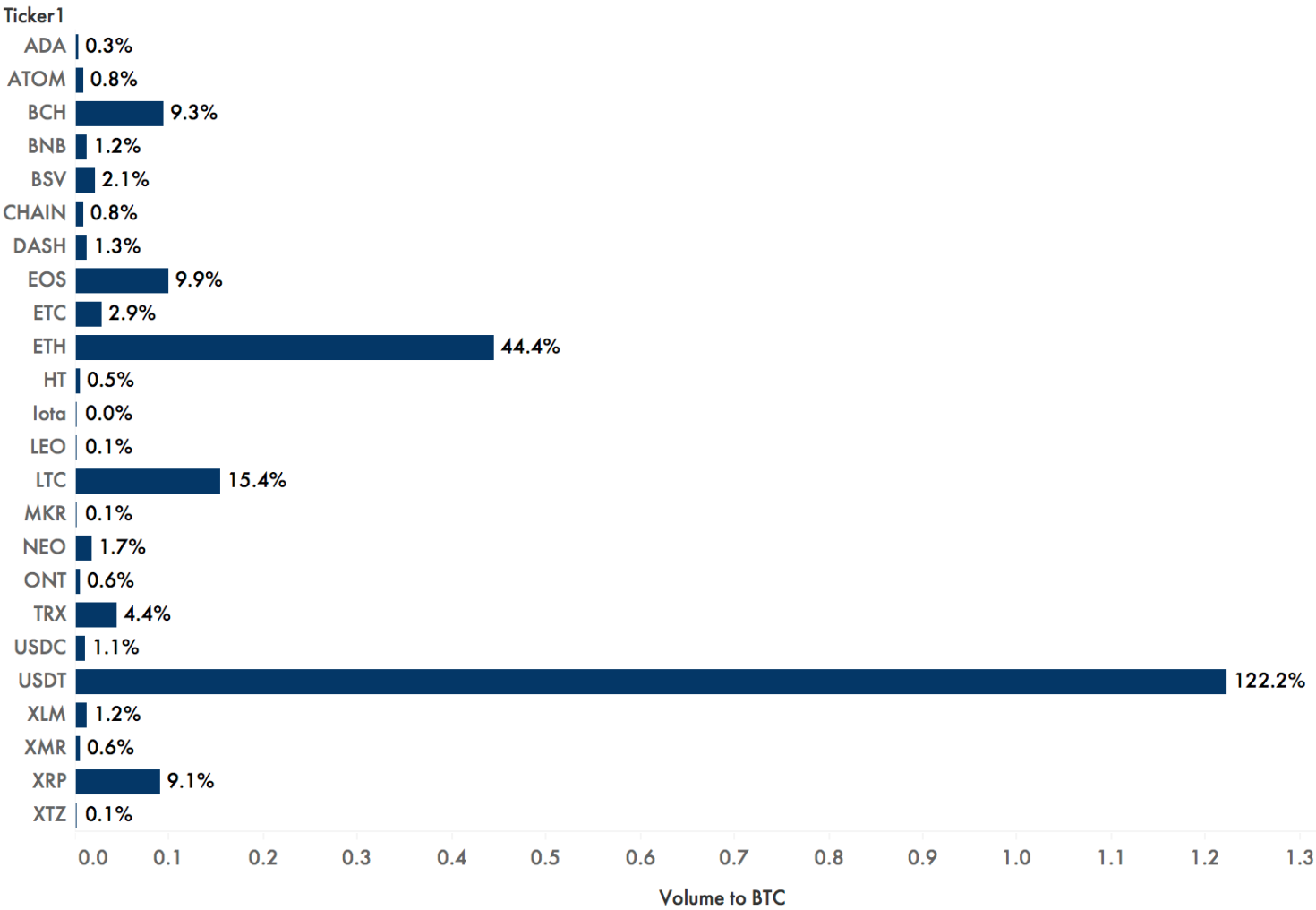
Bitcoin ends the month at 67.4% dominance over the market (from 67.6% at end September). Relatively, ETH regains influence at 12.8% capitalization against Bitcoin (from 11.4% last month). It is also the case for XRP (8% from 6.5%). Most of the others cryptocurrencies show little month-on-month difference in absolute value.



Average Daily Trading Volume to BTC

In terms of liquidity, USDT is more traded on exchanges than Bitcoin at 122% against it (from 118.7% in September). Ethereum has a liquidity at 44.2% against BTC (down 3% since last month), LTC follows at 15.3% (from 17.1%), tailed by EOS (9.8% from 11.5%), BCH (9.4% from 9.6%) and XRP (8.9% from 8%).

Bitcoin daily average trading volume was at \$18.95 Billion this month.



Daily Average Spread (DAS)

