Daily Fintech

Bitcoin & Blockchain

Bitcoin & Blockchain is a cross cutting concern that applies to all the functional areas such as Business banking, Consumer Banking, Investing & Insurance

OCTOBER 2, 2017 OCTOBER 2, 2017 BITCOIN & BLOCKCHAIN LEAVE A COMMENT

Blockchain Bitcoin & Crypto Weekly CXO Briefing for week starting 2nd October 2017

The Blockchain Bitcoin & Crypto Weekly CXO Briefing is all you need to know, each week, jargon free for CXO level business leaders and investors who will use this technology to change the world. Each week we select the 3 news items that matter and explain why and link to one expert opinion.

For the intro to this weekly series, please go here. (https://dailyfintech.com/the-other-bbc-news/)

News Item 1: Zen blockchain hopes to strengthen, broaden Bitcoin (https://venturebeat.com/2017/09/30/zen-blockchain-hopes-to-strengthen-broaden-bitcoin/)

Decrypted: Recently, the Zen Protocol came out out of stealth mode hoping to create an alternative to Ethereum and solve the "running out of gas" problem that can happen with Ethereum based smart contracts.

The Zen Protocol is a solution for decentralized, automatic contracts that runs in parallel to Bitcoin, just like a sidechain. The Zen Protocol eliminates some of the problems associated with Ethereum smart contracts. Zen allows its miners get to know the amount of computation a contract requires, before actually executing it. This makes it possible for contracts to execute extremely fast.

Our take: Smart contracts are one of the key innovations of Ethereum. The basic idea is programmable, self-executing contracts that are recorded and executed on the blockchain. Smart contracts run on the Ethereum Virtual Machine (EVM), that uses resources for computation and data storage.

All transactions, from simple transfers to ICO smart contracts, require resources to execute. Each of these resources has an associated cost in "gas". Gas is the metering unit to use EVM and the way miners are incentivized to process the transactions.

When a transaction is sent to EVM, it will start to execute, but if it does not have enough gas, it will eventually stop. When this happens, the amount of Ethereum spent on gas is not returned, but since the transaction did not actually complete on the blockchain, the main funds remain in the wallet.

Zen is a decentralized financial platform, built from scratch with the goal of providing people with a secure, scalable and useful infrastructure for creating their own financial instruments, and trading them directly without intermediaries.

Zen enables everyone anytime anywhere in the world to create and trade financial products. The platform creates an open marketplace where users can operate various types of financial instruments, including options, futures, digital currencies, ETFs. This makes this new chain a more fully fledged financial system compared the others.

Zen can be utilized with real world assets, and not just blockchain related assets, as in the case of Ethereum. Because its a Bitcoin side chain, it's part of the Bitcoin blockchain and all Zen nodes are also Bitcoin nodes. Its close connection with Bitcoin makes it possible to sell assets for BTC or to create Bitcoin-backed assets.

The Zen blockchain is secured by multiple proof-of-work algorithms, with token-holder voting on the balance between them. Multi-hash mining creates robust incentives for miners to deliver efficient, reliable security.

Zen smart contracts are written and secured by a subset of the F* functional programming language, allowing users to prove:

- The amount of resources a contract will consume and provide the necessary fees for running the contract to miners, removing the need for a "gas" based system.
- Their contracts meet a given specification, meaning they can prove the contract will definitely do (or not do) something given a specific set of parameters.

The Zen Protocol eliminates the problems with Ethereum smart contracts, when they run out of gas. The protocol utilizes contracts that never exhaust network resources and are always correct. In advance, miners know exactly how much computing power will be required to verify a contract. This allows for contracts to execute and transact faster.

News Item 2: <u>Prime Minister's Son to Head Barbados Blockchain Startup (https://www.coindesk.com/prime-ministers-son-to-head-barbados-bitcoin-startup/)</u>

Decrypted: Rawdon Adams, Bitt's new CEO, takes the helm of the Barbados-based fintech company, a few months after the company revealed a plan to develop a pan-Caribbean settlement network, built on blockchain. The plan is to create a way to better connect the region and create a new type of digital currency: a regional cross-border blockchain currency.

While many solutions are being talked about, the problem of de-banking in the Caribbean is enormous. Its clear to everyone that something needs to happen. Leveraging Blockchain technology can lead to economic transformation in the region. The appointment of Adams adds clout to the startup's regional plans. Rawdon is the son of Tom Adams, who served as the prime minister of Barbados between 1976 and 1985.

Our take: Smaller, poorer countries are being abandoned by big banks in an exodus commonly referred to as "de-risking" or "de-banking." In the Caribbean, where many small countries with poorer populations reside close to each other, the problem is getting so bad that local businesses regularly have a hard time receiving remittances and paying suppliers outside of their own country, even when their trading partner is just the next island over.

When traveling between islands in the Caribbean, dealing with currencies has always been complicated. With 7,000 islands comprising 12 dependent territories and 13 sovereign island nations, trading and travel is complex, especially in terms of having the right money or making conversions when paying by card.

The growing trend in the Caribbean was the topic of a 2016 <u>report (https://www.imf.org/external/pubs/ft/sdn/2016/sdn1606.pdf)</u> by the IMF. No one knows exactly how much of the population is "unbanked," or financially underserved, in Latin America and the Caribbean. However, estimates put the number as high as 70%, or more than <u>400 million (http://latintrade.com/reaching-the-unbanked-400-million-potential-customers-are-still-waiting-for-a-bank-to-find-them/)</u> people.

The UN Economic Commission for Latin America and the Caribbean, when examining the use of digital currency technology in the Caribbean, released a report (https://www.cepal.org/en/publications/39860-opportunities-and-risks-associated-advent-digital-currency-caribbean) with the goal of drawing attention to the opportunities and liabilities related to the technology.

The UN's report noted that in March 2014, the Central Bank in Trinidad and Tobago issued public awareness information about digital currency, warning that "potential users of the product must be aware of the risks involved in investing in virtual currencies as regulators seek to establish appropriate frameworks to ensure the continued safe operation of the payments system and the smooth conduct of monetary policy."

The report also stated that Trinidad and Tobago have the potential to become a hub of digital currency activity given its relatively low cost of energy, making it an attractive location for digital currency mining. Moreover, the research into Koblitz Group revealed two subsidiaries: Bitt, a digital currency exchange and ASICBLOCK, a hosted digital currency mining service.

In early 2014, the Koblitz Group was working on an initiative to establish a digital currency exchange to serve the Caribbean, with a launch in Barbados and then an expansion into Trinidad and Tobago.

Bitt was founded in 2013 in Barbados. Its a digital asset exchange that owns and operates a trading platform for Bitcoin and other fiat currencies. The company focuses on providing access to cryptocurrencies in emerging markets. Bitt has developed a high frequency trading platform, boasting military grade security, that includes a digital asset exchange, a mobile money wallet, a remittance platform, and merchant payment processing tools.

In 2016, Bitt launched the <u>Barbadian Digital Dollar (https://www.coindesk.com/bitt-launches-barbados-dollar-on-the-blockchain-calls-for-bitcoin-unity/)</u>, the Caribbean's first blockchain-based digital money. The Barbadian Digital Dollar is equivalent to one dollar issued by the Central Bank of Barbados. To create the digital dollar, Bitt took advantage of the <u>Colored Coins protocol (http://coloredcoins.org/)</u>, that allows the creation of new assets on top of the Bitcoin blockchain.

Other central banks in the region are joining the project and Bitt will soon also handle Aruban florins and Bahamian dollars. The Eastern Caribbean Central Bank (ECCB) is engaged with Bitt for a pilot in the Eastern Caribbean Currency Union (https://www.barbadosadvocate.com/news/blockchain-technology-provides-enormous-opportunities-our-region).

Also, earlier this year, <u>Bitt parnered with PwC (http://www.newsbtc.com/2017/03/31/pwc-and-bitt-partner-up-to-improve-bitcoin-and-blockchain-presence-in-the-caribbean/)</u> to offer central banks and other institutions, access to PwC's deep global expertise in blockchain research and knowledge, marketplace strategy, operational readiness and technology services.

Looking at the bigger picture, it seems like we have a new type of digital currency in the making, that will potentially span across several countries. With the appointment of Rawdon Adams, its likely that support from the Barbados government and other governments in the Caribbean region, could turn Bitt's project into an initiative that potentially could impact the entire region.

News Item 3: Fidelity Investments Is Mining for Cryptocurrency (https://futurism.com/fidelity-investments-mining-cryptocurrency/)

Decrypted: Fidelity Investments is one of the largest investment firms, managing \$2.3 trillion in assets. In May, during the 2017 Consensus conference, Abigail Johnson, Fidelity's CEO, said (https://qz.com/990229/one-of-the-worlds-largest-financial-services-firms-is-mining-bitcoins/) that the company was in the business of mining Bitcoin.

The firm has been experimenting internally with Bitcoin and is now bringing some of those features to its broad customer base. Now, through the Fidelity website, cryptocurrency balances are visible to customers that hold an account with Coinbase.

Our take: Fidelity is one of the few US. financial firms that have taken a proactive approach to cryptocurrencies, speaking publicly about its cryptocurrency operations, while most of the big banks have been hesitant to adopt Bitcoin and are only now starting to explore blockchain technologies.

