

Project Craze – Bitcoin, Blockchain and Cryptocurrency

5 Sept, 2017
Calvin Ng

Purpose

I have been researching and observing (1) Bitcoin (2) Blockchain & distributed ledgers and (3) other cryptocurrencies for about 6 months. Whilst related its important to understand (1),(2) and (3) are very different. For the reasons outlined below I think it is time for Aura to explore gaining exposure to the (1) Bitcoin ecosystem (as opposed to Bitcoin itself) and (2) distributed ledger technologies as they apply to existing Aura related companies (this will require a separate paper on a case by case basis).

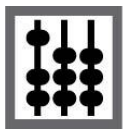
Bitcoin Overview

A bitcoin is a decentralized digital currency that is issued by, and transmitted through, an open source, digital protocol platform using cryptographic security that is known as the Bitcoin Network. The Bitcoin Network is an online, peer-to-peer user network that hosts the public transaction ledger, known as the Blockchain, and the source code that comprises the basis for the cryptography and digital protocols governing the Bitcoin Network. No single entity owns or operates the Bitcoin Network, the infrastructure of which is collectively maintained by a decentralized user base. Bitcoins can be used to pay for goods and services or can be converted to fiat currencies, such as the U.S. Dollar, at rates determined on Bitcoin Exchanges or in individual end-user-to-end-user transactions under a barter system

Bitcoins are “stored” or reflected on the digital transaction ledger known as the “Blockchain,” which is a digital file stored in a decentralized manner on the computers of each Bitcoin Network user. The Blockchain records the transaction history of all bitcoins in existence and, through the transparent reporting of transactions, allows the Bitcoin Network to verify the association of each bitcoin with the digital wallet that owns them. The Bitcoin Network and bitcoin software programs can interpret the Blockchain to determine the exact bitcoin balance, if any, of any digital wallet listed in the Blockchain as having taken part in a transaction on the Bitcoin Network.

The Blockchain is comprised of a digital file, downloaded and stored, in whole or in part, on all Bitcoin users’ software programs. The file includes all blocks that have been solved by miners and is updated to include new blocks as they are solved. As each newly solved block refers back to and “connects” with the immediately prior solved block, the addition of a new block adds to the Blockchain in a manner similar to a new link being added to a chain. Each new block records outstanding bitcoin transactions, and outstanding transactions are settled and validated through such recording, the Blockchain represents a complete, transparent and unbroken history of all transactions on the Bitcoin Network.

The process by which bitcoins are created and bitcoin transactions are verified is called mining. To begin mining, a user, or “miner,” can download and run a mining client, which, like regular Bitcoin Network software programs, turns the user’s computer into a “node” on the Bitcoin Network that validates blocks. Bitcoin transactions are recorded in new blocks that are added to the Blockchain and new bitcoins being issued to the miners. Miners, through the use of the bitcoin software program, engage in a set of prescribed complex mathematical calculations in order to add a block to the Blockchain and thereby confirm bitcoin transactions included in that block’s data.



Project Craze – Bitcoin, Blockchain and Cryptocurrency

What is the significance of Bitcoin?

The significance of Bitcoin is still being understood but includes the following :

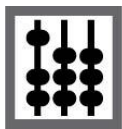
- Allows you to send \$1,000,000,000 from/to anywhere in the world (almost) instantly, any time, with almost none (minimal) transaction fee.
- Bitcoin is not controlled by a central authority and there will only be 21,000,000 coins ever created, thus the value of your Bitcoin is not dependent to a central monetary policy.
- Allows any merchant to start accepting digital money without signing up for a credit card payment gateway. Also allows any merchant to start accepting money over the internet without the need of a credit/debit card.
- No 3rd party fee for any transaction taken place. Since Bitcoin transaction takes place from the sender directly to the receiver, there is a small fee for miners to validate your transaction though.
- The Bitcoin public ledger, also called the Blockchain is the world's first publicly distributed ledger that is backed by a global distributed network of computational power. One can potentially store contract, voting ballot, public identity into the Blockchain as a proof of ownership.
- Transaction is facilitated by complex encryption (hence the term cryptocurrency) and do not require the owner to be identified (although using players in the eco-system may).
- Bitcoin has inspired many other cryptocurrencies. Those cryptocurrencies are trying to solve the problems that arise within Bitcoin and also trying to carve its own niche by addressing problems that Bitcoin is not good at solving.