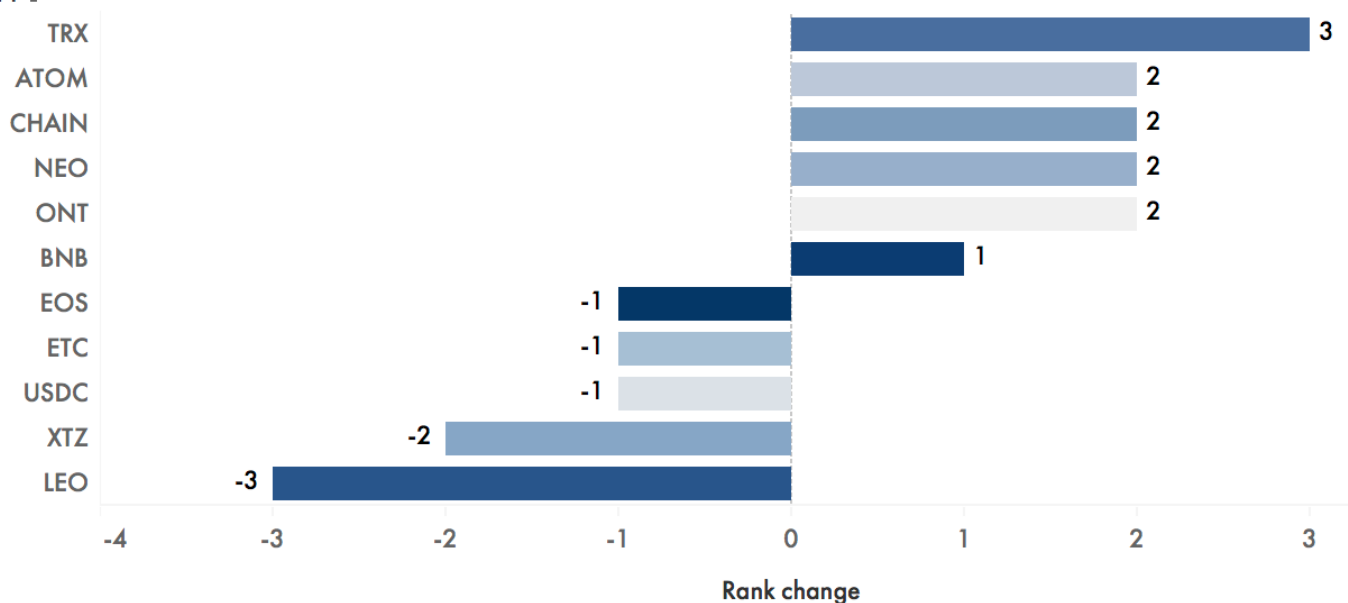
Ticker1 

BTC	4.1%	XMR	5.7%
ETH	4.8%	TRX	7.6%
XRP	4.9%	HT	5.2%
BCH	5.8%	Iota	4.9%
USDT	1.8%	DASH	4.3%
LTC	5.1%	CHAIN	9.0%
EOS	5.9%	XTZ	7.9%
BNB	5.6%	NEO	7.2%
BSV	8.0%	ETC	5.4%
XLM	4.4%	ATOM	7.9%
LEO	2.9%	MKR	6.7%
ADA	5.3%	USDC	1.8%
		ONT	8.5%

Among the top 25 main cryptocurrencies, CHAIN, ONT and BSV have offered the best opportunities for profits to daily traders this month with average day spreads at 9%, 8.5% and 7.9% respectively tailed by XTZ (7.8%), ATOM (7.5%), TRX (7.4%) and NEO (7.3%). Bitcoin itself posted a daily spread at 4% in average when LEO is showing more stability with a 3% mark.

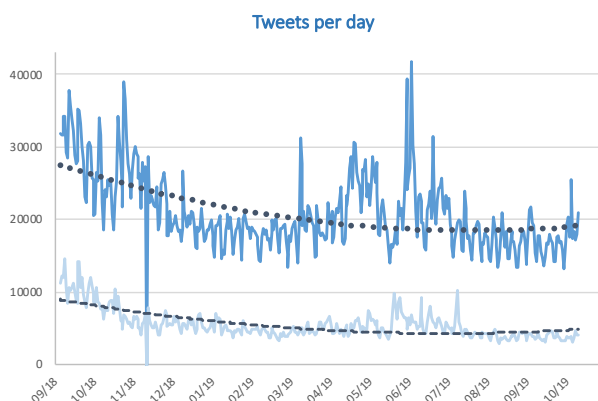
Rank Change

Ticker1 



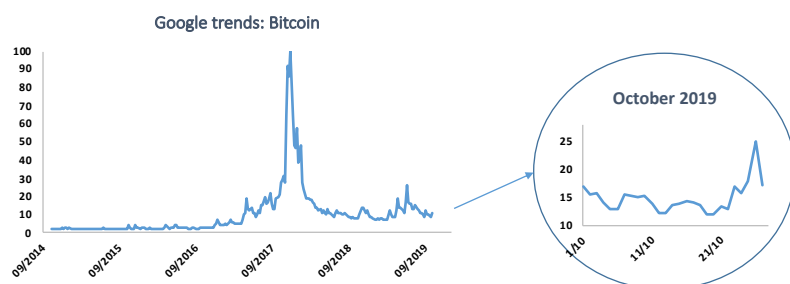
Market Sentiment

Interests over bitcoin is still high in countries with instability and/or relatively high inflation/interest rates (Nigeria, Ghana, Venezuela). We note that Cyprus, Malaysia and Bahamas are jumping up in the ranking this month when Turkey, Australia and New Zealand follow the opposite trend. Surprisingly, HongKong disappear from the top25 even though the political climate is still under tension.



Google trends:

- +33% year on year
- -7,6% since last month



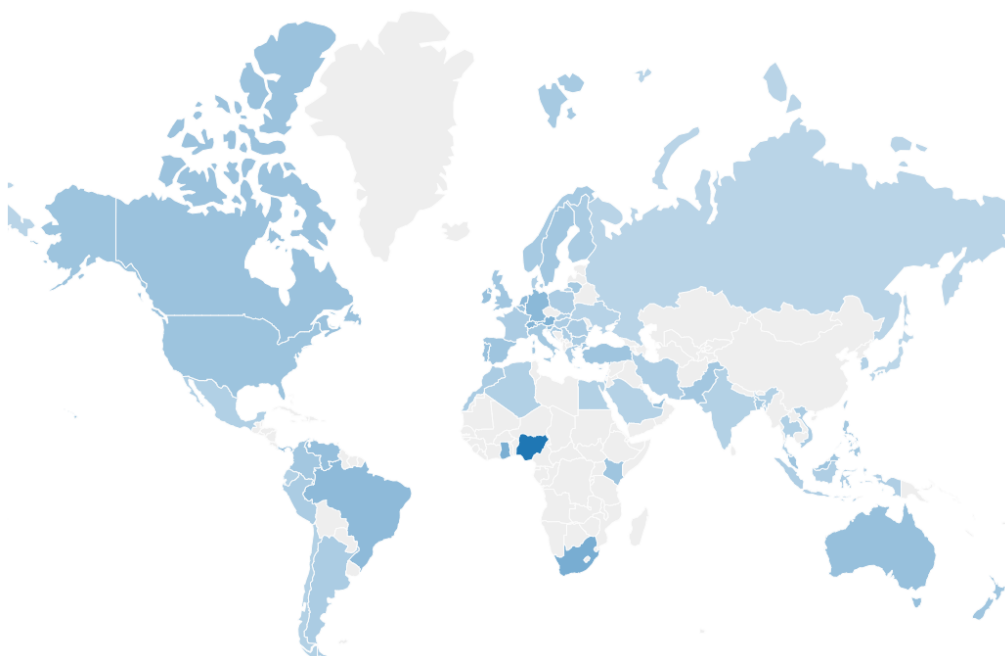
A peak in Google searches for bitcoin over the weekend of the 24 is matching with the sudden bullish rally on Friday night (+42% in a couple hours). The rally came after the announcement by Chinese president Xi Jinping on the importance of blockchain for China on Friday evening (UTC+8) eventually leveraged by a short squeeze on futures trading. On the following Monday, 200 Chinese companies investing into blockchain saw their stocks gaining an impressive +8% in average over the day.

Overall interest remains at low levels compared to historical highs.

Ticker	daily	change	change y-
BTC	17186	1%	43%
ETH	3823	-1%	64%
LTC	1101	10%	49%
BCH	407	-21%	39%
XRP	6304	4%	-7%
EOS	769	-9%	59%
ETC	96	-16%	27%
BNB	70	-11%	-205%
TRON	4104	38%	85%
USDC	0,25	55%	
DASH	622	-29%	57%
NEO	428	-23%	49%
XLM	6	-41%	82%
CHAIN	594	32%	
ADA	394	-17%	26%
BSV	198	41%	
ZCASH	96	-18%	60%
ATOM	353	15%	
XMR	245	-14%	53%
ALGO	14	-2%	
ONT	54	12%	
BTT	266	10%	
WAVES	515	-28%	-20%

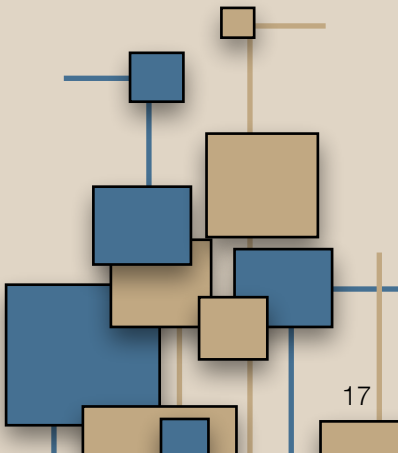
Bitcoin: Interest by country

Rank	Country	MoM rank change
1	Nigeria	nc
2	South Africa	nc
3	Ghana	nc
4	Austria	nc
5	Switzerland	1
6	Cyprus	22
7	Germany	nc
8	Brazil	-3
9	Netherlands	-1
10	Singapore	nc
11	Venezuela	-2
12	Panama	18
13	Slovenia	7
14	Ireland	15
15	United Arab	nc
16	Australia	-5
17	Portugal	-4
18	Canada	-4
19	United States	5
20	New Zealand	-4
21	Kenya	1
22	Belgium	-1
23	Malaysia	18
24	Turkey	-6
25	Spain	-2



