

# CRYPTO A.M.

Our series on AI, Blockchain, Cryptoassets, DLT and Tokenisation

PARTNER CONTENT

## CITY A.M.'S CRYPTO INSIDER

JAMES BOWATER

Building an entirely new, robust financial system from the ground up was never going to be an easy task, but building that third generation blockchain protocol was exactly the challenge that IOHK's Charles Hoskinson set, leading to the development of Cardano. IOHK utilise formal methods and functional programming languages - more commonly seen in mission-critical applications such as satellite and aerospace, to ensure the highest possible levels of software robustness and security. That approach has meant that the development process had been slow and steady. I have previously compared Cardano to EOS being a reflection of the Aesop Fable 'The Tortoise and the Hare'. Well there has been a sudden rush of activity from IOHK, as they prepare for the pending 'Shelly' era of Cardano's development, later this year, which will bring full decentralisation to the platform - initially via a testnet, which will allow participants to run their own nodes, run a 'stakepool' allowing participants to pool their stake of Cardano's native token, ADA, delegating the task of earning rewards by contributing their ADA to a stakepool.



With most Crypto prices showing red, Cardano has been pretty consistently in the green and at the time of writing Bitcoin (BTC) was trading at US\$8,464.09 / GB£6,525.95; Ethereum (ETH) is at US\$182.43 / GB£140.69; Ripple (XRP) is at US\$0.2585 / GB£0.1990; Binance (BNB) is at US\$19.73 / GB£15.67 and Cardano (ADA) is at US\$0.04561 / GB£0.03498 Overall Market Cap is at US\$233.91bn / GB£180.45bn (data source: www.CryptoCompare.com)

Changing tack, I thought it was time to talk about the OneCoin scandal. After speaking with Crypto AM contributor Jon Walsh, I learned that OneCoin is the world's largest scam at US\$4.5bn that most people had never heard of up until this September when the BBC blockbuster podcast "The Missing Cryptoqueen" first aired. The magic of OneCoin was in its product and the way it was sold directly through friends, family and acquaintances on social media (incentivised via a 10% commission of course). OneCoin was frequently hailed as "the Bitcoin killer" - where Bitcoin was hard to buy, OneCoin was easy, where Bitcoin had had frequent attacks on exchanges, OneCoin was secure, where Bitcoin was slow and expensive to send, OneCoin was cheap, and where so few merchants accepted Bitcoin, OneCoin was already building merchants via their own Amazon style platform.

OneCoin though was/is a Ponzi scheme and the Missing Cryptoqueen is Bulgarian Dr Rujna Ignatova who, as the multilingual CEO of OneCoin, would come on stage to fireworks and loud motivational music to mesmerise the audience and harden their belief that OneCoin truly will be the leader of this financial revolution.

The current status is that Dr Ignatova has now been missing and whereabouts unknown for two years, her brother is giving evidence against her in absentia in court in New York this month and ever hopeful affiliates are still blind. Jon will be writing in fuller detail in the coming weeks, so watch this space!

Facebook announced Libra, it's proposed digital currency, on June 18, 2019. Libra's intended launch was 2020, but international regulatory pushback makes it uncertain when or if Libra will launch. Regardless, simply by being proposed, and simply because Facebook is involved, Libra is already challenging national fiat currencies.

### LIBRA OVERVIEW

> Libra's stated purpose is bringing financial services to the globally unbanked by "...empower[ing] billions of people through the creation of a simple global currency and financial infrastructure." Users will directly and globally exchange low-volatility Libra (not local national fiat currency) using their mobile devices.

> Officially Facebook's Libra involvement is through its subsidiary Calibra. Calibra in turn participates in Libra via membership in the Libra Association (the "Association").

> The legality of Libra's novel model is unclear, but it does not seem to be clearly illegal. More likely there exists a regulatory vacuum. Libra's documents and Calibra have emphasized that Libra seeks to coordinate with governments to operate in a regulated and compliant manner. But, Calibra has refused to place Libra's launch on permanent hold pending US congressional approval.

> The Association is a non-profit membership organization based in Geneva, Switzerland. The Association was intended to have 28 initial members, scaling to 100+ members around Libra's launch. However, several payment providers, including Mastercard, Stripe, PayPal, and Visa, withdrew after receiving threats from the US Congress. When the Association held its first meeting on October 14, 2019, it had just 21 members.