Fidelity has a small operations team in charge of mining Bitcoin, trying new wallets, and even experimenting on innovations to further augment cryptocurrency.

One of Fidelity's projects is mining Bitcoin and Ethereum, which started for educational purposes, but now turns a nifty profit. Abigail Johnson said "We set up a small Bitcoin and Ethereum mining operation, that miraculously now is actually making a lot of money".

Fidelity is reported to have purchased its mining equipment from the company 21 Inc. It is unclear how many units they purchased or what type of mining power Fidelity has, but we can only assume their mining operation is still limited in power, considering it was only set up for educational purposes.

Additionally, Fidelity has updated its website to display cryptocurrency balances for a customer's Coinbase account. Earlier this year, Fidelity began testing the view balance feature with employees who own digital assets on Coinbase. During testing, Fidelity found strong internal support for the partnership and ability to view digital asset holdings within their portfolio.

Fidelity Labs, the company's research group, has made venture investments in a handful of Bitcoin businesses as well as partnering with university efforts, including the MIT Digital Currency Initiative.

Fidelity employees can pay for their lunch or coffee using Bitcoin in the cafeteria at its Boston headquarters. The firm's charity arm also began accepting Bitcoin donations in 2015 and the company received \$7 million worth of Bitcoin donations last year.

In 2017, the market cap for cryptocurrencies has grown significantly, especially Bitcoin and Ethereum. Despite the acceptance of the underlying blockchain technology, regulators and financial firms in the US have diverged from implementing cryptocurrencies in their daily business operations. But maybe the winds are changing and now we'll start seeing more big financial services firms becoming more proactive with cryptocurrencies, contrary to some of the statements we heard in the past weeks.

Even though J.P. Morgan chief executive, Jamie Dimon, called Bitcoin a fraud, the bank's traders were buying shares of an exchange traded fund that tracks cryptocurrencies. In a recent article on CNBC, James Gorman, CEO of Morgan Stanley, took a different stance saying that Bitcoin and other cryptocurrencies were certainly "more than just a fad. (https://www.cnbc.com/2017/09/27/morgan-stanley-ceo-gorman-differs-with-dimon-says-digital-currencies-are-more-than-just-a-fad.html)".

Along with JPMorgan, more than a dozen banks, including Morgan Stanley (http://fortune.com/fortune500/morgan-stanley/), Goldman Sachs Group (http://fortune.com/fortune500/goldman-sachs-group/) Inc and Credit Suisse Group AG, have acted as brokers for buying and selling Bitcoin XBT on Nasdaq's Stockholm-based exchange, according to Swedish online bank Nordnet AB.

It is good to see Fidelity Investments showing confidence in cryptocurrencies. This very public Bitcoin recognition makes Fidelity just one of a handful of big investment companies that have decided to integrate cryptocurrencies and putting it in direct opposition to many others including the likes of J.P. Morgan, that continue to ignore what they can't control.

Opinion: It's Political: Why China Hates Bitcoin and Loves the Blockchain (https://www.coindesk.com/political-china-hates-bitcoin-loves-blockchain/)

Some governments love blockchain technology, but hate Bitcoin. Some governments are in panic, because they understand they can't stop Bitcoin from becoming an alternative to their monopoly on money. Deep down, most governments understand the underlying value of blockchain, which is primary reason they are considering and are experimenting with their own versions of fiat digital currencies.

Bitcoin is largely an American invention. While no one knows who Satoshi Nakamoto really is, it is believed that he primarily spoke and worked on Bitcoin in English and eight years ago he refined his protocol with the late <u>Hal Finney (https://en.wikipedia.org/wiki/Hal Finney (computer scientist)</u>).

Yet, China and Russia have both shown interest in pursuing their own national cryptocurrencies, as part of their strategies to disrupt US. economic dominance. The Chinese government is speeding up investment in cryptocurrency technology to replace paper money with digital currency. The Ministry of Industry and Information Technology (MIIT) recently approved nine products that meet the country's "trusted blockchain standards", including Tencent Blockchain developed by online payment system Tenpay, and a platform from Chinese telecom conglomerate ZTE.

The US dollar's position as the world's dominant reserve currency gives the US enormous leverage over the world's economy. The high demand for dollars in many different countries, allows the US. to constantly print more, making buying imports and borrowing money cheaper for the United States.

But the US. is holding on too tight. This is the primary reason the US. has not been pro-cryptocurrency. And this is potentially its down fall.

In such a globally connected economy, the impact of transitioning to blockchain will be profound and will likely turn any nation and industry on its head. Amazon dominates as a marketplace. Facebook dominates as a social network. Google dominates as a search engine. Airbnb dominates renting rooms. Blockchain, the distributed database that powers Bitcoin, could disrupt everything.

In an <u>article on Bloomberg (https://www.bloomberg.com/news/articles/2017-06-06/putin-eyes-bitcoin-rival-to-spur-economic-growth-beyond-oil-gas)</u> that Vlad Martynov, an adviser for the Ethereum Foundation said:

"Blockchain may have the same effect on businesses that the emergence on the internet once had — it would change business models, and eliminate intermediaries such as escrow agents and clerks. If Russia implements it first, it will gain similar advantages to those the Western countries did at the start of the internet age."

The winners of the blockchain era, will be the countries and businesses that embrace it and Michael J. Casey sums it up perfectly:

"Given the current policy priorities of the Trump administration, the U.S. won't likely be the winner in this. But neither will China if it continues on its present course. The age of cryptocurrency will deliver the spoils to countries, businesses and individuals that operate within a system of open access, property rights and free trade – the principles upon which U.S. hegemony was originally built".

<u>Ilias Louis Hatzis (https://www.linkedin.com/in/iliaslouishatzis/)</u> is a Blockchain entrepreneur who writes the Blockchain Bitcoin & Crypto (BBC) Weekly CXO Briefing each Monday.

Get fresh daily insights from an amazing team of Fintech thought leaders around the world. Ride the Fintech wave by reading us daily in your email.

SEPTEMBER 25, 2017SEPTEMBER 26, 2017 BITCOIN & BLOCKCHAIN 1 COMMENT

Blockchain Bitcoin & Crypto Weekly CXO Briefing for week starting 25th September 2017

The Blockchain Bitcoin & Crypto Weekly CXO Briefing is all you need to know, each week, jargon free for CXO level business leaders and investors who will use this technology to change the world. Each week we select the 3 news items that matter and explain why and link to one expert opinion.

For the intro to this weekly series, please go here. (https://dailyfintech.com/the-other-bbc-news/)

News Item 1: <u>YC wants to let people invest in its startups through the blockchain (https://techcrunch.com/2017/09/20/yc-wants-to-let-people-invest-in-its-startups-through-the-blockchain/)</u>

Decrypted: Sam Altman, the president of Y Combinator, expressed his interest in adopting blockchain for investment purposes, while speaking at the recent TechCrunch Disrupt conference. Altman said that he wants to democratize the process: "We are interested in how companies like Y Combinator can use the blockchain to democratize access to investing".

Y Combinator wants to give people another way to invest in startups that it works with, using the blockchain and cryptocurrency to offer wider access.

Our take: Y Combinator has helped numerous Silicon Valley giants get started. In recent years it has also <u>invested in several startups in the crypto space (https://www.crunchbase.com/organization/y-combinator/insights/categories/bitcoin/1c163fa9a6a242ed1fa5299f626804db)</u>: Coinbase, Blockstack, Serica, Bitaccess, Shift Payments, Buttercoin, TradeBlock, SFOX, Filecoin, Zenbox.

Now, Y Combinator is looking at ways they can leverage the power of cryptocurrency and blockchain, to get investors to back their startups and broaden the investment pool. The accelerator has shown interest in adopting blockchain and is currently working out legal factors that need to be taken into consideration before such a system can be put in place.

While Y Combinator showed interest in blockchain, when Alman talked about ICOs, he expressed reservations: "Do I think ICOs are silly, bordering on scams? Yes, they are, but, there are a few that are important, and the blockchain is more important than not... ICOs need to be regulated."

Y Combinator is not the only one looking at blockchain for investments. Sequoia and Andreessen Horowitz and other large VCs have backed Polychain and MetaStable (http://fortune.com/2017/07/26/bitcoin-cryptocurrency-hedge-fund-sequoia-andreessen-horowitz-metastable/).

In recent weeks ICOs have been in the eye of the storm, with China's ban on ICO funding in early September. Several regulators around the world have commented and issued warnings and are <u>looking at ways to control ICOs (https://cointelegraph.com/news/in-wake-of-china-ico-ban-japan-singapore-us-give-crypto-second-look)</u>: Japan, Singapore, Canada, South Korea, Hong Kong, Russia, England, and the United States,.

Everyone is taking a closer look at ICOs. Canada wants to create a middle ground that allows ICOs to exist within current regulatory structures, while countries like the Isle of Man and Gibraltar want to create frameworks that allow ICOs to be legally compliant.