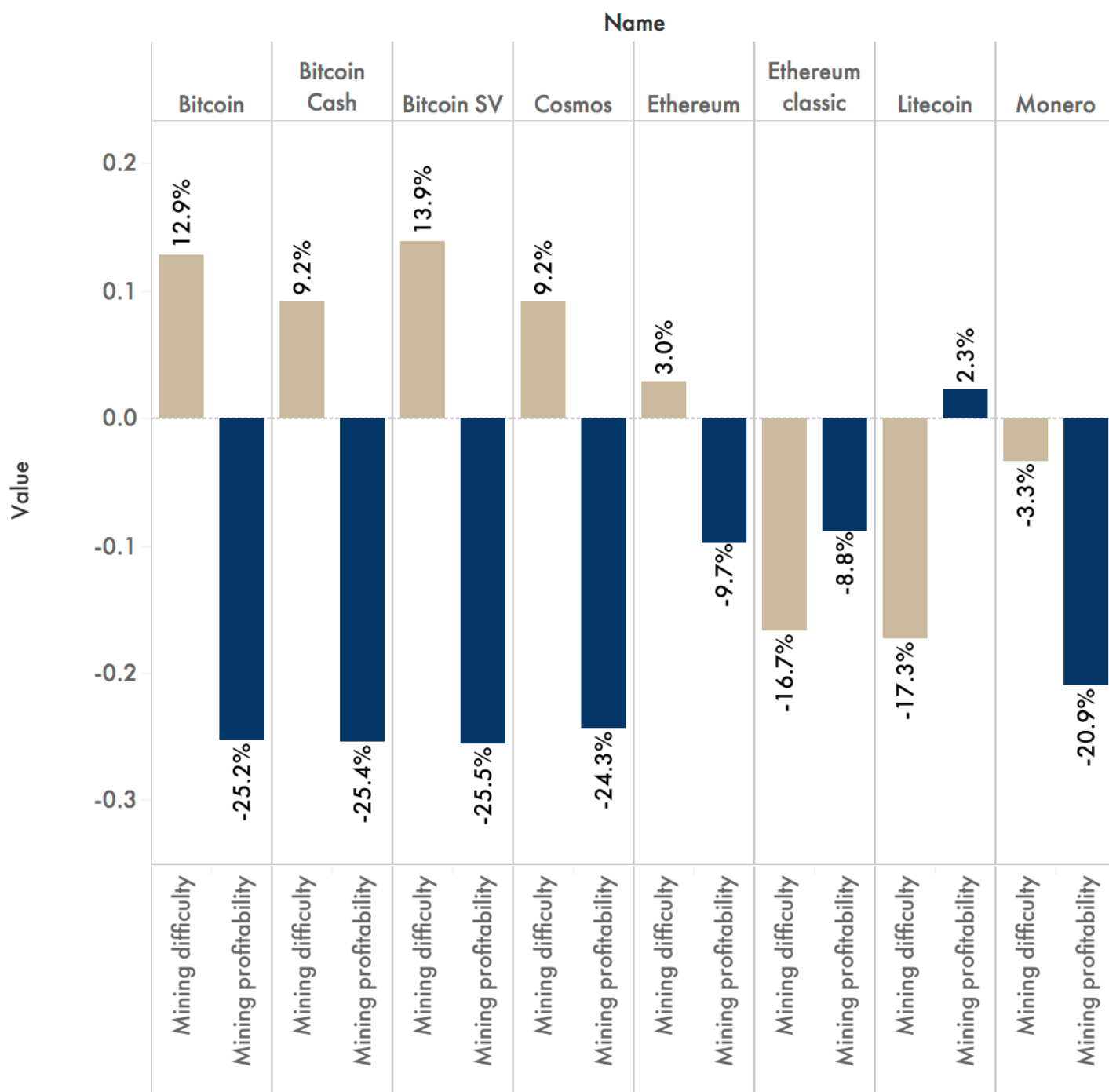
Newly Listed Cryptocurrencies

Date Added	Name	Ticker	Date Added	Name	Ticker
31.10.2019	CryptoBossCoin	CBC	15.10.2019	D Community	DILI
31.10.2019	INLOCK	ILK	14.10.2019	ChronoCoin	CRN
30.10.2019	USDx	USDx	14.10.2019	HUSD	HUSD
30.10.2019	AERUM	XRM	14.10.2019	Bitfex	BFX
30.10.2019	Swapcoinz	SPAZ	13.10.2019	Catex Token	CATT
30.10.2019	DAD Chain	DAD	12.10.2019	Bancacy	BNY
29.10.2019	Lambda Space Token	LAMBS	12.10.2019	Azbit	AZ
27.10.2019	Blockstack	STX	10.10.2019	TOKPIE	TKP
24.10.2019	ZUM TOKEN	ZUM	10.10.2019	wave edu coin	WEC
24.10.2019	MeconCash	MCH	09.10.2019	Versess Coin	VERS
24.10.2019	ESCX Token	ESCX	09.10.2019	EOS Force	EOSC
24.10.2019	Kava	KAVA	08.10.2019	KAASO	KAASO
23.10.2019	NOVA	NOVA	07.10.2019	Tepleton	TEP
23.10.2019	Dash Cash	DSC	07.10.2019	Treelion	TRN
22.10.2019	7Eleven	7E	06.10.2019	ZVCHAIN	ZVC
22.10.2019	Midas	MIDAS	03.10.2019	Dimension Chain	EON
22.10.2019	Ethlyte Crypto	EtLyteT	02.10.2019	Color Platform	CLR
21.10.2019	ALP Coin	ALP	02.10.2019	Velas	VLX
20.10.2019	EURBASE	EBASE			
20.10.2019	Xensor	XSR			
18.10.2019	CoinHe Token	CHT			
17.10.2019	GoMoney	GOM			
17.10.2019	Tutor's Diary	TUDA			
17.10.2019	Bitpanda Ecosystem Token	BEST			
17.10.2019	Tesra	TSR			
16.10.2019	Rapidz	RPZX			
16.10.2019	ROOBEE	ROOBEE			
15.10.2019	Dragon Option	DRAGON			
15.10.2019	Agora	VOTE			



Mining Difficulty and Profitability

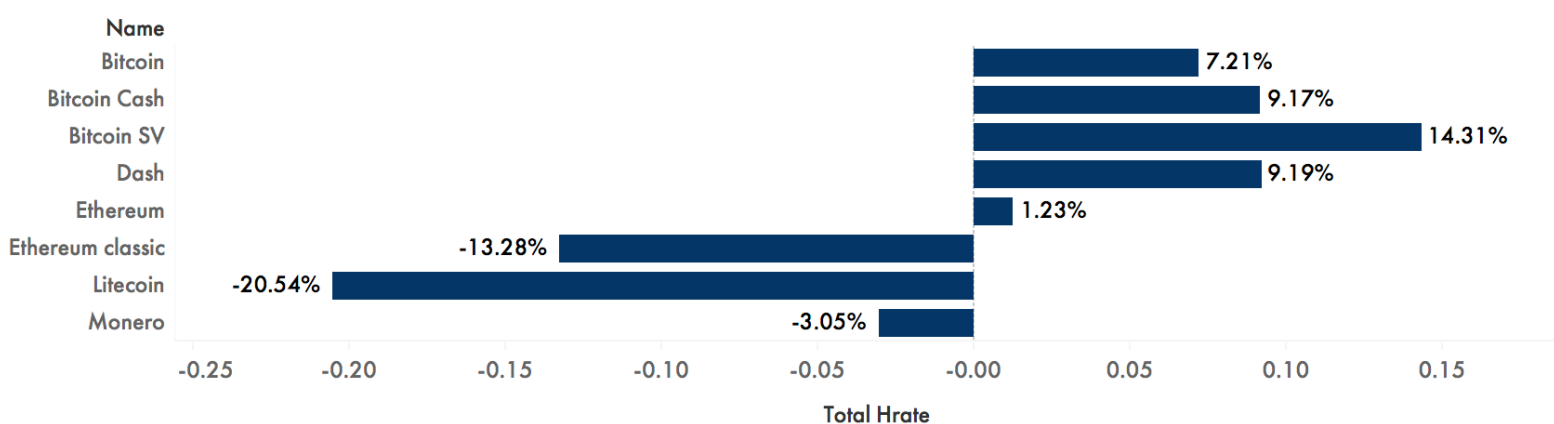
Mining difficulty is usually set to rise proportionally to the Hrate as mining algorithms adjust to keep the block time stable. Computing the ratio Hrate over mining difficulty shows that difficulty rose faster than Hrate for ETH (2.4), BTC (1.8) and XMR (1.1). The ratio is of 1 for DASH and lightly lower for BSV (0.97) and LTC (0.84), indicating a potential lag in algorithm adjustments.