Next, let's examine why regulators are so adamantly against Libra.

### LIBRA CAN RAPIDLY SCALE.

Beyond transactions per second, cryptocurrency scale also refers to the rate of user adoption and ease/recurrence of usage. Bitcoin et al. have not been globally adopted by everyday users engaged



# LIBRA'S CHALLENGE TO NATIONAL FIAT CURRENCIES

Designed by Phill Snelling, Bowater Media

in mundane transactions.

Libra is different and its competitive advantages have triggered regulators. Libra could rapidly and massively scale to the level of national fiat currencies. Facebook and its related products are already ubiquitous, with a userbase of 1 billion+. Libra has Facebook's vast monetary and technical resources supporting it. Even if a third of Facebook's users sign up, Libra will have a US-size "population".

### LOW VOLATILITY LIBRA.

Libra's key innovation is that it could be the first reliable highly-scaled cryptocurrency to achieve low volatility globally.

The trading prices of most cryptocurrencies freely fluctuate. This volatility

precludes their consistent use in consumer and business transactions. Significant fiat currencies (the US Dollar, the Euro, etc.) have low volatility against each other and rarely need to be exchanged given their large continental scales.

"Stablecoins" just inherit volatility from another source. Stablecoins are backed by, and usually exchangeable for, a specific asset. For example, Tether's USDT claims to be backed by and exchangeable for one US Dollar. In one sense USDT has trivial volatility due to its US Dollar correlation. However, since the US Dollar is itself volatile against other crypto and national currencies, USDT inherits that volatility. The same holds true for stablecoins backed by other assets.

Thus no stablecoin will fundamentally replace or supplant the US Dollar. Stablecoins also have risks related to there being a single small private issuer.

Libra is different. When a user buys Libra, it is from an approved Libra vendor. The user pays in national fiat at the current exchange rate and receives Libra. These payments are deposited into the "Libra Reserve". The Libra Reserve fund is invested in low volatility assets such as the main national fiat currencies, deposits, and bonds. The nature and diversity of the pooled assets should result in very low volatility.

The Libra Reserve's investment profits first go towards maintaining the Libra network, with the remainder distributed to the Association members. Al-

though "backed" by the Libra Reserve, Libra is not exchangeable for any part of it. Cashing out of Libra simply reverses the purchase process, with the user receiving the current selected national fiat market price for Libra.

Suppose Libra achieves Facebook-like scale and becomes a truly global medium of exchange. And, suppose it is low volatility like the US Dollar, but far superior to most developing countries' currencies. Why would a user ever cash out? What role then for national fiat currencies?

Libra's sovereignty implications are staggering. Many policy tools available to countries would become ineffective. For example, devaluing the currency to address a trade imbalance is futile if all

transactions are conducted in Libra.

### LIBRA'S US DOLLAR CHALLENGE.

The US Congress understands Libra's implications. In a July 2, 2019 letter to Libra, Congress wrote - "It appears that these products may lend themselves to an entirely new global financial system that is based out of Switzerland and intended to rival U.S. monetary policy and the dollar."

The main complaint regards a potential rival to the US Dollar. How is that thinkable? The global reserve currency, backed by the full might of the USA, and oil's trading currency, can be rivaled by... Facebook?!

The unfortunate truth is that the US has long been debating the US Dollar. Although the world has long resented the US "exorbitant privilege", it was considered impolitic or dangerous to complain too loudly. BUT, as a consequence of Libra (and the US' defensive reaction) suddenly it is acceptable even for US allies to overtly discuss and take steps towards replacing the US Dollar. Even the Governor of the Bank of England (i.e., the US' best "special relationship" ally) is speculating about instead using a basket of digital central bank currencies as reserves.

China announced plans for a national digital currency immediately after Libra was announced. This has been a long time coming, but China's move so closely followed Libra's that it is hard to avoid the impression that Libra accelerated China going public.

Stay tuned.  
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## CRYPTOCOMPARE MARKET VIEW

### Global Access to Cryptoassets on the Rise

Last week bitcoin failed to make any serious headway - remaining below the \$9,000 mark to trade at the time of writing at \$8,470. Ethereum (ETH) is trading at \$183, dropping slightly from last week's \$190 level. While prices haven't been rising, other developments in the industry show how global access to cryptocurrencies is growing.

