

# CRYPTO A.M.

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

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## CITY A.M.'S CRYPTO INSIDER

JAMES BOWATER



Greetings once again from Malta where I am attending the AIBC Malta Blockchain Summit and its companion piece Cannabiz World. What is the link between Medical Cannabis, AI and Blockchain I hear you ask? Yes, of course there is that slight anti-establishment feel engendered by both, but in reality the links are more profound. Let's get the market recap over and done with and I will explain! At the time of writing Bitcoin (BTC) was trading at US\$9,333.12; Ethereum (ETH) is at US\$186.53; Ripple (XRP) is at US\$0.2958; Binance (BNB) is at US\$20.67 and Cardano (ADA) is at US\$0.04284. Overall Market Cap is at US\$249.58bn (data source: www.CryptoCompare.com)

Just as the cypher punks reacted against the financial crisis of 2008 (giving birth to Bitcoin) exponents of medical marijuana are often frustrated by 'Big Pharma' and their lobbying of government licensing agencies. The problem for them is that more and more anecdotal evidence provided by CBD product users suggests that the extraordinary benefits of these products are wide ranging and absolutely do threaten those who rail against it. Companies like Pharmstrong.com who make high quality products that genuinely help are leading the way. The link with blockchain, however, is harder than ideology - quality is key which mean provenance is fundamental from seed to processing; Blockchain based supply chain recording provides that solution.

One of the joys of being your Crypto Insider is that I'm not silenced and consequently am able to see a wide range of projects that deserve to be shouted about positively and also that contain synergies. This week sees the culmination of one thread that is a passion of mine which is to technologically unlock Africa for Africans. And when I say Africans I mean all that live on the continent as well as those who have been exiled or simply are expatriates.

Africa came into my life when I was ten years old when I met Fikile from South Africa, a friend of Steve Biko, who had been tortured and exiled. He was my mother's university friend who became my quasi stepfather and (and still is) wonderful. Africa is defined by so much more than race, religion and colonialism despite all three leaving indelible scars. Africa has, for so long, been a resource rich punchball for the west and east alike so it's essential that proper technological advancements are for the nations to benefit from.

In today's paper, you will read about Micky Watkins's World Mobile in the Spotlight below and also from Richard Eils, founder of Electroneum, who has written the Guest Main Feature. I'm extremely grateful to the organisers of the AIBC Malta Summit - Eman Pulis and Oliver de Bono - for creating a panel entitled "A Sleeping Giant: Driving Mass Adoption in Africa" that includes both Micky and Richard along with award winning musical artist Akon who's Akon Lighting Africa charity has provided electricity in 15 African countries. It's definitely going to be one worth watching!

Africa is a region that is unique in many ways. Before the arrival and exploitation in the late 19th and early 20th centuries of western imperialism, the continent was one of the most prosperous and economically thriving regions of the world, mainly because of its immense natural resources. Today, it is the world's largest but poorest region. However, it represents a significant opportunity for FinTechs and cryptocurrencies, particularly those focused on eradicating financial exclusion.

### WHY IT REPRESENTS AN OPPORTUNITY

On November 1st, Worldometers reported that just over 1.3 billion people were living in Africa. That represents 16.7% of the world's 7.7 billion inhabitants. The median age in the continent is 19.4 years.

The United Nations says that provided with the knowledge and the opportunities, youth represent a positive force for economic development. The younger generations are also the most tech-savvy and open to change. They represent the largest age group in today's workforce, according to a study. However, the World Bank says youths account for 60% of all of Africa's unemployed.

The 54 countries in the African continent are home to newer generations and the middle of Africa is the youngest region in the world. Their global share of people younger than 15 years of age is 46%, according to PRB.

Most experts agree that millennials, including post-millennials, are particularly open to embracing new technology and cryptocurrency, agree Forbes and Cointelegraph. The same goes for those who are unbanked. Venezuela is a prime example.