In May of 2017, Gibraltar's Digital Currency Summit (https://digitalcurrencysumm.it/dcs-gibraltar-blockchain-regulatory-framework/) explored ideas to grant legal status to companies with a focus on blockchain, as well as to companies conducting ICO's. In early September, the Isle of Man opened up its doors (https://www.coindesk.com/icos-welcome-isle-of-man-to-unveil-friendly-framework-for-token-sales/) to entrepreneurs looking to launch Initial Coin Offerings. In 2014 and 2015, it outlined rules and legislation for businesses that handle or exchange digital currencies and continued to develop a regulatory framework which will allow token sales to be compliant with anti-money laundering (AML) and know-your-customer (KYC) regulations. Having completed an ICO test case launched by Adel (https://adelphoi.io/), a fintech incubator which incorporated on the island, the Financial Services Commission has put their principles of regulation into action.

But competition may also come into play between regulators. We already saw an example of cantonal competition in Switzerland, where the municipality of Chiasso recently announced (http://fortune.com/2017/09/12/switzerland-chiasso-bitcoin-tax-zug/) it would be accepting Bitcoin for some tax bills, as the mayor hinted at competition with the nearby Swiss canton of Zug. Another example are the statements (https://www.coindesk.com/icos-welcome-isle-of-man-to-unveil-friendly-framework-for-token-sales/) made by the Isle of Man's Department of Economic Development, where one official was quoted as saying "Our understanding and analysis of the ICO market is that it represents a massive vertical market for us".

Its clear that cryptocurrencies, blockchain and ICOs have tremendous potential and can drive economic development. We can expect to see further regulatory development and competition between nations, regions, and municipalities, as everyone tries to get a better grasp of things.

News Item 2: Raiden Release: Simpler Micropayments Go Live on Ethereum's Testnet (https://www.coindesk.com/raiden-release-simpler-micropayments-go-live-ethereums-testnet/)

Decrypted: The <u>Raiden Network (https://raiden.network/)</u> has now entered live testing, the final stage before it's deployed into production. The Raiden Network is an essential part of the Ethereum ecosystem and one of the most important scaling solutions.

The Raiden Network is similar to the Lightning Network. It's an off-chain scaling solution, enabling near-instant, low-fee and scalable payments. It's complementary to the Ethereum blockchain and works with any ERC20 compatible token.

Also, its been posted that the Raiden Network plans to <u>launch an Initial Coin Offering (https://www.coindesk.com/raiden-ico-ethereum-scaling-solution-launch-publicly-traded-token/)</u> (ICO) this October, to further fund the development of the payments protocol.

Our take: As the market cap for blockchain assets is around \$130 billion, blockchain platforms have been plagued with scaling problems.

Blockchains don't scale well because they need a global consensus on the order and outcome of all transfers. Every participant needs to know about all the updates to the shared ledger. Hardware and bandwidth constraints set a limit on the number of updates per second, that can be shared in a decentralized network. The basic idea of the Raiden Network is to avoid the blockchain consensus bottleneck. This is done by leveraging a network of payment channels which allow to securely transfer value off-chain, without involving the blockchain for every transfer.

The Raiden Network has been in development for almost two years. Along with the Raiden Network, there have been a few other innovative projects attempting to ensure that decentralized applications can run as easily and at scale, as centralized apps run today. Truebit (https://truebit.io/) and Plasma (https://plasma.io/) have emerged as innovative ways to solve Ethereum's scaling problems.

Plasma, which is the brainchild of Joseph Poon (co-author of Bitcoin's Lightening Network) and Vitalik Buterin (founder of Ethereum), is trying to solve the scaling problem, using "baby" blockchains". The system connects child blockchains to the main blockchain, with something called fraud proofs. This concept is similar to the Lightning Network, an idea Poon described a couple years ago for Bitcoin.

While Raiden's ICO hasn't been officially announced yet, a couple of days ago on their blog, Raiden Network developers <u>announced</u> (https://medium.com/@raiden_network/announcing-the-raiden-token-rdn-a43fe264dcf1) that they decided to create a special token (RDN), that will be used for fees paid on the Raiden Network. The existence of this Raiden Network Token means that for most users, every transaction on the Raiden network will require the users to pay a fee that that can only be paid using these special tokens.

The <u>Coindesk article (https://www.coindesk.com/raiden-ico-ethereum-scaling-solution-launch-publicly-traded-token/)</u> says that the funds raised by the ICO in October, will be used to further develop the network. The ICO will be performed in a dutch auction manner, similar to <u>Gnosis (https://gnosis.pm/)</u>, meaning the price of the tokens would decline in cost over the course of the token sale.

Scalability remains the holy grail of blockchain technology and one of the main challenges faced by distributed ledger technology. The transaction throughput of blockchain technologies is still orders of magnitude behind that of mainstream financial networks. This hinders their widespread adoption. In order to challenge traditional payment networks and assume a key role in the decentralized future, blockchains must find ways to radically improve their throughput, measured in number of transactions per second.

We need to be working more on protocol layers for both scaling transactions and also scaling security protocols. Technologies like Raiden and Lightning can help change that.

News Item 3: Russian Prosecutor's Office Summons Burger King for Issuing Cryptocurrency (https://news.bitcoin.com/russian-prosecutors-office-summons-burger-king-issuing-cryptocurrency/)

Decrypted: The prosecutor's office in Russia summoned Burger King to explain the issuance of its cryptocurrency, the Whoppercoin. A month ago, the fast food giant launched its blockchain token with a supply of 1 billion Whoppercoins. Customers receive one Whoppercoin for every ruble they spend. With 1,700 Whoppercoins, they can buy a Whopper burger.

While the Whopper cryptocurrency is a bit of a gimmick, customers can still trade and transfer the coins, just like any other cryptocurrency.

Our take: The WhopperCoin concept is an out-of-the-box approach to a rewards program but not without some risk. A proposed Russian legislation last year included possible jail time for Bitcoin users. Within the territory of the Russian Federation the turnover of any currency other than Russian rubles is banned.

Burger King in Russia issued a cryptocurrency called Whoppercoin in August, entering crypto market with a blockchain loyalty program, that allows customers in Russia to earn a coin for every ruble spent at BK. The cryptocurrency is hosted on the Waves blockchain platform and lets users trade the token with other users on a peer-to-peer exchange, for other cryptocurrencies as well as fiat currencies.

A study by Colloquy (http://www.businesswire.com/news/home/20170629005694/en//U.S.-Customer-Loyalty-Program-Memberships-Reach-Double/? feedref=IjAwJuNHiystnCoBq_hl-fLcmYSZsqlD_XPbplM8Ta6D8R-OU5o2AvY8bhJ9uvWSD8DYIYv4TIC1g1u0AKcacnnViVjtb72bOP4-4nHK5iej_DoWrIhfD31cAxc860aE) suggests, US consumers alone held 3.8 billion memberships in customer loyalty programs. More than 75% of adults in the United States participate in customer loyalty programs, like those offered by credit card companies, hotel chains and retailers and more than \$50 billion in reward points and miles are issued by businesses annually. Loyalty programs are one of the most effective ways for merchants to boost customer retention.

While part of the WhopperCoin initiative seems like a fun and clever marketing ploy, cryptocurrency offers the perfect use case for reward tokens. It has the potential to be truly disruptive and reshape the way brands interact with consumers and consumers interact with each other. These tokens can effectively become private currencies issued by businesses or non-profit organizations, that would reward people's loyalty.

Building a loyalty program on blockchain means anyone can send to someone else, the tokens they have received from the brand, potentially opening up a secondary market. You could trade on an exchange the tokens you've received from Brand A, with anyone willing to buy them, for tokens from Brand B or for fiat currency. In a sense exchanging your Burger King tokens, for Starbucks tokens, BTC, altcoins or US. dollars.

Applications like this present serious potential for building long-term loyalty, as these token can then be easily exchanged with other customers, creating repeat purchases of products. Blockchain can streamline the execution and administration of loyalty rewards programs, giving all participants near-real-time transparency, within the permissioned constraints set by the program provider. And besides integrating with, and enhancing, legacy systems that currently operate loyalty rewards programs, loyalty rewards providers can control exactly how they and their customers interact in the interlinked network to which blockchain provides them access.

There are several platforms out there that anyone can use to create their own coins on top of their existing blockchain, saving all the trouble from building your own. These include platforms like NXT (https://xxtplatform.org/). Counterparty (https://counterparty.io/) or Waves (https://wavesplatform.com/).

Burger King Russia is calling their coin a cryptocurrency: "Now Whopper is not only burger that people in 90 different countries love – it's an investment tool as well. According to the forecasts, cryptocurrency will increase exponentially in value. Eating Whoppers now is a strategy for financial prosperity tomorrow".

I'd probably end up dead long before, if I had to eat my way through all these whoppers to ensure financial prosperity with WhopperCoins. However, crypto loyalty programs can certainly offer unique opportunities, not just to incentivize customers to spend more money with a brand, but to also give them genuine rewards.

Opinion: <u>Here's why the crackdown on bitcoin in China is 'not a real problem' for the digital currency</u> (http://markets.businessinsider.com/currencies/news/bitcoin-price-stable-despite-china-crackdown-2017-9-1002385209)

China's actions reflect views that cryptocurrencies have no intrinsic value backing them, operate without any kind of government control and pose a risk of destabilizing the entire financial sector.

