CRYPTO A.M.

Our series on AI, Blockchain, Cryptoassets and Tokenisation

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PARTNER CONTENT

CITY A.M.'S CRYPTO INSIDER

JAMES BOWATER

Greetings from Barcelona where, although the sun is shining, warm it is not! What *is* extremely hot right now, however, is how many blockchain / crypto folks I've bumped into.

Crypto AM contributor Paul Davis of Coinweb is based here; Charles Hayter, founder and CEO of CryptoCompare, which provides *Crypto AM* with market data, was visiting the city with his fiancé; and, last but not least, today's Spotlight *(see article below)* is shining on Heliocor, which has research labs in Barcelona.

Furthermore 40 minutes away in the coastal town of Sitges the founder of a mobile mesh networking game changing organisation is existing in stealth mode! All in all it's been a very busy week and, with the rest of the blockchain world at Hong Kong Blockchain Week (4-8 March), London's streets have been pretty empty.

Meanwhile the crypto market has been pretty active with a couple of interesting moments. Bitcoin (BTC) has been threatening to breach the $4,000 mark; Binance (BNB) has continued to behave in its own fashion breaking the standard correlation with BTC and forging its own path, climbing to seventh position and overtaking Tether (USDT) in the market cap stakes. At time of writing, BTC is trading at US$3,890.19; Ethereum (ETH) remains in second position at US$133.39, with third position Ripple (XRP) at US$0.3044 Because of BNB's interesting development I will start this week to report its price, which is currently US$14.26. Overall market cap has risen just over 6% since the last Crypto AM at US$133.46bn (data source: www.CryptoCompare.com)

Yesterday in London Invesco announced that it is launching an innovative ETF (exchange traded fund) designed to target companies with potential to generate real earnings from blockchain technology. The Invesco Elwood Global Blockchain UCITS ETF has been developed in partnership with Elwood Asset Management, an investment firm specialising in providing institutional investors with exposure to digital assets and blockchain technology. Usual suspects such as Apple, Intel and Advanced Micro Devices are included in the constituent mix. But interestingly Rio Tinto was cited as an example because the potential for blockchain to boost earnings was often not reflected in the share-price of the mining company, which owns hydroelectric assets that could be harnessed for cryptocurrency mining.

Many of you will be familiar with eToro, the social investment network / brokerage that caught my eye last week as founder and CEO Yoni Assia arrived in the US to launch eToro USA. This coincided too with Fidelity Digital Assets announcing: 'We are live with a select group of eligible clients and will continue rolling out slowly. Our solutions are focused on the needs of hedge funds, family offices, pensions, endowments, other institutional investors'. Both of these announcements indicated more traction for mass adoption.

DECENTRALISED EXCHANGES: A $950M SOLUTION

We are living in an ever more decentralised world. A world where individuals are free to transact goods, services, data and content directly with other peers, without relying on third-party platforms. Yet as we begin to move away from monopolistic institutions and embrace the disruptive crypto revolution, we find ourselves still largely dependent on centralised, profiteering crypto exchanges to trade – usually at a damaging cost.

According to recent data presented in the 'Ciphertrace Cryptocurrency Anti-money Laundering Report Q4 2018', more than $950m was stolen from centralised crypto exchanges (CEXes) by hackers last year. That's more than 3.6x higher than the 2017 report figures, and more than seven times higher than 2016 figures.

HACKS AND SCAMS

To put all this into perspective, that equates to an average loss of $2.6m per day just from CEX hacks alone. That's not including all the elaborate exit scams, phishing scams, crypto jacking, ransomware and Initial Coin Offering (ICO) scams that also emptied the pockets of crypto investors throughout 2018.

Substandard security protocols and a complete lack of contingency measures have been at the heart of almost every major crypto exchange breach, from the infamous Mt.Gox hack to the theft of more than 500 million NEM tokens from the Coincheck exchange. On both of these occasions, cyber thieves were able to break into the CEXes hot wallets that were connected to centralised servers, and make off with millions of dollars-worth of investors' funds - and there was nothing anybody could do about it. For the most part, the people in charge of running these exchanges were not even aware that the hacks were taking place until the funds had already disappeared.