### TRADITIONAL BANKS VS FINTECH AND CRYPTO

Access to traditional financial services remains almost a mirage for the majority of the African population, as 66% is unbanked. However, the penetration of mobile devices in the regions has provided millions of access to digital bank-



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ing. In fact, according to Forbes, mobile digital accounts are now higher in number than bank accounts. "The number of new FinTech users has increased by 250% to 7.2 million from the 2012 baseline," the news outlet stated.

Sub-Saharan Africa (the African nations south of the Sahara desert) is the only region in the world where nearly 10% of gross domestic product (GDP) in transactions are processed through mobile currency, according to an International Monetary Fund (IMF) study. It added that most Africans currently depend on mobile payments to send and receive funds domestically and, in-

creasingly, internationally. Mobile apps are also increasingly being used to pay bills, receive wages, and purchase goods and services.

Technological innovation is enabling an increasing number of Africans to move up the financial services value chain, the IMF added. They are accessing mobile financial services to open savings accounts for loans, insurance, and investments. With over 20 million users, M-Pesa is arguably the best example of this in Africa.

Electroneum is another start-up poised to help reduce financial exclusion in the region. Thousands of mer-

chants in South Africa, Uganda, and other African countries are already accepting ETN, the name of Electroneum's cryptocurrency. It is a mobile-based cryptocurrency that does not require users to have a bank account. Users benefit from the up to US\$3 worth of ETN every month, for simply engaging with the app. This can be used for mobile top-ups and, in some areas, for purchases of everyday items like bread, milk, maize and services, such as taxi rides, car washes, and haircuts. Electroneum's ecosystem will grow further through the ETN Everywhere, their on-the-ground program to

incentivise and educate thousands of merchants to accept ETN.

In a United Nations blog, business and tech journalist Rakesh Sharma said, "Africa is rarely mentioned among the largest markets for cryptocurrency, but it may be set to steal a march over other markets." This is already true in South Africa, which tops the list of Hootsuite's 2019 survey of internet users reporting they own crypto.

### FREELANCER AND ELEARNING PLATFORMS

Electroneum's mobile app is one of the fastest ways to globally send and re-

ceive payments, and it is free. Electroneum aims to spur local prosperity in developing countries by providing access to global digital economy through its AnyTasks freelancer platform. It gives people the opportunity to sell skills online and earn ETN at no cost. Buyers of these digital tasks pay with credit and debit cards, and sellers seamlessly receive ETN. Electroneum's upcoming free TaskSchool platform offers people online courses to learn skills they can perform and sell with a smartphone or laptop.

The new technologies that Electroneum, M-Pesa, and others have developed could help millions break the cycle of poverty in Africa, a region where the overall number of people living in extreme poverty is increasing, according to a report.

World Bank Senior Research Advisor Francisco Ferreira late last year said that 413 million in Sub-Saharan Africa live in extreme poverty. That represents half of the world's total. He added that if the current economic trend in the region continues, by 2030, 25% of the population will continue to live in poverty. That means that nine out of ten poor people in the world will be living in Africa, he said.

The IMF agrees that greater digital inclusion and innovation has the potential to spur economic growth, which comes with new jobs.

In the same article, the GSMA said that by next year, there would be 725 million mobile phone subscribers, and that 70% of them would have adopted smartphones by 2025, which contributes to making the region ripe for unlocking its access to the global digital economy.

Richard Eils, Founder & CEO of Electroneum in conversation with James Bowater. For further information visit <https://electroneum.com>

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## CRYPTOCOMPARE MARKET VIEW

### Exchange Blunders Fail to Dent Market Rally

Crypto markets have taken great strides over the past year towards institutional-level maturity, with many new players entering the space and new offerings from existing exchanges. A spat on incidents on Friday however, showed how there can still be setbacks on the road.

Firstly, a period of intense trading triggered a minor flash crash on Coinbase Pro, which stopped out a number of positions on the platform. This was followed by a more significant crash on Amsterdam-based Deribit, where the price suddenly dropped from above \$9k to \$7.8k due to an exchange range miscalculation, resulting in \$1.3 million in losses due to the consequent wave of liquidation events. Deribit has said it will refund affected users.