Jamie Dimon's recent prose could have been written in China. His beef is with Bitcoin, not blockchain. He believes that Bitcoin and other cryptocurrencies are a <a href="mailto:fraud-intension-left-decomposition-left-decom

jamie-dimon-lays-into-bitcoin-again.html) saying about cryptocurrencies: "It's creating something out of nothing that to me is worth nothing".

He's not alone in this rhetoric. In the UK, Schroders, an investment company, backed China's decision days after the ban was announced. Its strategist Huw van Steenis wrote "Why central banks should clamp down on cryptocurrencies (http://www.schroders.com/en/insights/economics/bitcoins-bite-why-central-banks-should-clamp-down-on-cryptocurrencies/)": "We should expect more central bankers to look to outlaw or crimp their use. This will be most acute in markets which are worried about capital flight and organized crime".

China is a key center for cryptocurrencies and the home to the vast and lucrative cryptocurrency mining operations for Bitcoin, Ethereum and other altcoins. Chinese exchanges, Bitfinex, OkCoin, and BTCC, made up over 45% of the global market share (http://bitcoinity.org/markets/list) over the last 30 days. Also, Bitmain, the largest manufacturer of Bitcoin mining equipment, is a Chinese company.

China is important. The extreme decisions by Chinese regulators are not a real problem for Bitcoin and other crypto in the long run.

The reality is:

- 1. Large financial hubs around the world are supporting Bitcoin and other digital currencies (Japan, South Korea, Singapore etc).
- 2. A day after China announced the ban on ICOs, Bitcoin's price dropped from \$4900 to below \$4200 and prices of Ethereum and other cryptocurrencies also dropped. But, the impact was short-lived. Within two days of the announcement, prices climbed above \$4600, suggesting that the market had brushed off the likelihood of a regulation-triggered tumble in prices.
- 3. The global Bitcoin exchange market is adjusting. The vast majority of trading volume from the Chinese market has moved to Japan and South Korea. Earlier this week, the South Korean Bitcoin exchange market officially overtook China to become the third largest bitcoin market in the world, behind Japan and the US.
- 4. China isn't shutting down exchanges, they're forcing them to get licensed and adhere stricter guidelines.
- 5. The PBOC wants to introduce a digital yuan that will serve as a CNY tether.

Charlie Shrem, an early Bitcoin entrepreneur <u>tweeted (https://twitter.com/CharlieShrem/status/910963819555500033)</u> about China's long-term impact on the crypto market:

"This China FUD is playing on all your fear, uncertainty and doubt. China has no real effect on the future of Bitcoin. Bitcoin is about censorship free and an alternative non government controlled financial system. China's relevancy is diminishing by the day. They overplayed their hand and there is a reason they are being ambiguous. The only power they have over Bitcoin is the power you give them. Bitcoin puts a financial system back in our control".

The reality is that China, understands the potential of cryptocurrency. The Chinese Government wants to know how its currency flows through the market, through regulated exchanges, and make crypto work in their own market.

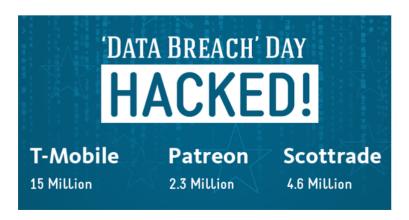
Yes, China is an important market and the news about exchanges shutting down and ICO funding being banned, certainly has a short-term negative effect on the prices. While Internet businesses like Google and Facebook have been banned in China, they are still doing well. Bitcoin and digital assets are a global phenomenon. We can expect Bitcoin and the entire cryptocoin market to do well, regardless of the words and actions of the small-minded, that are trying to halt change.

<u>Ilias Louis Hatzis (https://www.linkedin.com/in/iliaslouishatzis/)</u> is a Blockchain entrepreneur who writes the Blockchain Bitcoin & Crypto (BBC) Weekly CXO Briefing each Monday.

Get fresh daily insights from an amazing team of Fintech thought leaders around the world. Ride the Fintech wave by reading us daily in your email.

SEPTEMBER 23, 2017SEPTEMBER 20, 2017 BITCOIN & BLOCKCHAIN, STRATEGIC VIEWPOINT LEAVE A COMMENT CYBERSECURITY DATA PRIVACY GDPR PSD2 XAPO

How incumbent banks, particularly Swiss, can thrive thanks to GDPR and cybersecurity, even after PSD2, but need to embrace Bitcoin



The usual story line goes that big old slow incumbents cannot compete with agile Neobanks with their hip UX and with their low costs that are unencumbered by branch networks.

If UX is the game, banks can at best play catch up. They can buy the hip UX ventures, only to be left in the dust as a new one emerges that is even more hip. Just when you figure out mobile apps, you have to figure out ChatBots with an AI back end. Just when you figure out ChatBots with an AI back end, you have to figure out...

Doing that with a clunky backend designed in the batch era is not just hard, it is almost impossible.

Playing catchup is a lousy game.

PSD2 made the playing field level

That was really bad news for incumbent banks. In theory, banks can win on that level playing field. In reality, if the game being played on that level playing field is how to create the best UX, banks will lose. Agility wins that game and a Neobank is more agile than an incumbent Bank. If two teams play soccer/football on a level playing field and one has an average age 25 and one has an average age 55, I am placing my bet with confidence on who will win. If the 25 year old team has a 25 degree upward slope, the odds even up.

Consumers don't care that much about UX

That is heresy. UX is the whole deal. That is the mantra we have all been repeating, but which I will challenge. Sure consumers care about UX. But *how much* do they care? How much do they care compared to things like low fees, low interest rates and that simple word – security.

Before getting onto security, look at this from the POV of those hip Neobanks. Read this post by Fred Destin of Acce (https://medium.com/@fdestin/neobankskeptic-29fc2e053eb1)l, one of the best VCs, working at a top tier VC firm. The Customer Acquisition Cost (CAC) for Neobanks is a real issue. This is not like getting users to engage with a free social service. When money is at stake, people take longer to commit. Fear is part of that delay. Will the venture still be around years from now? Will they lose my money? The fear may be irrational, but even irrational fear kills your CAC metrics.

The biggest fear is, will they lose my money? Will they lose my data? This is where banks could have an advantage – if they play their cards well.

The latest hack – Equifax – creates an inflection point in the market. It could be a disaster for banks. If they don't take urgent and decisive action it will be. Or banks can seize the opportunity that this creates.

The Equifax inflection point

The Equifax data loss is a huge problem for institutions that live on trust from consumers. It impacts consumers in such a fundamental way, causes so much work and impacts every interaction with the banking industry.

To anybody who understands a bit about cybersecurity, this was no surprise. Cybersecurity folks hold 3 truths to be self evident:

- 1. Anything that is digital can be hacked. Nothing is secure. It does not matter whether you are a Fortune 500 company, Government, US Presidential candidate, mega Bank or payment network. You will get hacked. It is an arms race that the good guys are losing because every solution, no matter how clever and expensive, has a shelf life until the bad guys find a way around it (and the payoff for the bad guys is big enough and the Crime As A Service networks use the full power of digitization and Moore's Law). Your identity can be stolen with ease and with a valid but stolen identity all the KYC & AML processes are useless.
- 2. *This is a Board level issue.* Banks and other big companies are willing to spend whatever is needed because the cost of a breach is so high. This is an existential threat for the biggest companies on the planet. Attention is not the problem. Budget allocation is not the problem. A viable solution that does not create an awful onboarding UX is the problem.
- 3. *Eliminating static passwords is essential*. With key loggers on mobile phones, everything you type on those phones is visible to criminal gangs. Which is a problem when we all live on our phones. If you drew a matrix with Great UX and Secure as the axes, it is obvious where Mobile phones sit.

There are only two ways out of this:

Scenario 1: everything moves to decentralised self-sovereign identity stored on a blockchain. This will make banks as we know them today irrelevant. The problem for ventures pushing in this direction is "how do we get from here to there, *today*?" It is a grand futuristic vision, but consumers want a solution *today*, not at some distant time in the future. The banks also will have trouble buying this vision. Telling a Fortune 500 board that their only hope is to move off centralised data centres to a fully decentralised Blockchain based network will get you some odd looks around the boardroom table.

Scenario 2:banks get their act together. Which brings us to the wonderful world of Cold War spy stories and the one time password.

One time password is the only answer – ask John Le Carre

If you steal the the one time password, you can steal the contents of that message/payment and *only that message*. And you have only a short time window to do do. This makes it *theoretically* possible, but *economically* impossible for the thieves. That is fundamentally different from stealing data that is a key that thieves can use multiple times (such as a password, social security number, credit card number),

The one time password was extensively used during World War 2 and the Cold War. John Le Carre fans will know it as a key part of "spycraft".

One time password uses cryptography. Don't worry, you Bitcoin fans, we will get to that other cryptography later.

That totally messes with the frictionless UX

If you live in Switzerland, you may already use a hardware device that the banks give you (a "dongle") that uses one time password technology. Many Banks insist upon it. But each dongle is bank specific and can be rather unfriendly to use, making onboarding harder. Once you get used to it, the dongle is fine, but the onboarding experience is lousy.

This is where the opportunity lies. The onboarding pain of a one time password dongle makes consumers reluctant to switch to a new bank if they have to adopt a totally new dongle. The incumbent bank can argue "why not keep all your accounts with us, we can do all the account aggregation and reporting that you need".