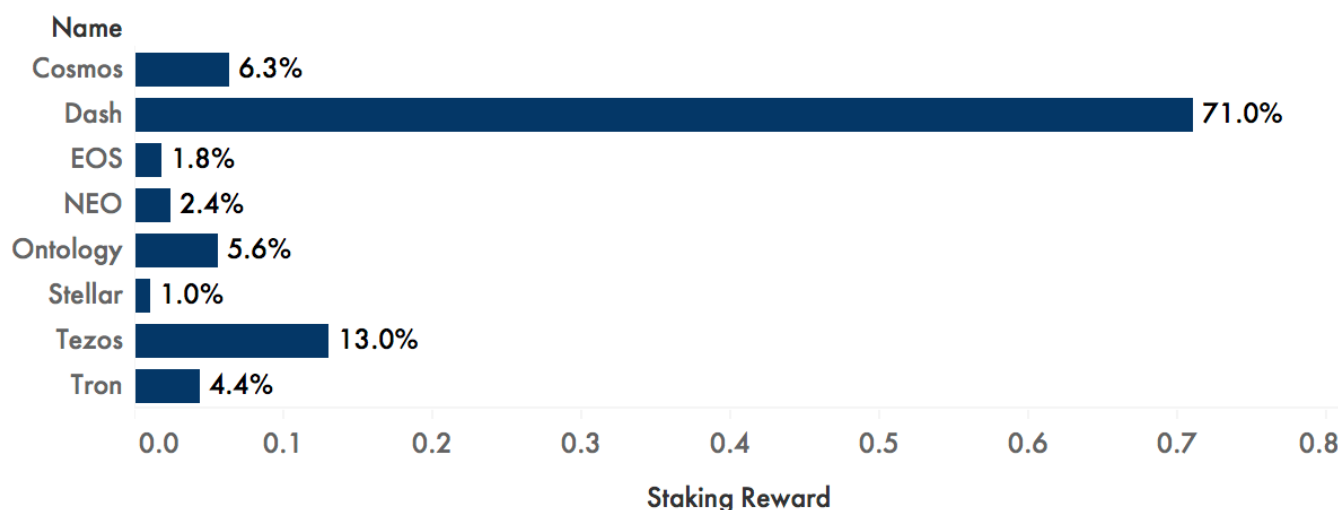
Total H Rate and Staking Rewards

Mining activity has been on the rise for Bitcoin SV (+14.3%), Dash (+9.2%), Bitcoin Cash (+9.17%), BTC (+7.2%), and Ethereum (+1.23%), an indication of miners confidence in these cryptocurrencies. On the other hand, Ethereum Classic (-13.8%), Litecoin (-20.5%) and Monero (-3%) lost mining power compared to September.

Total H Rate



Staking Rewards



The best cryptocurrency to stake in October among those stakable of the top 25 is Cosmos (ATOM) with 13% annual return, while Stellar (XML) provides the lowest stacking return at 1% annually. It is relevant to note that among top 25 cryptocurrencies, eight are POS: TRX, XML, NEO, EOS, XTZ, DASH, ATOM and ONT.

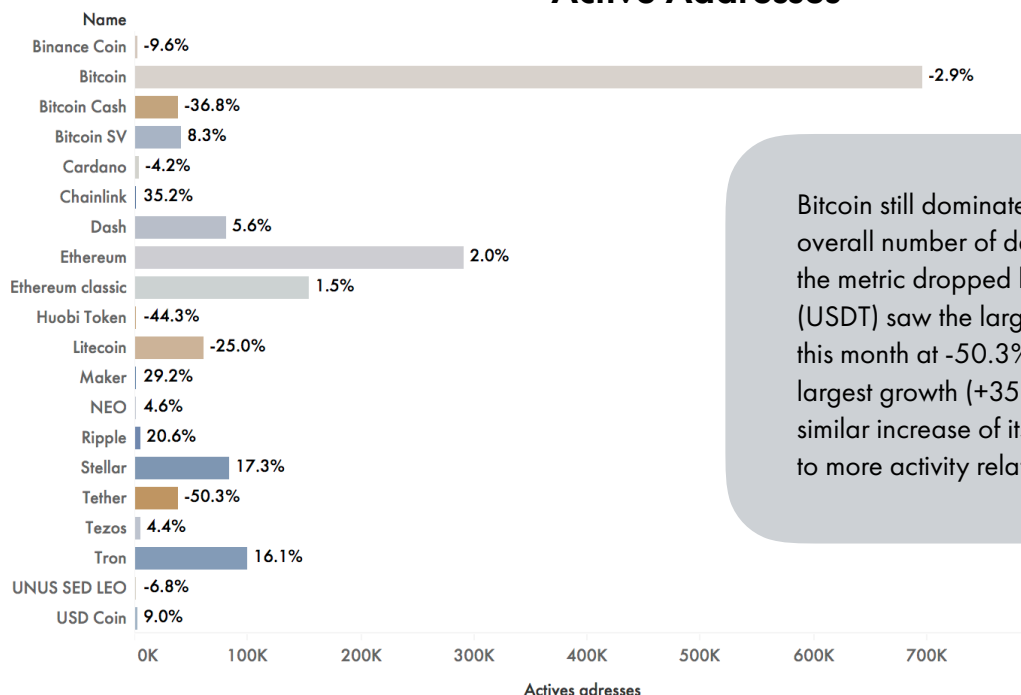
Inflation Rate and Emission

Monthly inflation rates lost 0.01% this month for BTC (from 0.32% to 0.31%) and litecoin (0.34% to 0.33%) but increased for BSV and BCH (0.30% to 0.31%) and Dash (0.56% to 0.58%). Stellar still has the lowest inflation recorded at 0.08%.