Leading crypto exchange Binance last week revealed that it's looking to support 180 fiat currencies on its platform. Currently supporting the Euro, the Nigerian Naira, Russian Ruble, Ukrainian hryvnia, Kazakhstani Tenge, and the Turkish lira, the exchange is looking to capitalise on markets where crypto presents a viable alternative to volatile fiat currencies.

Bolstering this trend, the number of Bitcoin ATMs throughout the world has now surpassed the 6,000 mark. Over three-quarters of the machines installed globally are in North America, with nearly 20% in Europe and only 2% in Asia.

In other positive news for investors, crypto

products with real products are also growing. The cryptocurrency-powered Brave browser, which rewards users with Brave (BAT) tokens for using content, officially moved out of its Beta phase, after gaining over 8 million users across various platforms. To date, it has already powered 475 ad campaigns for brands like Pizza Hut and Intel.

Last week also saw news that an unknown fund pledge to support internet anonymity using bitcoin. Comprising "people from different countries who met on the 4chan English-language imageboard" the group intends to donate \$75 million worth of bitcoin to the development and protection of online privacy.

Finally, those looking to bet on the future price of bitcoin are set to be offered a new way to do so. Bakkt, a venture from New York Stock Exchange parent company ICE, is looking to launch cash-settled bitcoin futures. Complementing its existing physically-settled bitcoin futures product, the exchange is also set to launch bitcoin options on Dec 9th.

## CRYPTO A.M. INDUSTRY VOICES

### Will blockchain based decentralized applications take over the mobile industry?

Decentralisation as a theme and buzzword may not have reached the same levels as Blockchain and AI, however its potential impact on our infrastructure and systems has just as much potential.

MONET was established to create an open-source infrastructure for decentralized mobile peer-to-peer applications. Its open source downloadable code enables decentralised applications to be built on mobile phones that envisages a future where like minded groups can congregate, exchange services and ideas in areas such as: transportation, delivery, housing, payments, networking and services.

One existing example of this technology being put to use is the news sharing app Twaddle. It enables users to share and discuss news stories with other users on the same local network. Twaddle uses MONET's consensus algorithm, Babble, to ensure that users see all submitted comments in the same order, thus removing the need for a centralized service, more importantly it enables users to own their data.

Twaddle's launch coincides with a time when the traditional media distribution model is rapidly evolving, the blockchain adds another dimension in how the news content and distribution model is conceptualized. MONET is introducing a suite of DApps to start building the next generation of mobile ad hoc blockchain applications. Users will be able to connect only when they need to and only for the duration of their interaction.

Twaddle provides a practical demonstration that why blockchain matters, the DApps that run on it, have the potential to democratise the Internet and refocus it away from the technology giants that currently control most of the world's information. MONET envisages a future whereby individuals are able to use decentralized applications to carry out tasks and complete transactions within small groups. By empowering individual citizens to have full control of their data, identity and digital assets, MONET's vision fulfills the original vision of an independent and free Internet that its pioneers imagined in

the early 1990s. We are not there yet, and won't be as long as blockchain remains synonymous in most people's mind with cryptocurrency.

There is a growing awareness and discussion surrounding DApps, although real life practical applications are few and far between. MONET has been designed to ensure that the benefits of Distributed Ledger Technology can be applied to as wide a variety of mobile applications as possible such as the world's first decentralised chat app, Chatterbox. The Chatterbox app uses the Babble consensus algorithm to enable multiple mobile devices to chat without a centralised server. In addition to Chatterbox, MONET envisages being used to design ride sharing apps, accommodation portals and online platforms that will make up the digital economy of the future. In doing this MONET aims to unleash the promise and potential of decentralised, frictionless transactions and interactions between individuals who have traditionally been dependent on centralised systems and data silos.

The last generation has seen the emergence of the internet and mobile phone technology transform how traditional business models operate. The creation of blockchain technology and emergence of digital currencies as a means of financial exchange free from intermediaries has created an additional dimension in terms of how internet services and goods are conceptualised. Concerns regarding misuse of data and the growing power of Silicon Valley, is in part what fuelled the creation of MONET. Its mission is to create an open-source infrastructure for truly decentralized mobile peer-to-peer applications that anyone can use and apply without handing over personal data. The technology now exists, only time will tell how it's applied and the impact it will have on how the internet and online services evolve.

