SHOULD YOU BANK ON BITCOIN ?

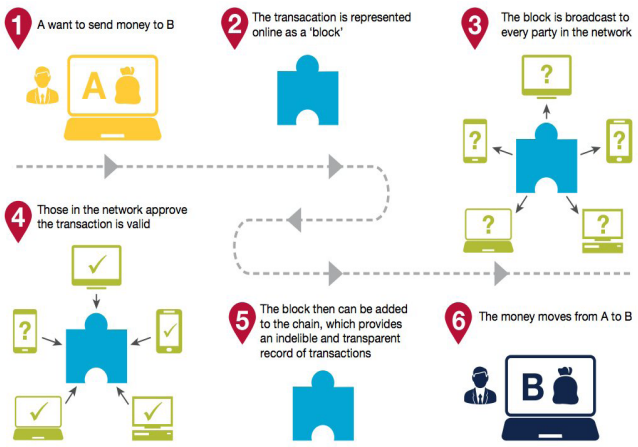
If someone had to summarize 2017 in one buzzword, it would undeniably be «disruption». Amazon acquired Whole Foods, asserting that traditional retailing was a thing of the past while Alibaba hit that nail on the head when its singles' day sales amassed $25.3bn, double the Black Friday and Cyber Monday sales combined. Intel acquired Mobileye in what became the largest exit in Israel's high-tech industry to date, validating the fact that full autonomous driving would become a reality, possibly in as early as 2020. More generally, technology's ubiquity became obvious, not only for better efficiency in all aspects of our day-to-day lives, but as a driving force of societal, political and economic changes. Facebook's news algorithm was accused of tilting political sentiment during the US elections; machine learning and big data were made prevalent in targeted ads (sometimes with questionable ethical standards), and Twitter has effectively replaced the White House press secretary.

And then there was Bitcoin. It came under the spotlight over the course of what looked like a never-ending rise to fame which culminated on December 18th, when the "cryptocurrency" was valued at $18,764. Was the case for a decentralized medium of exchange finally being recognized? Were we witnessing the ultimate disruption which would go as far as modifying central banks' ability to impact business and market cycles? Or were we simply about to be harshly reminded that behavioural finance is more prevalent than ever? 45 days later, Bitcoin was down 62%. At the time of writing, Bitcoin is valued at $6'800 and we have no idea where it will trade tomorrow…

Bitcoin is a cryptocurrency or "virtual currency scheme" (VCS), a means to exchange value pseudo-anonymously with the added benefit that no government owns it, and therefore cannot influence it. While other VCS have existed before it, it has proven to be one of the most robust iterations and its launch coincided with the Global Financial Crisis, a fortunate time as governments were about to engage in the most unconventional monetary policies ever witnessed. Bitcoin, as all other VCS, relies on a technology called the "blockchain", a digital ledger used to keep track of all transactions. Every single payment service in the world already does this (think VISA or PayPal), their ledgers being proprietary and only accessible partially by a number of counterparties. In the case of Bitcoin, the ledger is open to everyone, easily readable and shared across a distributed network. While traditional payment services require human intervention and are prone to mistakes or fraud, the blockchain is fully automated and bases its transaction confirmation mechanism on solving cryptographic mathematical problems which are in turn verified by the entire network.

"...rising liquidity and loose standards always lead to bubbles..."

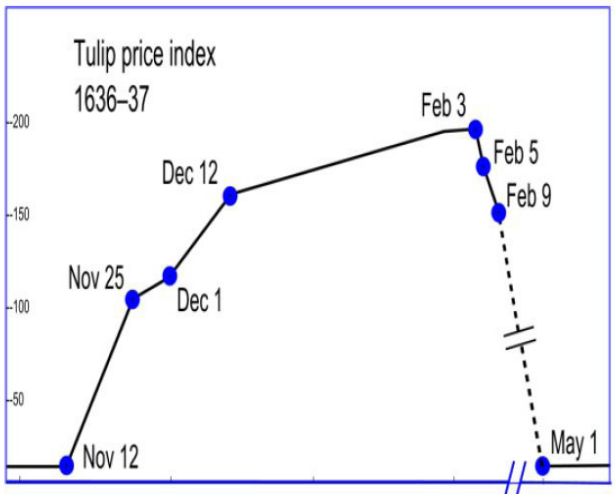
This is called "mining" and each participant who succeeds in verifying a transaction is rewarded in Bitcoin. These completed transactions are bundled together in blocks of information, which follow each other in chronological order, a sort of chain, hence the "blockchain" moniker. Because each block also contains information about all previous transactions, this system cannot be falsified. Every single transaction is recorded for ever, there is no counterparty risk, and it does away with human error. But more importantly, because no one owns it, it cannot be manipulated.