Name	Inflation Rate	Emitted
Monero	0.29%	50,485
Bitcoin SV	0.31%	55,850
Bitcoin Cash	0.31%	55,750
Bitcoin	0.31%	56,550
Litecoin	0.33%	212,275
Ethereum	0.38%	413,330
Tezos	0.46%	3,398,987
Dash	0.58%	52,747

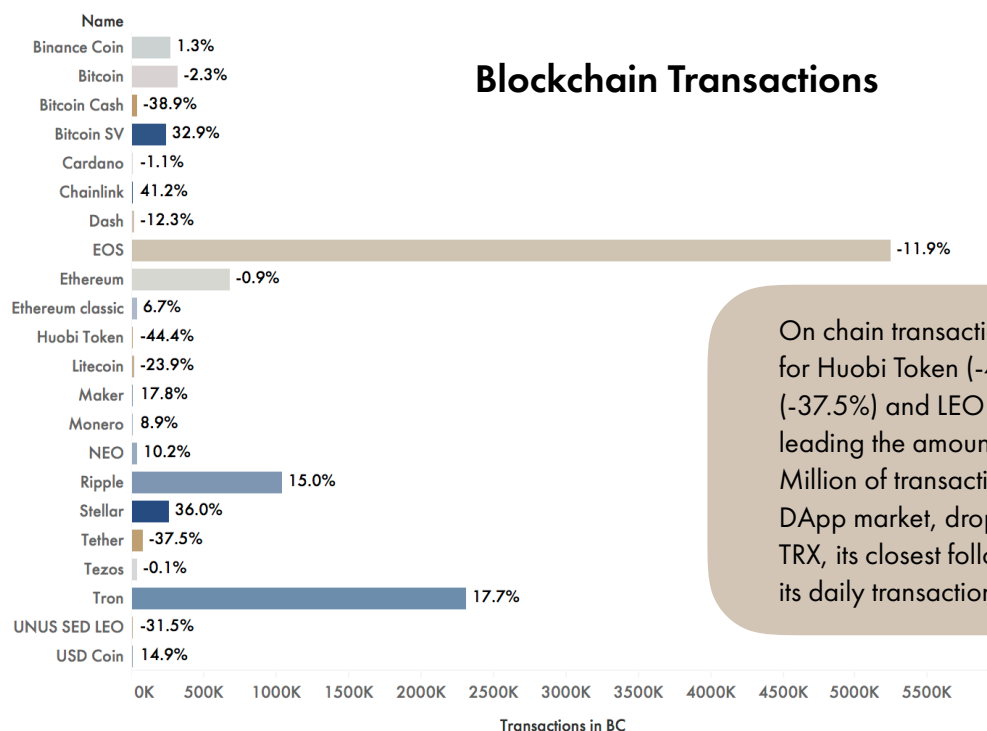
Active Addresses and Transactions

Active Addresses



Bitcoin still dominate the landscape regarding the overall number of daily active addresses, even though the metric dropped by 2.9% since last month. Tether (USDT) saw the largest decline of its active addresses this month at -50.3%. Chainlink (LINK) posted the largest growth (+35.2%) which is matching with a similar increase of its onchain transactions, likely due to more activity related to dApps and smart contracts.

Blockchain Transactions



On chain transactions are declining sharply this month for Huobi Token (-44.4%), BCH (-38.9%), USDT (-37.5%) and LEO (-31.5%). EOS, which is by far leading the amount of onchain transactions (5.3 Million of transactions a day in average) due to his DApp market, dropped by 11.9% during October. TRX, its closest follower, witnessed a +17.7% growth of its daily transactions volume.

Ticker	Tx/AA	TRX	23
BTC	0.5	ADA	0.4
ETH	2.3	LEO	1
XRP	200.7	LINK	1.4
BCH	1.1	HT	1.7
USDT	2.1	NEO	20.8
LTC	0.4	DASH	0.3
BNB	87	XTZ	7.1
BSV	5.8	ETC	0.2
XLM	3.1	MKR	2.1
		USDS	1.4

Reports Published by Institutions and Firms

Academia

Google scholar blockchain-related publications in October: 736

Bitcoin-related October: 309

Relevant academic papers:

Finance & Economics

"Cryptocurrency value changes in response to national elections: do they behave like money or commodities?"

Mark Schaub and H. Phares, published 30 September 2019, Applied Economics Letters.

The study examines the change in value of Bitcoin during two major political events: BREXIT and 2016 US presidential election and compared to national currencies and main commodities as USD, GBP, gold and silver. Results suggest a weak form of relationship with gold and silver.

"Empirical evidence of extreme dependence and contagion risk between main cryptocurrencies"

Kumar and al. Published 3 October 2019, North American Journal of Economics and Finance.

The study explores the dependence between BTC, XRP and LTC between 2013 and 2018 and finds evidence of a stronger interdependence for the pair BTC/LTC than BTC/XRP opening an argumentation about contagion risks about price returns for major cryptocurrencies.

"Bitcoin Futures and Option Markets: Searching for Completeness"

H. Geman and H. Price, published 6 October 2019, SSRN papers.

The authors apply the Black-Scholes formula to the price of bitcoin option traded on Deribit Exchange and argue that price trajectories provide answers about the incompleteness of the bitcoin market.