The fact that it's not controlled by any central bank or government and is finite and massively divisible makes Bitcoin very attractive as the world has used money to influence government agenda or printed money to solve economic problems. Also given that there is no single entity controlling the ledger the risk of failure of that entity (either by fraud, hacking or insolvency) is less likely. Note this is not true of players in the Bitcoin eco-system.

The Bitcoin Eco-system

Key players:

- Exchanges - allow you to buy / trade bitcoin and sometimes provide Wallets.
- Miners - validate and record Bitcoin transactions and are rewarded with Bitcoin in return for their computing power
- Wallets (both hardware and software) - assist with holding bitcoin and security
- Payments providers - enable ordinary businesses to transact with bitcoin and interfaces with traditional payments providers (ie banks, visa and mastercard)
- Others are peripheral applications ie lending against Bitcoin

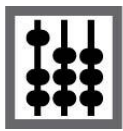


Project Craze – Bitcoin, Blockchain and Cryptocurrency



Why Now?

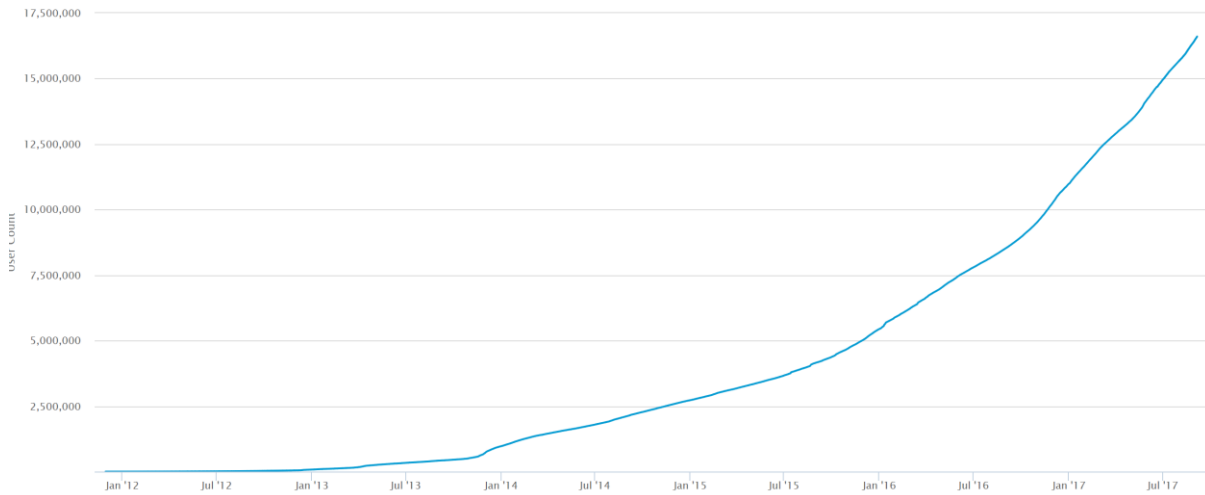
- More and more countries around the world has declared bitcoin legal and more and more are embracing it (and regulating it).
 - https://en.wikipedia.org/wiki/Legality_of_bitcoin_by_country_or_territory
 - <https://www.coindesk.com/japan-bitcoin-law-effect-tomorrow/>
- Credible financial institutions are now playing in the eco-system
 - <https://www.cnn.com/video/2017/08/09/fidelitys-bet-on-bitcoin.html>
 - <https://qz.com/990229/one-of-the-worlds-largest-financial-services-firms-is-mining-bitcoins/>
 - <http://www.businessinsider.sg/bitcoin-price-increases-and-van-eck-files-for-etf-2017-8/?r=US&IR=T>
- Ordinary business acceptance of bitcoin is growing exponentially
 - <https://99bitcoins.com/who-accepts-bitcoins-payment-companies-stores-take-bitcoins/>
 - <https://news.bitcoin.com/bitcoin-accepted-260000-stores-summer/>
- Capital controls globally are tightening eg China
- There is global unrest with global politics and distrust of fiat currencies
- The number of wallets has exploded including rising from c10m in Jan 17 to c17m in Aug 17.