So why do we continue to pour our trust and hard-earned money into these incompetent centralised custodians? Is it because we secretly enjoy the thrill of risking our life savings, or is it maybe because we haven't seriously considered all of the other options?

Designed by Phill Snelling, Bowater Media

USERS IN CONTROL

Decentralised exchanges (DEXes) are beginning to gain prominence as a more secure and cost-effective solution for trading cryptocurrencies peer-to-peer.

By removing central authority DEXes have no single point of failure, are able to run almost fully autonomously and charge near-zero fees. But perhaps the most important difference is that DEXes are non-custodial. This means that users have complete control over their own private keys and cannot be frozen out of their accounts by an overriding authority. Because of this, it makes it nigh on impossible for malicious attackers to access and steal a user's funds.

So, if DEXes are so great why isn't everybody using them?

Well, it may not surprise you to know that creating a completely trust-less environment where individuals can trade digital assets without any intermediary input, has its problems. A major issue right off the bat is creating liquidity - how do autonomous systems attract enough buyers and sellers to facilitate trading on demand, and create enough market depth so that large trades do not affect the underlying asset's value.

Another problem is price discovery. On-chain order settlement can only be executed as fast as the elected blockchain system allows. In highly volatile markets where large volumes of orders come flooding in, there's an increased risk of high latency and slow order updates if a blockchain requires multiple confirmations to verify each transaction. This means that traders are likely to end up with a large spread of orders as opposed to a clear market price. Add all of that on top of complex legal implications due to no Know Your Customer (KYC)/Anti-Money Laundering (AML) pre-checks, as well as no fiat on-ramps, and you can see why DEXes have been slow to take off so far.

HYBRIDISED PLATFORMS

Things however, are beginning to improve. To combat latency and liquidity issues, many DEX developers are opting to create hybridised platforms that integrate the best practices of both CEXes and DEXes. Binance, for example, has recently entered into the DEX market with the new release of its Binance DEX testnet. Leveraging its existing vast pool of liquidity and new 'Binance Chain' blockchain - which is allegedly capable of 'near-instant transaction finality' - Binance claims that its DEX will be able to handle the same trading volume that its leading centralised exchange can. The main underlying difference between the two platforms, however, is that Binance DEX will not be a custodian of its clients' funds, nor will it have control over any private keys.

> The most important difference is that DEXes are non-custodial

IDEX is another example of an existing hybridised DEX platform that has already incorporated the comforts of a CEX, such as a technical support team and KYC measures, into a non-custodial P2P platform. By doing so, not only does it satisfy the needs of international regulatory bodies (namely the US Securities and Exchange Commission), but also the needs of its customers. Some would call that harmonious.

So what we can take from this is that while we may not be in a position from a technology standpoint to completely move away from centralised platforms, the introduction of these decentralised components mean that crypto traders *finally* get to take back control of their funds – just like Satoshi would've wanted.

Ollie Leech, financial journalist, in conversation with James Bowater

WIREX MARKET VIEW

Waves makes waves in a quiet week

The crypto market was relatively subdued last week, yielding no big surprises for investors as it moved in a restrained upward trend.

Bitcoin posted a 1.43% price increase and traded around the $3,900 mark, with market experts predicting it will make its way back to $4,000 this week. Ethereum was sluggish and made a marginal gain of 0.36%, with the price hovering around $140. XRP retreated by 2.57% to trade around $0.30.

There were a few coins that bucked the trend, however. Litecoin posted healthy gains of 18.63%, Binance Coin impressed with a 27.50% jump and BAT achieved a 18.03% gain. The overall market cap grew by a reasonable two per cent over the past week.

Waves is continuing to be an interesting coin to watch. They recently announced the launch of a Waves Reward Token (WRT) to encourage their ambassadors to give feedback, and to prove that smart assets work effectively. The token is expected to be airdropped this week.