Of course a Neobank can also use a a one time password dongle. It will make them significantly less hip and mess with the lovely UX, but it will be significantly more secure. Personally that is a trade off I am able to live with.

So how do you find early adopters to use this secure account with a harsh onboarding UX? Up to this point, incumbent banks will be doing the nodding dog act. The takeaway will be "just protect the base by being ultra secure".

This is where incumbent banks will start getting uncomfortable because my recommendation is that they offer a secure service to Bitcoin investors.

The newbie Bitcoin investors pain point.

The Bitcoin veterans tell newbie Bitcoin investors to have hot wallet and a cold wallet and the cold wallet needs to be on a hardware device that you put in a safe. They look with scorn on anybody who thinks this is a pain.

If you have a lot of Bitcoin on your hardware device, put it in a bank vault rather than relying on a home safe.

Does that remind you of the gold business?

The reason I wrote "particularly Swiss" in the headline is that Bitcoin is legal in Switzerland. Sure you have to ask investors/customers for AML/KYC checks, but that is not a problem. Just don't accept Altcoins designed for the dark web. Dark web users don't use Bitcoin so much any more because it is trackable. With a bit of work it it is quite feasible to define a service to store Bitcoin that passes AML/KYC checks.

However, once they have done this, banks do not need to give that information to anybody who comes knocking asking for the data, which brings us to GDPR and Switzerland.

Switzerland by law is already ahead of GDPR – customers have data privacy as a right.

Bitcoin investors is a tiny market today, maybe 1% of the gold market. Read Peter Thiel's Zero To One to see the value of starting with a tiny market that nobody else cares about that may grow in future (for example PayPal started with power sellers on eBay).

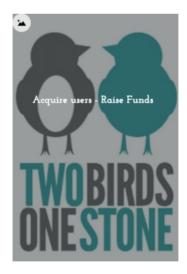
Image Source (https://twitter.com/secmetiri).

Bernard Lunn (https://www.linkedin.com/in/bernardlunn/) is a Fintech deal-maker, author (https://www.amazon.com/Mindshare-Marketshare-hearts-budgets-networked/dp/1503243494), investor and thought-leader.

Get fresh daily insights from an amazing team of Fintech thought leaders around the world. Ride the Fintech wave by reading us daily in your email.

SEPTEMBER 19, 2017 BITCOIN & BLOCKCHAIN, INNOVATION CAPITAL LEAVE A COMMENT ICO SMART VALOR TOKENS

ICOs: Two birds One stone



The digitization of financial services means that we are at the very early stages of tackling two significant social impact topics (Jason Bates says "Digital Banking is only 1% done (https://11fs.com/blog/digital-banking-1-done/)"):

Financial inclusion – mainly in the "Rest"

Tokenization of the economy - on a global basis

Since the tokenization of our economies is really nascent, we are at risk of thinking of different aspects when we hear the term. We are even at risk of dismissal altogether of this emerging reality, from those that see this as fraud, exuberance, a fad. Jamie Dimon, a Greek immigrant that made it on the billionaire list, being one of them. Others, look at the thousands of tokens that have been issued (over 6,000 and growing as we speak) and the ever-increasing ICO rounds (over \$250mil lately) and are naturally, worried about this young market.

There is room for all these concerns but the market will grow and advance with or without our opinions, thoughts, and concerns. The reality (including stumbles and crashes) will be exactly as Richard Olsen (https://www.linkedin.com/in/richardbolsen/), co-founder and CEO of Lykke describes it and as David Siegel (https://www.linkedin.com/in/siegelventures/), CEO of 20130 and the Pillar Project, quotes in the opening of his in-progress e-book The Token Handbook (https://medium.com/@pullnews/the-token-handbook-a80244a6aacb):

There won't be millions of tokens. There will be millions of kinds of tokens. — Richard Olsen

Today we are mostly focused on the thousands of fundraising tokens with a just a few functionalities, like tokens that represent ownership, or some rights, or rewards, or incentives.

Tokens are not only alternative fundraising (crowdfunding) weapons that make VCs stay up at night because of fear of extinction; as some like to believe.

Tokens will enable network effects and the creation of ecosystems, we cant imagine with the current business processes. These are the "other kind" of tokens that Richard Olsen is referring to, I believe. So, stay tuned.

The Zurich ICO summit organized by Smart Valor

For now, we mostly see crowdfunding kind of tokens and most of them can't answer the question "Why this token?" without admitting that it is a quick, techie way to crowdfund and "acquire users" or it is an existing app that is tokenizing its self. Actually, in many cases, ICOs look more like *Initial User Acquisition Events – IUAs*. In some cases, like Civic which already had an app, the ICO was a cheaper way to KYC and onboard users and at the same time finance their growth (Civic can answer clearly the Why question).

What is important to keep in mind is that the technology of ERC20 tokens that has clearly facilitated the explosion of ICOs, isn't going to help in building a community (be it developers or users) and therefore, there is no magic way in building "Network effects".

A token sale can be a financing tool and a user acquisition tool! But it is not panacea for network effects.

Smart Valor, founded by Olga Feldmeier (ex-Xapo), organized the first ICO summit in Zurich with an amazing lineup of speakers from around the world. I was able to watch part of the conference which was streamed live. From the opening speech of <u>William Mougayar</u> (https://www.linkedin.com/in/williammougayar/) and then some of the topics and angles during a few panel sessions.

Smart Valor (https://smartvalor.com/) is a blockchain venture that is focused on the tokenization of all kinds of alternative investments (real estate, funds, private equity etc.) on a decentralized platform that can make them accessible to Emerging markets. In other words, private banking kind of financial services for EM. You can hear more about the value proposition in this interview (https://www.youtube.com/watch?time_continue=129&v=TICOY2s2bfU).

William Mougayar, the keynote speaker, reminded us that June 2017 was the first month that ICO funding (\$600) surpassed the total seed-angel fundraising (\$500mil). He shared his insight that on Sep 1. the market cap of cryptos was around \$172billion and the amount from ICO crowdfunding was \$1.7bil. This shows that ICOs were 1% of the total market cap. So clearly, there was simply a shift (diversification maybe) of 1% from cryptos into ICOs.

He reminded us that Ethereum ICO'd in the summer of 2014 and Ether started trading only one year later (summer 2015) when the network went live. Will this be one aspect of the self-regulatory standards that ICOs adopt going forward?

Here is my collection of self-regulatory standards to be considered. A few inspired from the panel discussions and a few additions of my own.

- No more white papers, unless they are exceptional highly computational academic breakthroughs
- \circ $\,$ No more token trading before the protocol or the app is live
- More Smart tokens that release funds as milestones are achieved
- Allocation of tokens with the whitelist technique (i.e. KYC users-signup and guarantee a minimum token allocation) so that communities are built and whales don't dominate.
- Avoid Slack and Telegram for pre-ICO community building because they are vulnerable to phishing (Chainalaysis reports \$250mil have been hacked to date).
- $\circ\;$ Ventures that can answer the "Why the token?" question with a vengeance, join the IGF.

Miko Matsamura (https://www.linkedin.com/in/mikomatsumura/) from Pantera Capital (https://panteracapital.com/) (a San Fran. \$100M ICO-only fund) highlighted a new self-regulatory effort the ICO Governance Foundation (https://icogovernance.org/) (IGF) which is an international organization and Swiss Foundation whose mission is to protect global ICO investors and facilitate capital formation for ICOs. It aims to create something like S-1 filling for ICOs. The Crypto Valley Association (CVA) also issued recently a code of conduct around ICOs (https://cryptovalley.swiss/crypto-valley-association-statement-token-launches/).

Panel participants here (https://icosummit.ch/zurich-2017/). Source of original image (https://twitter.com/tbos_leeds)

Efi Pylarinou (https://www.linkedin.com/in/efipylarinou/) is a Fintech thought-leader, consultant and investor.

Get fresh daily insights from an amazing team of Fintech thought leaders around the world. Ride the Fintech wave by reading us daily in your email.

SEPTEMBER 18, 2017SEPTEMBER 19, 2017 BITCOIN & BLOCKCHAIN LEAVE A COMMENT

Blockchain Bitcoin & Crypto Weekly CXO Briefing for week starting 18th September 2017

The Blockchain Bitcoin & Crypto Weekly CXO Briefing is all you need to know, each week, jargon free for CXO level business leaders and investors who will use this technology to change the world. Each week we select the 3 news items that matter and explain why and link to one expert opinion.

For the intro to this weekly series, please go here. (https://dailyfintech.com/the-other-bbc-news/)

News Item 1: <u>Bitcoin at crossroads after shedding more than \$27 billion in value (http://www.marketwatch.com/story/bitcoin-at-crossroads-after-shedding-nearly-20-billion-in-value-2017-09-13)</u>

Decrypted: Announcements over the past couple of weeks have set off Bitcoin's price tumble. After its all-time high in the beginning of the month, China notified local Bitcoin exchanges to <u>cease and desist (https://www.coindesk.com/document-lists-closure-steps-for-chinas-bitcoin-exchanges/)</u>. China ordered Bitcoin exchanges to shutdown, because they operate in the country without an official license

The shutdown of the exchanges coupled with the pressure that was created another announcement by China's central bank earlier in the month, to ban Initial Coin Offerings (ICO), triggered huge price drops to the entire crypto market.