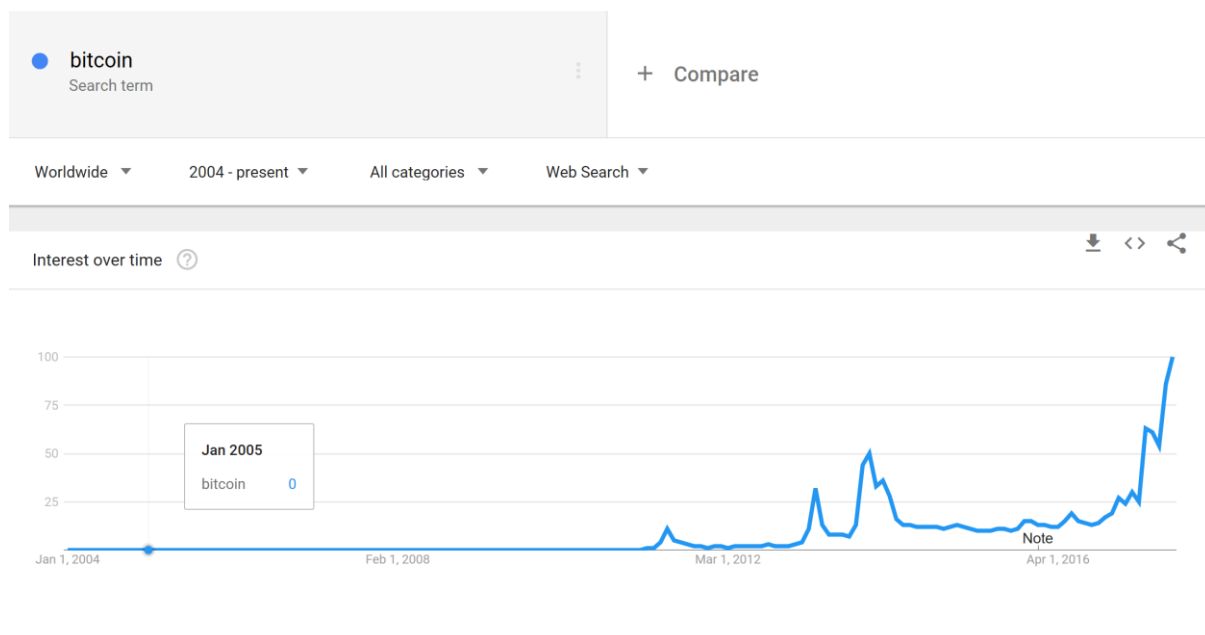
Project Craze – Bitcoin, Blockchain and Cryptocurrency

Blockchain Wallet Users

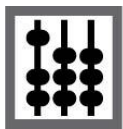
Source: blockchain.info



- Search volume and media mentions is at all time highs



As a result the network effect is kicking in transforming Bitcoin from what was previously (1) predominantly used for black market purposes and (2) a speculative asset into a truly widely accepted global crypto currency.



Project Craze – Bitcoin, Blockchain and Cryptocurrency

The Problem

Understanding the above and trading in Bitcoin is extremely time consuming and complicated. Bitcoin like any currency will become a large investment asset class that will attract attention from the masses but my view is most don't know how to effectively get exposure.

Recommendation

To be clear I am not recommending speculation in Bitcoin, I don't care whether its USD\$4500 or is \$1000 or is \$10m (which is the mooted number if it replaced all global wealth). Nor am I recommending anything to do with an ICO which is more around using blockchain to develop newer more obscure crypto-currencies.

What I am recommending is exploring a way to participate in the Bitcoin eco-system in a way that is consistent with the Aura business model and also with our regulatory obligations. The mechanism needs to make sense irrespective of Bitcoin value.

The mechanism ive thought of is that Aura should consider exploring launching passive Bitcoin ETF/LIC/LIT's in Australia / Singapore and Thailand exchanges (and quickly the rest of SEA):

- The operating model is scalable and can be largely emulated country to country however we would need to tailor the vehicles for local structure, regulation and distribution.
- >\$100m targets in each jurisdiction
- If structured correctly would constitute "permanent capital"
- Given its passive nature Aura would not technically be "managing" any assets, in many ways more of a facilitator.
- There is a precedent for this in the OTC market in the US that is trying to list on the NYSE (refer attached).
- We could be the first mover in APAC (potentially globally).
- There is a natural extension to other crypto-currencies (Ether / Litecoin etc) if they begin exhibiting global acceptance along the lines of Bitcoin.
- Gut feel is retail distribution should not be an issue.

Key Risks

Largely outlined in the risks section of the SEC Form 1 – Bitcoin Investment Trust (refer attached). The risks worth discussing here are:

- Reputational risk (as opposed to legal risk as Bitcoin is legal in the jurisdictions we will operate in).
- Market fall and whether that may cause us reputational risk even though what I am proposing is a passive strategy.

Approval Required

Seeking approval to put a global deal team together (needing 1-2 representatives from Australia / Singapore / Thailand) and spend up to \$100k on exploratory costs.