"Casual relationship between bitcoin price volatility and trading volume: Rolling window approach"

N. Yamak, R. Yamak, S. Samut. Published the 4 October 2019, Financial studies.

The paper investigates the relationship between Bitcoin price volatility and trading volume between 2014 and March 2019. Using an EGARCH model, the authors found a statistically weak correlation between both variables.

"Examining the day-of-the-week-effect and the-month-of-the-year-effect in cryptocurrency market"

R. Robiyanto and al, Published 9 October 2019, Journal of Finance and banking.

This paper investigates the month-of-year and day-of-week effect on daily returns for bitcoin and Litecoin between 2014 and 2018 and finds both phenomenon are present indicating a non-efficient market.

"A New Method to Verify Bitcoin Bubbles: Based on the Production Cost"

J. Xiong and al. Published 21 October 2019, North American Journal of Economics and Finance

The paper propose a prediction model and indicators to measure and anticipate bitcoin bubble based on VAR and LPPL models. The paper evaluate that next bubble is likely to happen in the second half of 2020.

Technology

"A blockchain-based smart contract trading mechanism for energy power supply and demand network"

W. Hu and al. Published 10 October 2019, Advances in Production Engineering and Management Journal.

The paper proposes a trading mechanism for energy power supply and demand based on smart contracts in the prospective application for the Chinese energy market.

"A blockchain use case in food distribution: Do you know where your food has been?"

D. Bumblauskas and al. Published 11 October 2019, International Journal of Information management

The paper explores the blockchain use cases for food tracking, review the literature regarding concepts and applications and propose some applications and opportunities offered.

"The Consensus Games for Consensus Economics under the Framework of Blockchain in Fintech"

Lan DI and al, Published 12 October 2019, Communications in Computer and Information Science.

The paper introduce the notion of "Consensus Game" (CG) as a consensus mechanism based on consensus incentives and game theory to solve stabilities issues of mining pools and Fintech blockchain economy.

"Blockchain and radio communications over suborbital spaceflights"

S. Martinez-Losa del Ricon and E. D. Gutierrez, Published 10 October 2019, Cornell University

The paper explains how blockchain could be apply to secure long-distance communications using a network of nodes on the ground and radio waves.

"Proof of burn"

K. Karantias, A. Kiayias, D. Zindros, published the 1 October 2019, International Association for Cryptographic research.

The paper go through the main known mechanisms defining "proof of burn" protocol and their implementation in the blockchain.

"A Coefficient of Variation Method to Measure the Extents of Decentralization for Bitcoin and Ethereum Networks"

K. Wu and al. Published 10 October 2019, International Journal of Network Security.

The paper proposes a method to measure the decentralization level of main cryptocurrencies.

Patents

"System and Method for Verifying and Providing Compensation for Participation in Real-Time Streaming of Multimedia over a Decentralized Network"

Inventor: Chris Allen, Davide Lucchi, Paul Gregoire JR. Assignee: infrared5 Inc. Published 17 October 2019

Systems and methods for verifying and compensating nodes for streaming multimedia based on computational resources contributions

"Gaming consensus protocol for blockchain"

Inventor: Diego A.Masini Assignee: International Business Machines Corp. Published 17 October 2019

Describes operation including receiving, by gaming peers of a gaming network, a number of transactions from a blockchain network, electing a subset of gaming peers to verify the transactions and a leader from the subset of gaming peers generating a block, validated by gaming peers and broadcasting to the blockchain network

"System and method for interoperability of blockchains"

Inventor: A. Keskar Assignee: Innoplexus AG Published 17 October 2019

A system and method for interoperability of blockchains allowing use of smart contracts across a plurality of blockchains in real time and in a secured manner.

"System and method for implementing blockchain-based digital certificates"

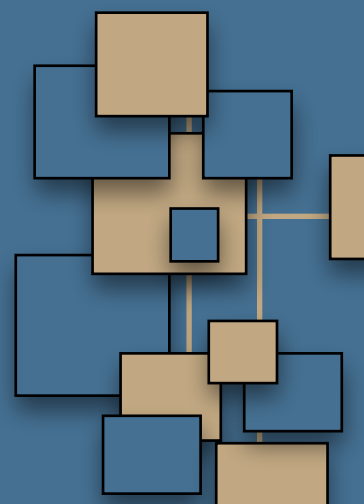
Inventors: Long Chen and Yanpeng Li, Assignee: Alibaba group Holding Ltd Published 17 October 2019

Methods, systems, and apparatus, including computer programs encoded on computer storage media, for implementing digital certificates.

"Blockchain post-quantum signature scheme"

Inventor: K. Chalkias, Published 17 October 2019

Various systems for providing secure signatures based on post-quantum computing are provided. The systems allow one-time signatures ("OTS") to be based on the same public key providing efficient and fast use of OTS signatures.



Publications by companies and firms

"Blockchain technology in Retail & Consumer Packaged Goods"

Published by Deloitte on October 2019. 24 pages

The report explores the role of blockchain in retail and CPG distribution, how it is applied and the main advantages and opportunities it can bring to the industry.

"IEO Performance Report – Q2 2019"

Published by Coinsflare on September 2019. 9 pages.

The report provides key metrics and indicators regarding IEOs conducted during the last quarter.

"Blockchain for Social impact"

Published by Stanford University on September 2019. 37 pages

Stanford reviews the use of blockchain for social impacts as for Agriculture and land rights, climate and environmental protection, digital identity, financial inclusion, health, governance and democracy.

"Valuing Bitcoin"

By Amun AG published 23 September 2019. 9 pages

Amun Ag reviews different valuation models for bitcoins and their outcomes for estimating its price.