Our take: Chinese regulators have dealt a huge blow to the cryptocurrency market. These announcements have sent the cryptocurrency markets into a free fall. Early in the month the total value of cryptocurrencies was over \$170 billion, while all this news caused panic and pushed it below \$100 billion.

One of China's largest Bitcoin exchanges, BTC China, announced that it will shutdown its operations at the end of the month, after considering the announcement made by Chinese regulators in early September. The BTCChina announcement was followed by OkCoin and Huobi that said they were shutting down their yuan-based trading operations by Oct. 31.

Investors in China have been using Bitcoin as a way to protect themselves should the yuan fall in value. Trading their yuan in for Bitcoin can allow Chinese investors to move funds outside of the country. Traditionally, China's government has set a \$50,000 annual limit on how much its citizens can move outside of the country. Buying Bitcoin was a way to bypass those rules.

The news has sent Bitcoin's price plummeting. Last Thursday, the cryptocurrency dropped about 9% trading just below \$3,500. That's a significant drop from its all-time high of \$5,013.91 on September 2. Along with Bitcoin, all crypto's were affected. Ether dropped by 11% to around \$240, Bitcoin Cash crashed by 17% to \$417, Ripple fell 10%, Litecoin dipped to \$46, while Dash and Monero each fell about 10%. So far, Bitcoin has lost more than 20% of its value since the Chinese regulators announced the ban on ICOs on September 4.

It is likely that panic-driven traders in China, South Korea, US and Japan caused the sell-off and the sudden price drop. But, I think its important to note that the ultimate plan of the PBoC and Chinese regulators is to provide and offer a licensing program for exchanges, not ban trading platforms. China's central bank has been testing a prototype digital currency (https://www.bloomberg.com/news/articles/2017-02-23/pboc-is-going-digital-as-mobile-payments-boomtransforms-economy) with mock transactions between it and some of the country's commercial banks. China is seriously exploring the technical, logistical, and economic challenges involved in deploying digital money, something that could ultimately have broad implications for its economy and for the global financial system.

A ban on crypto exchanges won't necessarily mean the end of trading in digital currencies. Major Chinese exchanges could make significant changes to their trading and offer peer-to-peer trading, instead of centralized exchange services.

Even though Bitcoin's prices sharply dropped this week, Bitcoin has climbed more than 250% year to date, outpacing many other assets. Also over the weekend the price was relatively stable and rebounding to around \$3,580.

News Item 2: <u>Broken Hash Crash? IOTA's Price Keeps Dropping on Tech Critique (https://www.coindesk.com/broken-hash-function-iota-price-drops-on-tech-critique/)</u>

Decrypted: IOTA's price fell by double-digits due to <u>cryptographic vulnerabilities (https://github.com/mit-dci/tangled-curl/blob/master/vuln-iota.md)</u> found by researchers at Boston University and MIT.

Specifically, the researchers claim they were able to break the homegrown hash function "Curl" that IOTA was using as part of its digital signature scheme to secure user funds. The researchers were able to demonstrate how an attacker could forge a user's digital signature and use it to steal funds.

IOTA in a <u>blog post (https://blog.iota.org/curl-disclosure-beyond-the-headline-1814048d08ef?gi=41a4d2dcf7fc)</u> did not deny its Curl hash function was breakable, and the company has already issued a patch to the cryptocurrency's code.

Our take: IOTA (https://iota.org/) is a revolutionary new transactional settlement and data integrity layer for the Internet of Things. Its a new cryptocurrency that is focused on Machine-2-Machine (M2M) transactions. The main purpose of IOTA is to serve the machine economy by enabling M2M payments without fees.

The technology behind IOTA is based on a new distributed ledger architecture called the Tangle, which overcomes the inefficiencies of current Blockchain designs and introduces a new way of reaching consensus in a decentralized peer-to-peer system. For the first time ever, through IOTA people can transfer money without any fees. This means that even infinitesimally small nano-payments can be made through IOTA.

Currently IOTA with a market cap of approximately \$1.4 billion (https://coinmarketcap.com/currencies/iota/), counts among its partners VW, Bosch, Innogy and Microsoft, has ambitions of becoming a standardized protocol that becomes embedded into the everyday life activities of users. IOTA also recently made its way into the cryptocurrency casino arena, with BitDice choosing IOTA's Tangle for its platform.

But IOTA's price suffered a heavy blow, after Boston University and MIT researchers claimed to have found vulnerabilities to IOTA's proprietary hash function. DCI Director Neha Narula explained the findings in a post (https://medium.com/@neha/cryptographic-vulnerabilities-in-iota-9a6a9ddc4367) on Medium. She says the DCI reviewed the IOTA source code in July and were concerned when they found that IOTA developers had invented their own hash function:

"We found that IOTA's custom hash function Curl is vulnerable to a well-known technique for breaking hash functions called differential cryptanalysis, which we then used to generate practical collisions. We used our technique to produce two payments in IOTA (they call them "bundles") which are different, but hash to the same value, and thus have the same signature. Using our techniques, a bad actor could have destroyed users' funds, or possibly, stolen user funds."

The IOTA developers had written their own hash function, Curl, and it produced collisions, when different inputs hash to the same output. Cryptographic hash functions are important for cryptocurrencies because usually a transaction is hashed before it's signed. If you can break a hash function, you can potentially break signatures as well, meaning that the mechanism used to determine if a transaction is a valid and authorized spend is broken. The

mathematical integrity that cryptocurrencies provide hinges on this relationship being secure.

The cryptocurrency is still new, making it vulnerable, and creating price volatility especially when news like this break. But despite the price drop, on a monthly basis, it is still up 16%. Considering that the error was detected and reported by reputable researchers, and the flexibility and speed the IOTA team shown in fixing the bug, will eventually boost confidence. In the long run, robust and useful technologies will emerge from the use of IOTA.

News Item 3: <u>Bitcoin in the Browser: Google, Apple and More Adopting Crypto-Compatible API (https://www.coindesk.com/bitcoin-browser-google-apple-move-adopt-crypto-compatible-api/)</u>

Decrypted: Initially conceived in 2013, the World Wide Web Consortium (W3C) has been working with Microsoft, Google, Facebook, Apple and Mozilla, to create a currency-agnostic web payment standard.

The new <u>browser crypto API (https://www.w3.org/blog/wpwg/2017/09/14/payment-request-api-now-being-implemented-in-all-major-browsers-advances-on-the-recommendation-track/)</u> will allow browsers to easily support cryptocurrencies directly in the browser.

Our take: These days the majority of online shopping is happening on mobile devices and more than 66% are through mobile browsers, not native apps. This is a pain for most users, because each web site has its own flow, and most require users to manually type in their information (addresses, contact information, and payment credentials) over and over again. In most cases, people don't complete their purchases, and conversion rates on mobile are much lower when compared to desktop purchases. Also, on the development side, its difficult and time-consuming to create and maintain checkout pages that support various payment methods.

With W3C's Payment Request API, online merchants will be able to use simple standard 'in-browser API' to initiate payments from their checkout pages, regardless of what payment method consumers may prefer to use from their side. This exciting browser innovation clearly simplifies merchant-side integration requirements, but at the same time, it completely changes the dynamics on the consumer side as well. W3C's Payment Request API streamlines the checkout process, making the experience consistent and faster for users.

How does it work? Its pretty simple. The browser saves the user's personal information, billing address, shipping address and payment information in a safe way. When a shop requests the data the user gets prompted to allow transfer of data. This is done on the client side, meaning there is no communication to third-party providers needed and the data, once approved by the user, is just passed from the browser to the site. A website using Web Payments can request the user's stored data, provide a list of accepted payment methods, process that data and send it to its server, entirely skipping the checkout.

The new payment API supports several currencies and browsers. On the currency side it will support Bitcoin, fiat digital currencies and other cryptocurrencies, and for browsers all the big ones: Google Chrome, Microsoft Edge, Apple Webkit, Mozilla Firefox, Samsung Internet Browser and Facebook in-app browser.

The long term potential of this API is exciting, because it will eventually allow users to ditch card numbers, for new, secure and open payment methods. It drastically decreases the steps from adding products to the basket to confirmation of the purchase. In the best case the user only has to grant access to the data, and in the worst case, when no data is stored yet, the user needs to be entered it once, just the first time, and then never again.

Opinion: Jamie Dimon; Bitcoin Is a 'Fraud' (https://www.coindesk.com/jamie-dimon-bitcoin-fraud/)

"Frenemy" is an oxymoron of "friend" and "enemy". It refers to someone that combines the characteristics of a friend and an enemy. Someone with whom we are friendly and at the same time we dislike or rival. The term is used to describe personal, geopolitical and commercial relationships both among individuals and groups or institutions.

For banks, Bitcoin and other cryptocurrencies are frenemies. On one end banks and governments are exploring and experimenting with cryptocurrencies and blockchain, because they see the innovation and disruptive transformation they bring to the table, but on the other end they see them as a huge rival that can jeopardize their core businesses.