The OneCoin Ponzi scheme was in the news again, with reports that Konstantin Ignatov, the scam's kingpin, was arrested in Los Angeles. The OneCoin 'cryptocurrency' launched in 2014 but no code was ever released. Ignatov's endeavours earned $3.5bn from some, now very unhappy, investors

America is slowly coming out of its crypto-shy shell with Colorado Governor Jared Polis recently signing the Digital Token Act. The law is seen as significant move as it paves the way for cryptocurrency adoption and development. The act means that cryptocurrencies will be exempt from strict securities registration requirements. This positions Colorado as an increasingly crypto-friendly state that aims to support entrepreneurs who are creating blockchain-based products and solutions.

Fidelity Investments, the global financial services provider, added their significant weight to the crypto movement. Their recently launched Digital Assets service will facilitate the storage and trading of crypto assets. It is currently limited to a select group of institutional investors but the plan is to expand the service soon.

Lastly, the International Association of Trusted Blockchain Applications (INATBA) was established in Brussels on 6 March, with the aim of supporting blockchain and DLT by bringing together industry start-ups, SMEs, policymakers, regulators, civil society and standard-setting bodies. It has 105 founding members who believe the association will help harness the benefits of blockchain and DLT for businesses.

TOKEN INTELLIGENCE
TokenIntelligence.io

The FCA's 'dodgy dossier'

Anyone who has seen the first two editions of 'Frontier News & Insights' cannot be in any doubt as to the scope and depth of innovation already happening as a result of tokens, cryptocurrencies and blockchain. There can be no doubt that this is a revolution on a similar scale, and probably greater, then the internet itself. We are in the midst of remaking the internet, money – and so the world. You can take a look for yourself via this week's edition (which you can find at bbfta.org/insights – for a short time, you can also read our full archive).

WORLD LEADERSHIP OPPORTUNITY

Britain currently has the opportunity to take a position of world leadership. We should not – must not - throw this away, regardless of Britain's impending exit from the EU (Brexit). We cannot allow the attention of everyone in government to be so distracted by a mono-focus on Brexit to allow this crucial, one-off opportunity to slip away forever. Slip away it will if it's left to those more focused on business as usual, not motivated by innovation. In the dynamic world that we now inhabit, innovation is the key source of growth, new revenues and prosperity.

FCA'S ROLE IS CRITICAL

The part that the Financial Conduct Authority (FCA) plays in the transition to the global use of tokens and cryptocurrencies will be crucial to the success, or otherwise, of UK plc. For this reason the organisation clearly needs much greater scrutiny (and, it would appear, rather less lobbying).

Trust in institutions is at an all-time low, as Rachel Botman points out in her excellent book *'Who Can You Trust'*. Blockchain – which is capable of creating trustworthy, automated, institutions that run transparent rules, equally applied - offers some hope. As does, to a lesser extent Distributed Ledger Technology (DLT) (as it retains a central authority).

FAKE SCIENCE, FAKE NEWS

At a time when society is looking to regulators to counterbalance corporate spin and 'fake news', it is particularly sad – and dangerous – that the FCA, in the middle of the consultation on crypto assets, is indulging not just in spin but fake science to support what amounts to fake news.

Less than a month before the deadline, the FCA has chosen to publish previously unannounced 'research'. However this so-called research, and accompanying press statement, amount to a hatchet job, designed to paint a particular picture: seeking 'harm' rather than balance and finding risk where little or none exists (as becomes plain when you look at the data they base the research on).

UNSUPPORTED CONCLUSIONS

And it's all the usual tricks. Tiny samples over-interpreted, a 'dodgy dossier' – 17 'case studies' from a sample size of 31 – and conclusions that are not supported by the data. This is all a particular disappointment given that as a result of work over the past few years that obliged the FCA to take a more positive approach to innovation.

OPPORTUNITY COULD EVAPORATE

The FCA now have an international reputation, chairing the international GFIN group. But the FCA's leadership position could soon evaporate.

Its own leadership may have lost any appetite they had for innovation but that is hardly the point. What we are talking about here is analogous to going back 20 years and proposing that web use be restricted on the basis of possible 'harms'. We need balance and, in order to get it, it is now clear that the FCA is going to need scrutiny.

An extended version of this piece is available online at bbfta.org.
By Barry E James, chair of bbfta.org and founder, Token Intelligence.

Crypto A.M. shines its Spotlight on Heliocor

Not many companies dream of changing the way the world does business – fewer still get paid to do the market research to assess whether the necessary technology exists. That is the founding story of London-based reg-tech company Heliocor.