Giacomo Puri Purini, Co-Founder of MONET. For further information visit <https://monet.network>

# Crypto A.M. shines its Spotlight on Clear Factor

Clear Factor is a decentralised global invoice finance ecosystem designed for SME's with a mission to provide every viable SME with access to fair and affordable working capital.

The birth of Clear Factor came after principal sources of funding for loans to businesses and individuals were no longer available, following the financial crisis of 2008.

More than 10 years on, a group of financial professionals who were all affected, yet survived the financial crisis, joined together to create a community-driven global invoice finance ecosystem that will address a £2 trillion marketplace full of small businesses which are still being denied finance.

profits in its infant years. When payment terms lengthened three years later, Shankar looked in to invoice financing and agreed an invoice finance facility with HBOS whereby Amsphere was able to draw down 85% of all invoices raised immediately.

It all changed in 2009 when HBOS was taken over by Lloyds and they merged to become Lloyds Banking Group. Lloyds

Clear Factor is focusing on micro and small segments of the SME market - those that are not currently serviced by banks for invoice finance.



recalibrated its risk assessment and Amsphere was now deemed 'high risk' despite being a reliable client and posting no bad debts. Amsphere was given six months to find a new invoice finance lender. Shankar learnt an important lesson. Banks which provide working capital

finance to any business, especially an SME, are able to decide the fate of that business as and when they chose no matter how profitable the SME is. The idea for Clear Factor was spawned with a simple mission, to help small businesses access finance without punitive interest rates.

Clear Factor's fair interest rate will be determined by the auction and agreed to by the SME and during the invoice auction, the interest rate is agreed via a smart contract mutual consensus. Investors invest in different interest-rate pots. The pot that fills up the earliest is offered to the SME. If the SME rejects the offer, the auction begins again. All invoices are assessed twice - first by Clear Factor by entering into a legally binding contract with the debtor and latterly by an underwriter in the debtor's country of residence. Clear Factor uses Ethereum to create smart contracts for the outcome of each invoice finance auction and Stellar for cross-border money transfers of invoice finance in any currency.

Clear Factor is focusing on micro and small segments of the SME market - those that are not currently serviced by banks for invoice finance. There are no lock-ins, impositions, hidden costs or contractual binds and there will always be a quick payment against the invoice. The only fee is the ecosystem fee which is 1.0% of the withdrawal amount taken and this applies to the SME, individual investor and trade investor.

Clear Factor has a mandate to make sure that it is recession robust. It is about protecting SMEs from a possible future financial crash and a repeat of 2008.

For more information on Clear Factor please visit [www.clearfactor.io](http://www.clearfactor.io)



## BLOCKCHAIN NETWORKS AND VALUE

Troy Norcross, Co-Founder Blockchain Rookies

Blockchain is one example of a distributed ledger technology (DLT). The premise is that a ledger of information is spread across multiple computers and kept in sync as new information is written to the ledger. As there are numerous copies of the ledger, any errors or tampering in one version are apparent. Thus the information in the ledger is tamper-resistant - the more copies of the ledger, the better the security.

A network is created by connecting each of these different computers. The computers are owned and managed by different companies who have all agreed to work together and to accept that the information in the ledger is a single "golden record". This group of companies operates under their

governance principles, and the companies themselves form a network. Blockchain is having the most significant impact at the enterprise level in the area of supply chains. Companies are using blockchain to gain greater transparency into their supply chain. For downstream suppliers, they are benefiting from faster payments. Blockchain is allowing for increased product and financial liquidity across the supply chain. And of course, supply chains are often very networked. Manufacturers may deliver to multiple carriers, wholesalers and retailers. And retailers may use various suppliers. This situation creates a web of goods, information and cash flows which can be recorded and tracked on

the blockchain.

The network operates more efficiently because there is no need for reconciliation. Transfer of assets and funds are instantaneous and include finality. All transactions are auditable. There is reduced potential for errors and fraud. When operating blockchain across a complex network, all participants can benefit.

Blockchain is more than just a shared set of information. Blockchain is a network of computers, enterprises and value flows. And it is the network which gives blockchain its value.

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