So here comes the head honcho of a major bank, that basically said Bitcoin is a fraud, not a real currency, and that he would fire any employee trading Bitcoin for being "stupid." Jamie Dimon, JPMorgan's CEO, has been a long time critic of Bitcoin, <u>dismissing the digital currency's survival</u> (https://www.youtube.com/watch?v=Vcq0 https://www.youtube.com/watch?v=

Not long ago, in February this year, JP Morgan Chase, joined a group of 30 big banks, tech giants, and other organizations to create a group, called the Ethereum Alliance (https://entethalliance.org/) to demonstrate a pilot of the financial technology and show off a spot trade on the foreign exchange market for global currencies, using an adaptation of Ethereum as the settlement layer.

Banks seem to be far more interested in blockchain, the technology behind Bitcoin. The reason they are so interested in distributed ledger technology, is because they think its a way to respond to the competitive threat that Bitcoin poses to traditional money. Banks and the governments that regulate fiat currencies, recognize that cryptocurrency is one of the few innovations that can securely and efficiently create and handle money, far beyond their control.

Banks want to adopt the efficiencies without the decentralization, the global nature and the low cost without loosing control. But you can't have Bitcoin's revolutionary nature, while removing all the things that make it innovative. I think Andreas Antonopoulos explains it best when he talks about why you can't separate Bitcoin from blockchain (https://cf-media.sndcdn.com/XOOmZk6tlhOL.128.mp3?

Policy=eyJTdGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lZGlhLnNuZGNkbi5jb20vWE9RbVprNnRJaE9MLjEyOC5tcDMiLCJDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lZGlhLnNuZGNkbi5jb20vWE9RbVprNnRJaE9MLjEyOC5tcDMilCJDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lZGlhLnNuZGNkbi5jb20vWE9RbVprNnRJaE9MLjEyOC5tcDMilCJDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lZGlhLnNuZGNkbi5jb20vWE9RbVprNnRJaE9MLjEyOC5tcDMilCJDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lZGlhLnNuZGNkbi5jb20vWE9RbVprNnRJaE9MLjEyOC5tcDMilCJDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lZGlhLnNuZGNkbi5jb20vWE9RbVprNnRJaE9MLjEyOC5tcDMilCJDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lZGlhLnNuZGNkbi5jb20vWE9RbVprNnRJaE9MLjEyOC5tcDMilCJDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lZGlhLnNuZGNkbi5jb20vWE9RbVprNnRJaE9MLjEyOC5tcDMilCJDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lZGlhLnNuZGNkbi5jb20vWE9RbVprNnRJaE9MLjEyOC5tcDMilCJDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lZGlhLnNuZGNkbi5jb20vWE9RbVprNnRJaE9MLjEyOC5tcDMilCJDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lZGlhLnNuZGNkbi5jb20vWE9RbVprNnRJaE9MLjEyOC5tcDMilCJDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llJlc291cmNlIjoiKjovL2NmLW1lDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llDb25kaXRpb24iOnsiRGF0ZW1lbnQiOlt7llDb25kaXRpb24iOlt7llDb25kaXRpb24iOlt7llDb25kaXRpb24iOlt7llDb25kaXRpb24iOlt7llDb25kaXRpb24iOlt7llDb25kaXRp

7HJfp~aMnLkvG9W2CtoFd0iZmwN3TEtiVNAWChsRHooPeMY~gftHRuE8j9W91ojRDPbZKCEvh7XA88hPBrklzdDtm8YG9ICFL45WLCFlDHAvXRZXN47nAc9HEc6x48Yq44mz~EhL7j~t9gdEMjN00iA &Kev-Pair-Id=APKAJAGZ7VMH2PFPW6UO):

"The big invention behind Bitcoin is not the currency, but it's also not the blockchain. The blockchain, as a hash-chain set of blocks, is really not that novel and not that interesting. What is really interesting is the combination of all four things together, and the important thing we haven't mentioned is the Nakamoto Consensus. The Nakamoto Consensus being the ability to agree on a set of consensus validation rules for transactions and blocks that are then implemented through a competition using proof of work".

The belief that you can separate Bitcoin and blockchain is flawed. If you remove the reward, Bitcoin, and the Nakamoto consensus mechanism, what you have left is a slow database that needs central control and oversight to work. So how is this different from what is in place today? Sounds to me like an existing centralized system, where you need to trust someone, because they say you should trust them, and not the math (known as a proof-of-work

calculation).

Sometimes it's hard to tell true innovation from fraud. In 1903, the president of Michigan Savings Bank told Horace Rackham, an early stockholder in Ford, that the "the horse is here to stay but the automobile is only a novelty."

The Internet has forever changed the world, and continues to transform our lives. Bitcoin and blockchain will restructure finance, even though most banks today see it as a big threat that can wipe out how they make money. Banks want to transform their industry, but in reality they can't imagine disruption that changes the fundamental principles of what they do. Those that embrace change instead of fighting and calling it a fraud, will be the one's that thrive in the new and emerging financial system.

<u>Ilias Louis Hatzis (https://www.linkedin.com/in/iliaslouishatzis/)</u> is a Blockchain entrepreneur who writes the Blockchain Bitcoin & Crypto (BBC) Weekly CXO Briefing each Monday.

Get fresh daily insights from an amazing team of Fintech thought leaders around the world. Ride the Fintech wave by reading us daily in your email.

SEPTEMBER 14, 2017 SEPTEMBER 14, 2017 BITCOIN & BLOCKCHAIN 3 COMMENTS LIGHTNING NETWORK SEGWIT

RTGS Segwit red Lightning Network Procesamiento fuera de cadena y el futuro de BCH y de la Mineria



What follows is a translation into Spanish of an article that appeared on Saturday. The translation is by <u>Enrique Melero (https://www.linkedin.com/in/enriquemelero/)</u>, a Crypto Finance Consultant based n Geneva.

Daily Fintech is branching out from its English roots by getting more translation into other languages. So far we have done some in German, Chinese and now Spanish. We would like to do more in those languages and add other languages (such as French).

Este título parece popurrí SEO de términos técnicos. Perdón – lo desglosaré para aquellos que no viven en el mundo digital. Títulos alternativos podrían haber sido:

- Puedes vender tus BCH porque pronto podrás pagar el un café con BTC.
- Bitcoin será pronto de uso corriente, elevando todavía más su precio.
- o Por qué puedes olvidarte de aquello que "Bitcoin está condenado a causa de su consumo de energía"
- Los mineros Bitcoin seguirán haciendo dinero pero ya no controlarán el ecosistema.

Para tener una explicación de las tecnologías que Bitcoin necesita para escalar puedes ir a este artículo y aprender lo que es Segwit, Lightning Network, procesamiento fuera de la cadena etc.

Para empezar, propongo una explicación para los que viven en el cyber espacio desde la vieja sala de máquinas de los pagos internacionales.

SLBTR es el procesamiento fuera de la cadena

Allá en la era de los dinosaurios, los bancos globales procesaban pagos internacionales a través de los bancos centrales usando un mecanismo llamado Sistema de Liquidación Bruta en Tiempo Real (a partir de ahora usaremos sus siglas en inglés, RTGS). Hoy todavía siguen haciéndolo de la misma forma. Permíteme que un dinosaurio como yo, te explique sus principios básicos y por qué es relevante para Bitcoin.

RTGS es la forma en que los bancos centrales liquidan pagos entre ellos – es en tiempo real, pero solo los Bancos Centrales tienen acceso al sistema. Es rápido, cerrado a unos pocos y para grandes

cantidades. Piensa en RTGS como procesamiento dentro de la cadena de bloques. A partir de aquí los pagos entran el sistema de pagos nacional y los libros de cuentas de los bancos cambian y Pepito Pérez recibe y paga dinero usando mensajes que funcionan usando la red SWIFT. Este sistema nacional es lento, semi-abierto (cualquier miembro de SWIFT puede participar) y puede usarse para pequeñas cantidades. Piensa en ello como proceso fuera de la cadena de bloques.

Esta es la forma en la que funcionan los pagos internacionales hoy.

El mundo Bitcoin hacia el que nos dirigimos se parece a esto mismo, pero mejor. Las transacciones más grandes se harán en la cadena mientras que las pequeñas se harán fuera de la cadena. Ahí terminan las similitudes.

Este es el modelo de pagos internacionales que va a emerger con la red Lightning (gracias a Segwit):

- Rápidos: Para pequeñas transacciones fuera de cadena será quasi en tiempo real (algunos segundos). Los sistemas de pago nacionales (que tardan desde unos pocos días hasta unas pocas horas) serán irrelevantes porque los usuarios no entenderán por qué debe llevar más tiempo que un mensaje o una actualización en Facebook.
- Abiertos: será posible elegir si se quieres hacer un pago en la cadena o fuera de cadena. Todo el mundo podrá convertirse en banco central simplemente montando el equipo de minado y cualquiera con una cartera bitcoin tendrá los mismos privilegios que tienen hoy los participantes de SWIFT.

Nota: aquellos a los que les asusta la centralización que supone el procesamiento fuera de la cadena deben de estar tranquilos. Es como el email. Todos pueden o podrían poner en marcha un servidor de email, pero elegimos usar el de otros. De la misma forma podrías montar tu propia infraestructura de minado que sería el equivalente a un Banco Central, pero la mayoría elegimos no hacerlo.