In 2014, serial technology entrepreneur Owen Hall was asked to run a global product search for a Tier 1 financial institution. Its fx division, accounting for about 12% of daily global volume, was concerned that its compliance technology (stopping fraud and financial crime) was not fit for ever-increasing regulatory demands.

Over the next six months, Owen and his Barcelona-based tech team spoke to vendors and users and pulled apart the best products in the market. Heliocor's conclusion: the rigid 'rules-based' approach of existing software was running out of road.

While the future of a pure Artificial Intelligence(AI)-based approach might be alluring, the fact is that conservative compliance teams in financial institutions (and their regulators) were and are not ready to move to a pure HAL-like black box solution. Instead, the team proposed a bridge to that future – blending a rules-based approach with AI, Machine Learning and Neural Networking.

This created tuneable, risk adjusted, algorithms to scan massive amounts of data at high volume, significantly reducing the false alerts that require manual intervention (often as high as 98%). The modular system sits across all asset classes and all regulations. Married to the reduction in false alerts was a focus on marshalling the data behind positive alerts to be quick to compile and easy to escalate. It became

> Heliocor has the ability to construct a global, token-driven, anti-fraud ecosystem

Owen Hall, CEO, Heliocor Limited

Robolitics ('Robots doing analytics') and has been monitoring c. 10,000 transactions/second for more than two years.

The next challenge for the Heliocor team was the high cost and manual process involved in Know Your Client processes – where banks have to machine read often crumpled and coffee-stained copies of gas bills and passports. Inspired by Easyjet moving boarding-card management to the customer, Heliocor developed an app to use phone cameras to machine-read and share 'good' data with onboarding systems.

That app has now evolved into Dokstor – a digital store of all of life's most important documents (in the App and Play stores). Crucially, it is designed with blockchain at its heart to avoid the 'honeytrap' problem of creating a single massive store of sensitive data. We do not store the documents in the blockchain - instead we hold a document's 'fingerprint' there, to ensure its validity.

Combined, the two products reach all the way from a bank's systems to the consumer's wallet (phone), creating a powerful, compliant, digital-identity solution. The potential of blockchain – to allow micropayments, low-friction transactions and full traceability – means that Heliocor now has the ability to construct a global, token-driven, anti-fraud ecosystem. Heliocor has just raised $2.5m in a tokenised preference share offer to build it.

That will change the way the world does business.

For more information see www.heliocor.com

BLOCKCHAIN ROOKIES

BLOCKCHAIN BOOSTS LIQUIDITY: GOOD, BAD OR BOTH?

Troy Norcross, Co-Founder, Blockchain Rookies

By deploying blockchain technology companies are not only reducing shipping times, combatting counterfeiting, and demonstrating their commitment to food safety. They are implementing a framework of smart contracts to support the flow of currency through the supply-chain. Making both money and goods flow through the supply-chain is what we mean when we say that blockchain technology can be used to improve liquidity.

When goods move more easily, safely and securely through the supply-chain it also means that goods are moving faster. The Tradelens blockchain in partnership between IBM and container shipping company Maersk has helped to reduce shipping times by as much as 40 per cent. The same platform is used to reduce costs of shipping by matching demand with excess capacity without the need for brokers. When goods arrive faster and for less shipping costs it means that there is a reduced demand for trade finance and again this lowers the overall cost of doing business.

This is a good thing - right? Not always.

Some businesses rely on 30-, 60- or 90-day payment of their suppliers as part of their business model. These companies take advantage of the extended payment terms to use those funds as a cheap loan for operating capital. Some smart contracts, such as escrow agreements, must be pre-funded - meaning that the merchant must have extra capital set aside in advance to ensure that all smart contracts can execute upon delivery.

Downstream suppliers that are desperate for cashflow look at smart contracts and blockchain technology as a major opportunity to improve their business cashflow. Upstream suppliers look at smart contracts as a major negative as it requires more upfront capital to be tied up for longer.

Blockchain technology definitely brings liquidity to the supply-chain for both goods and payments. Whether that is good or not is a matter of perspective.

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