"Hype cycle: Most blockchains are still 5 to 10 years away from transformational impact"

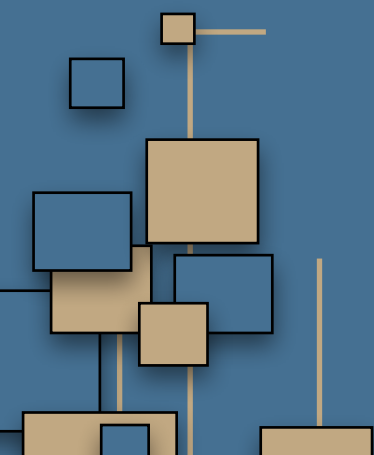
By Gartner, published October 8 2019.

Gartner shares its views of the future prospects for blockchain tech based on a "hype and disillusionment" cycle

"Cryptocurrency and blockchain"

Published by Hedgeweek the 9 October 2019. 28 pages

In the edition of this month, Hedgeweek provides some insights about cryptocurrencies to Hedge Funds managers.



Trends and Market Thoughts

Q&A with Sergey Ivanov and Arthur Meunier



Sergey Ivanov
Founder & VP at FAS



Arthur Meunier
Business Development Specialist

Question: Many strong partners are quitting Libra Association this month after the regulators and politicians worldwide but also the SEC and the Supreme Court had negative reactions. How do you see Libra's future? Will Facebook step back?

Sergey: Libra Association had a large support from many international organizations, such as Visa, Mastercard, PayPal etc. However, since the SEC is not favorable towards Facebook-backed Libra, those companies decided to withdraw for the project at the time being. Mark Zuckerberg stated in his latest hearing that Facebook would also leave Libra Association if Libra decided to operate without complying to all possible regulations. The future of Libra is unknown, since complying to all of the regulations will not be easy, and moreover, stable coins released by corporations are a threat to United States Dollar. We should keep a close eye on the future developments, since it would in many ways shape the market of the future.

Arthur: It is indeed difficult to have a clear view of what is going to happen for Libra. We saw concerns about user privacy and financial stability being rose by different stakeholders including regulators. As James A. Garfield said, "He who controls the money supply of a nation controls the nation." and that is probably what worries regulators and governments of countries in which Facebook operates. In terms of privacy, we know that who runs nodes has an ability to access transactions history, and, coupled with the user data Facebook already has at hands, it would allow the company to map profiles and users purchases, going further in their data aggregation on users.

Question: What about Telegram and the TON token frozen by the SEC? Why are US regulators so sensible about both Libra and TON recently?

Arthur: Both could have accepted payments with other cryptocurrencies such as Bitcoin on their platforms but decided to create their own. The SEC probably sees this approach as an attempt to emitting securities without following the rules in place for IPOs.

Sergey: Telegram is in a similar situation as Facebook in that regard, since they also want to release a cryptocurrency on their platform. TON and Libra have a very large amount of users, and releasing their own currency is seen as an open door for more private companies emitting their own currencies and could pose problems regarding national sovereignty. Regulators are now stepping in so to avoid this kind of snowball effect before it gets out of control.

Question: China is allegedly steps ahead of releasing a CBDC and Xi Jiping announcement this month to accelerate blockchain's development sends signals the Central Bank could eventually release it in a near future. How do you see it implemented in China? Which impact could it have on the Chinese economy?

Sergey: Central Bank Digital Currency or CBDC has become popular since Facebook's Libra announcement about their plans to release their own token. China was the first to react by announcing their plans to release their own CBDC, which was apparently underway for 5 years already. Considering difficulties that Facebook and Telegram are facing with US regulatory commissions, it is very likely that Chinese CBDC could become a serious game changer for digital currencies, especially if backed by a central government like Beijing. As for the impact China's CBDC would bring, it is about allowing quicker and more secure RMB-backed payments and transactions, but also reduce operating costs for banks by simplifying clearing & settlements, or allow easing trades on the stock market, for example. Since the central government itself would implement it, we can expect that the transition would go smoothly for CBDC.

Arthur: Digital cash is already widely available in the country with Alipay and Wechat and a CBDC could fasten and secure such transactions one-step further. Besides, a CBDC could fluidity cross border exchanges and free money flows in and out China, which could make the RMB in direct competition with the USD for trade. On the other hand, China is recently tightening its control on money outflows, which poses the question about the degree of control China may have over such CBDC.

Question: Google claimed to have achieve Quantum supremacy. Is it the case? What are the implication for blockchain technology?

Sergey: Quantum supremacy is basically reached when the computing power obtained cannot be outcompeted by any existing supercomputer. Google stated that they have achieved such processing power this month with a 54 qbit processor. This technology is important because it would give us tools for performing any kind of complicated tasks and solve equations we are today unable to compute. As for Blockchain, this technology could be a potential threat, as it would have enough processing power to quickly brute force existing cryptographic protocols. Quantum resistance is becoming increasingly more important in the world of Blockchain and cryptocurrencies, and considering latest news regarding quantum development, developers should consider how they would plan to secure stability of their network.

Arthur: Google claimed to have achieved quantum supremacy for which IBM has responded that the claim was excessive. It is also political as other countries are involved in this technological race including Europe and China. Note that Microsoft is already developing a particular code to make use of the tech once it becomes available. Analysts suggest that we are still far away to make a proper use of the technology for commercial purposes. Recently, we also saw granted patents regarding post quantum blockchains, a sign that blockchain's developers are anticipating it.



FAS is established in Hong Kong and provides financial services to startups and companies willing to evolve in the exciting blockchain ecosystem. FAS offers include in-depth market studies, data analysis, financial modelling and projections, Stress tests, financial reviews, consulting, Business development & strategy, especially regarding Asian markets.

FAS can rely on a strong network of professionals from different areas and expertise and connect with investors and accelerators worldwide. Believing in decentralisation, we apply this ideal to our business strategy by having consultants available at any time all over the world. Thinking out of the blocks is our motto.

The State of the Cryptocurrency Market team:



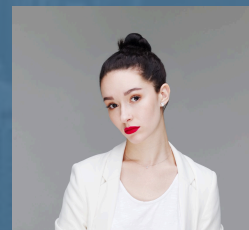
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