Puedes vender tus BCH porque podrás pronto comprar café con BTC.

Si recibiste BCH después del hard fork podrías estar tentado a guardarlos porque BCH es más rápido y más barato para pequeños pagos lo que hará que suba su precio. BCH podría tener sentido hoy en día porque los pagos pequeños en BTC son lentos y caros. Pero eso será irrelevante cuando Bitcoin se integre con la red Lightning y el procesamiento fuera de la cadena.

¿Todavía te sientes a gusto guardando BCH? ¿o a lo mejor tiene más sentido venderlos mientras siga habiendo posibilidad de hacerlo antes de que la red Lightning y el procesamiento fuera de la cadena sean de uso corriente?

Bitcoin será pronto moneda de uso corriente, impulsando su precio.

La idea que el precio de Bitcoin se sostiene gracias a que es oro digital no tiene ningún sentido. Es presentarlo como un taburete cojo e incita a pensar en él como algo inestable que terminará cayendo. El Bitcoin necesita otra pata para sostenerse. Necesita ser tanto una moneda como una reserva de valor. El oro es teóricamente una moneda además de ser reserva de valor, pero realmente es cuestionable su uso como moneda con las

dificultades de transporte que ofrece. Bitcoin puede que también lo sea, pero no tanto.

Un Bitcoin con esas dos patas – reserva de riqueza y moneda – puede ofrecer un valor creciente y que sea sostenible en el tiempo.

Una vez que la red Lightning y el procesamiento fuera de la cadena sean de uso corriente, volveremos a examinar la salud del ecosistema bitcoin y los números deberían ser diferentes.

Puedes olvidarte de aquello de que "Bitcoin está condenado a causa de su consumo de energía"

La web Motherboard hizo un gran trabajo sobre esto y sus argumentos son innegables (https://motherboard.vice.com/en_us/article/aek3za/bitcoin-could-consume-as-much-electricity-as-denmark-by-2020): La mayoría de la energía eléctrica viene de combustibles fósiles y un consumo creciente de estos recursos es lo último que queremos para el planeta. La conclusión a la que llega Motherboard es que Bitcoin es malo.

Tendremos la oportunidad de ver aparecer muchos artículos de investigación sobre este tema en los próximos años. Hay demasiado dinero en juego gracias a Bitcoin con el que podrán pagarse (junto a otros muchos investigadores que honestamente creen que Bitcoin es malo porque consume mucha energia).

Imagínate un mundo en el que la red Lightning y el procesamiento fuera de la cadena se conviertan en uso corriente. Muchas menos transacciones grandes se hacen en la cadena y la mayoría de las pequeñas se hacen fuera de la cadena que consume probablemente tanta electricidad como poner al día tu estado de Facebook.

Los mineros Bitcoin seguirán haciendo dinero pero ya no controlarán el ecosistema.

Tiene todo el sentido del mundo que los mineros de Bitcoin se resistan a Segwit. Saben que con Segwit lo siguiente es la red Lightning y el uso corriente de transacciones fuera de la cadena. Actualmente los mineros se llevan lo mejor de los dos mundos. Procesan las transacciones grandes via BTC y las pequeñas como el pago de un café con BCH. Todo esto lo perderán cuando la red Lightning y el proceso de transacciones offline se establezcan en el procesamiento de BCH. Seguirán encargándose de las transacciones grandes, donde la seguridad de las transacciones en la cadena es crítica. El volumen de transacciones grandes via BTC se incrementará para poder liquidar todas esas transacciones fuera de la cadena. Los mineros seguirán estando bien. No controlarán el ecosistema Bitcoin pero todavía podrán contar con unos beneficios adecuados.

SEPTEMBER 12, 2017SEPTEMBER 17, 2017 BITCOIN & BLOCKCHAIN, INNOVATION CAPITAL, WEALTHTECH LEAVE A COMMENT BANCOR BNT CRR ICO KICKCOIN KICKICO SMART TOKEN

<u>Tokenized Capital markets with reserve ratios & no exchanges: Bancor Network, Kickico,...</u>

Bancor (https://www.bancor.network/)'s token sale (BNT) held the ICO record in June, with \$153million raise in just one hour (https://blog.bancor.network/press-release-bancor-announces-153-million-raise-largest-token-generation-event-in-history-dca92f94d7ef). Back then (it feels already like ages) it was the first one to launch a "One-hour uncapped" sale! Needless to say, that the record has been broken every month and we are now at a \$257million for Filecoin just a few days ago who beat Tezos with \$232million.

Bancor token sale was not a white paper fundraiser. A team of 10 developers was already working for a whole year and had a beta product delivered about 1.5 months before the ICO!

I first heard about their value proposition, it was late May when they contacted DailyFintech to share content. At first sight, it was solving liquidity in the token emerging market and resembled the mission of Lykke exchange whose global trading platform is open source on the one hand but uses a proprietary match-making mechanism on their exchange that will be able to handle (eventually) any kind of digital asset.

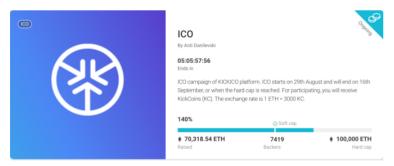
I had the pleasure to speak to Eyal Herzog (https://www.linkedin.com/in/hertzog/) from the Bancor foundation, recently and got to the heart of their core value proposition. Bancor is focused on adding liquidity to digital currencies or any token without the need of an exchange that depends on market-makers or any algorithmic match-making. Bancor is not automating the match-making mechanism that clears trades. Bancor is automating the conversion of tokens (I.e. buy one, sell another) through a programmable smart mechanism. So liquidity is offered outside of exchanges – I like to think of this as off-road liquidity. Eyal likes to think of the analogy of transportation via cars, trucks, planes, ships etc but with no driver, pilot, captain etc.

This way the Smart contracts will be facilitating the issuance of tokens which of course are ERC20 compatible but offer more than just transferability. You can convert the tokens without having to go to an exchange.

Liquidity is measurable. For Bancor it is determined by the CRR – Constant reserve ratio. For example, the BNT token has a 10% Ether reserve ratio. The higher the CRR of a token, the more liquidity; the lower the CRR of a token, the less liquid. 100 CRR would be pegging it to Ether. BNT is not a derivative of ETH but you could say it is denominated in ETH. When you buy a BNT, there is an issuance of the token/and adding ETH to the reserve (on the smart contract) and when you sell BNT, the smart BNTs are destroyed.

Bancor wants small cap tokens to have liquidity. Their upcoming release will be the first step in that direction by offering the ability to integrate any third party ethereum wallet (like Metamask, Parity, Imtoken, etc) and enable on-chain conversion between any two tokens (without having to go to an exchange).

Second major step is Bancor's recent announcement of a strategic partnership with <u>Kickico (https://www.kickico.com/)</u>, a kind of decentralized Kickstarter or rather a 3-in-1 platform for ICO's, crowd funding and crowd-investing. The KickCoin has launched its sale since Aug 29 and is ongoing until Sep 16.



KICKICO aims to become a platform for small to medium size fundraising ventures through Initial tokens offering. However, since most of them will not have enough capitalization to be listed and traded on crypto-exchanges, the integration with the Bancor network will make their tokens really "Smart".

Through this partnership, the Bancor network is scaling with the onboarding of the Kickico ventures. Kickico offers liquidity to its clients that choose to issue a "Smart token" which would mean that it can be exchanged with any of ERC-20 tokens. The way it will work for Kickico and Bancor, is that every KickCoin will have a 5% reserve currency of BNTs.

A very different world

I can see the fear in many eyes these days around ICOs, ethereum etc. We are still very human and so we overreact to all the sweeping changes that are happening. And of course, it won't be a straight line to the direction we are heading to.

Let's switch to think of the change that is happening. ICOs are not only about funding a company. "ICOs are more about an ecosystem on which for profit companies will be built on; more like a country. We are in a unique time that protocols are built on which the next generation of the Web will operate" echoing words from an excited Eyal Herzog.

Bancor wants to remove the barriers to liquidity for the issuance of all sorts of tokens: from community, to loyalty, to business etc.

Anyone today can issue a currency against any asset. The cost of failure is so low and we have all the technologies needed:

- o 24/7 internet
- secure and decentralized = blockchain tech
- o connecting all blockchains = liquidity

For those that still think that Smart contracts and Smart tokens are just a programmable module on the blockchain, much like an Excel or a Google sheet cell with a Macro; there is a wake-up call that they can't continue ignoring.

Smart contracts and Smart tokens can hold Assets on-chain and off-chain; can transfer Value on-chain and off-chain; can create Liquidity on-chain and off-chain. Centralized checks, audits etc. are not needed.

Doesn't Bancor network feel like the decentralized tokenized version of future Central Banks and a few other Capital markets crucial institutions (SWIFT, exchanges etc), with reserve ratios determined in a decentralized way? Very exciting times of new decentralized monetary tools to consider. So stay tuned.

Efi Pylarinou (https://www.linkedin.com/in/efipylarinou/) is a Fintech thought-leader, consultant and investor.

Get fresh daily insights from an amazing team of Fintech thought leaders around the world. Ride the Fintech wave by reading us daily in your email.

Daily Fintech

Blog at WordPress.com.