Finally - and most significantly - derivatives exchange BitMEX, the highest-volume venue in crypto, suffered a serious email blunder which resulted in the distribution of mass emails with customer email addresses visible in the 'cc' field. The markets themselves were less filled with drama, especially in comparison with the previously week's price volatility. Bitcoin (BTC) spent the week in consolidation, opening at \$9,600 and closing down at \$9,100 with a weekly low of \$8,900. It was a similar pattern for Ethereum (ETH), which opened at \$183 and closed at \$180. The asset did however have a promising rally on Tuesday up to \$192 before being knocked back down to \$177 on Thursday.

The altcoin market remained stable across the week, ranging between \$69-75 billion. Standout performers across the week included Augur (REP) which increased 30% vs USD, Decred (DCR) which was up 28% and Elrond (ERD) up 25%. If BTC continues to range this week, the lack of volatility typically bodes well for altcoins, which would likely seek to regain lost ground in their bitcoin value.

## CRYPTO A.M. INDUSTRY VOICES

### Libra, China and the Next Phase for Digital Assets

Digital assets continue to permeate the public consciousness. In recent weeks, we have seen events unfold that highlight the potential for digital currencies to revolutionise the global economy.

In the US, congressional hearings on proposed stablecoin Libra captivated global media. Certainly Facebook's poor track record on privacy put CEO Mark Zuckerberg in the crosshairs. With a host of key members of the Libra Association including Visa, Mastercard and PayPal jumping ship, the project faces a tough road ahead.

Almost in response to this unfolding unease about non-sovereign digital currencies in the West, China reaffirmed its intent to embrace blockchain technology, complemented by their new central-bank digital currency, the Digital Currency Electronic Payment (DCEP).

With a former high-ranking Chinese official claiming that PBOC will become the first central bank to issue a national digital currency and that Libra is destined to fail, the gauntlet has been thrown down to both Western central banks and big tech alike.

However, it is the potential impact of these major international players on Bitcoin and other cryptoassets that most concerns the crypto community - specifically whether these moves from Facebook and central banks will help or hinder an institutional influx into crypto.

We saw an example of this just over a week ago. With bitcoin surging over 40% in a day to record one of its highest daily rallies, many in the cryptoverse were sure that the market's surge on October 25th was a response to President Xi's positive remarks about blockchain.

Whether or not the Chinese Premier's comments were the real impetus, it's clear that the market sees a distinct connection between centralised digital currencies that aim to compete with or replace fiat, and decentralised digital assets like Bitcoin.

Despite the fundamental differences between Bitcoin and centralised digital currencies such as Libra or DCEP - in

their architecture, governance and price volatility - there exists a strong link between the two classes of assets. On the most basic level, they share the moniker of "digital asset," and are therefore inextricably linked in the minds of the public and investors alike. Many crypto-natives believe this connection should not be underestimated, and will ultimately drive mass retail adoption of Bitcoin and 'sound money'.

Perhaps more significantly, institutions also seem to appreciate the connection between the two types of digital asset. CME Group, for example, which lists regulated cash-settled bitcoin futures, saw open interest on bitcoin contracts approach an all-time high following the announcement of Libra in June.

Other developments that may encourage institutional adoption include digital asset platform Bakkt's recently launched bitcoin futures, and their new bitcoin options offering, set to launch in December.

One area that will prove key as both sets of assets penetrate the mainstream is access to high-quality data. Trusted data brings transparency and efficiency to a marketplace, increasing confidence and - ultimately - liquidity. We are proud to have helped power 3iQ's Bitcoin Fund, the first exchange-traded bitcoin fund in North America. It is developments such as these that further awaken powerful players to the potential for digital assets to take centre stage on the world economy.

What does this all mean for the next phase of digital assets? Predicting what's around the corner for this nascent industry is notoriously risky. However, as nation states and multinationals enter the fray, there may be cause for cautious optimism about Bitcoin, cryptocurrencies and digital assets in general.

Charles Hayter is Co-Founder and CEO of CryptoCompare, the global leader in digital asset data. Previously, he was an equity analyst at Citigroup and Westhall Capital, specialising in the solar and chemical sectors. He holds a degree in Physics and Astrophysics from Durham University.

## Crypto A.M. shines its Spotlight on World Mobile

World Mobile is on a mission to create a distributed telecommunications network that promotes equality of opportunity, accessibility and economy for everyone, everywhere. Built on a backbone of blockchain technology, the World Mobile network is designed to deliver unprecedented levels of connectivity and increase inclusivity all whilst protecting the sovereignty of user identity.

We live in a world of staggering economic disparity. A world in which over 780 million people live on less than \$1.90 a day, whilst 1% of the population own 45% of the total wealth. Where 15% of people have no electricity. Where 10,000 people die each day because they can't access affordable healthcare, and 262 million children cannot go to school.

In this world only 50% of people are online. This means half of the population have no access to public debates, to

education, to government services, or economic opportunities - much of which has been digitised. They are being left behind. For those already on the margins of society, the disparity continues to grow burying them even deeper in the dust.

World Mobile is making connectivity not only possible, but not only affordable, but profitable for the unconnected. By giving those in disadvantaged regions the opportunity to operate their own network



World Mobile isn't reserved for those without a voice, it's for everyone that values community.



elements, the disenfranchised can begin to build digital businesses, access financial services and government resources, become part of the world at large, all whilst generating revenue via the network interactions their infrastructure processes. Africa will add 1.3 billion people to its population by 2050, with Sub-Saharan

Africa becoming the fastest growing mobile market in the world. By 2025 Mobile Phone Adoption will increase from 44% to 52%, adding 190m new users. During the same time period mobile broadband connections will increase from 38% to 87% of all connections and 440m new smartphones will be in operation.

This is estimated to contribute an additional \$40bn to GDP. The potential for telecoms companies in this region is unparalleled, and at 52% subscriber penetration, the gap to saturation will remain huge even by 2025. However, the subscriber growth rate has been slowing due to unaffordability and a growing youthful population. Future growth opportunities are instead to be found in low-ARPU (average revenue per user) markets and rural areas.

Beginning in Tanzania, World Mobile is entering the 3rd fastest growing economy in Sub Saharan Africa. The purpose: to capture a substantial share of the Tanzanian telecom market by putting in place a dynamic framework that employs a hybrid of mesh/GSM network elements, green energy, blockchain, open source software and license-exempt spectrums to connect the unconnected. All of which World Mobile has extensive experience with, and are characterised by significantly lower capex and opex.

We are laying down the foundations not only for the mass adoption of blockchain technology but more importantly mass inclusion at large. World Mobile isn't just reserved for those without a voice, it's for everyone that values community, demands fairness and desires connection. We bring them all together.

For further information visit <https://www.worldmobile.io>



## WHAT IS STORED IN A BLOCKCHAIN?

### Troy Norcross, Co-Founder Blockchain Rookies

Start with the idea that a blockchain is nothing more than a shared Excel sheet where every row in the sheet is information about a transfer or transformation of an asset. Groups of rows become blocks, and each block is password protected as a group of locked cells. What type of information exists in each row? And what kind of information should not reside in a blockchain?

The first and most well-known use of blockchain is for the cryptocurrency bitcoin. In the case of bitcoin, every entry reflects a transfer of a fixed amount of bitcoin from one wallet to another wallet. Anyone can query the current balance of a wallet and the record of all transfers to and from

that wallet. For a supply chain use case, a blockchain can record the transfer of assets, like bales of cotton, from one party to another or from one location to another. Blockchain can also record the transformation of an asset from one form to another, e.g., from a bale of cotton to meters of fabric. We can query the history of an asset through transfers and transformations along the supply chain.

Aligning asset transfer records with payments can add liquidity into the supply chain. When recording the transfer of an asset, the associated fee gets released at the same time. Eliminating the time, cost and errors of reconciliation adds liquidity to the

supply chain. But not everything needs to go into a blockchain. Blockchain technology is not intended to replace traditional relational databases or share filesystems. We do not store large files or high volumes of transactions in a blockchain. Good blockchain data architecture defines the minimum data necessary to share between the relevant parties.

As more enterprises experiment with blockchain, best practice in deciding what information should exist in the blockchain is emerging.

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