SOURCE: FINANCIAL TIMES. IN MANUAL AND ADREWS 2016

"By analogy, while there is a quasi-philosophical case for virtual currency schemes, they are not viable in their current shape and form as a physical, scriptural or dematerialized currency replacement."

The Bitcoin craze is often rightfully compared to the Tulip mania of 1637, when tulip bulbs were used as a store of value in the Netherlands and ultimately crashed in what remains one of the greatest asset bubbles in history. But what most observers miss is that the tulip mania found its roots in the ongoing decline of real wages and increasing income disparities, a context not too dissimilar to what we've been experiencing over the past 10 years. The 1600's saw the first wave of globalization with international trade rapidly expanding. The Netherlands were at the forefront of that growth, benefitting from their port infrastructure and building on their strong business acumen. The flow of bullion (the main currency at the time) entering the country created an imbalance in supply/demand which in turn led to the debasing of bullion value and a decline in livelihood which compelled market participants to find other means to store their wealth. In came the tulip bulbs as a new asset class but it could have been anything else, similarly to how gold, real estate, fine art or fine wines are often used as "safe havens".



SOURCE: EARL THOMPSON (2006), MACQUARIE RESEARCH, SEPTEMBER 2017

Fast forward to the years 2009-2017, and in comes Bitcoin. Fiat currencies are inflationary by nature, meaning that through time, one Dollar or Euro buys you less goods. If you lack trust in banks or traditional investments, storing bills under your mattress will make you poorer. Over the past 8 years, central banks' interventionism through unprecedented injection of liquidity and historically low rates have led to a rare situation where the real rate of return for risk free investments has been in negative territory. In other words, investing in the safest way possible also has meant a loss of wealth. Finally, rising liquidity and loose standards always lead to bubbles, which an increasing number of participants fear, notably in equity markets. Besides the political agenda which underpins their existence, cryptocurrencies are merely a reaction to global monetary policy, hence Bitcoin's recent increase in adoption rate and value. They should be approached from two complementary angles, as a potentially better means of transacting as well as a potential store of wealth. It is the premise that Bitcoin may replace fiat currencies that confers it its speculative nature. But is Bitcoin (or other VCS) the way of the future?

"Bitcoin's volatility should be considered as a transaction cost."

A currency should be easily transferrable, which Bitcoin technically is although its volatility (sometimes 100% per day!) should be considered as a transaction cost and hinders this attribute, as it currently does its function as a store of value. It should also be generally accepted to settle transactions, which Bitcoin may one day do but does not so yet. In 2015, Bitcoin was used for approximately 69,000 transactions per day worldwide, compared with a total of 274 million non-cash retail payment transactions per day for the EU alone. Interestingly, it is not a legal tender (a means of payment which you legally have to accept) but neither are credit cards which have now become mainstream. While Bitcoin does satisfy some aspects of a currency definition on paper, it cannot be considered as one as we speak and there has been no sign of an inflexion point in the past 5 years. That being said, when credit cards were first introduced in the United States in the 1950's they were literally pushed on to consumers, being given away for free in mailboxes. The fraud around credit card payments reached close to 25% but they've come a long way since, as may Bitcoin one day - with greater adoption would also come lesser volatility. Unfortunately Bitcoin in its current form suffers from a number of non-negligible shortcomings.

Bitcoin represents less than 1% of global payments, yet the energy required for computers to mine Bitcoins already matches the electricity

consumption of New Zealand. The majority of these miners are in China, benefitting from cheap coal-based electricity, which also happens to be the most polluting. If Bitcoin were to establish itself as the new global currency, its mining would require the equivalent of US, China and EU electricity consumption together. It would require the world to build 1,800 new large scale coal plants at a cost of $2.4 trillion, and global CO2 emissions would increase by 33%! The other main issue surrounding Bitcoin is that it is currently limited to 7 transactions per second. By comparison Visa/MasterCard perform an average 20'000 transactions per second. Finally, becoming an active player in the Bitcoin space requires a certain level of technological savvy. Online exchanges and platforms which have spawned over the past several years enhance user experience but they are prone to the same weaknesses as the more traditional venues Bitcoin competes against: fraud, human errors and hacking attempts. Proponents of Bitcoin argue that there are ways to solve the above issues (and some others), but it invariably comes at the cost of one of Bitcoin's main features.

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What about Ethereum, Ripple and other cryptos? Cryptocurrencies which aim at serving as a direct means of exchange (such as Bitcoin and its sub-versions called "forks") need to be separated from cryptocurrencies serving a slightly different purpose. While Ethereum and Ripple both rely on blockchain technology, their protocols are different from Bitcoin's. Ethereum focuses on smart contracts, using the blockchain as a secure means to automatically link an action to a payment. For example, in a decentralized car-sharing platform one would receive a specific token after providing ride services to another user and could then either spend that token to get that same service at a later stage, or exchange it for Ether (the "currency" used to facilitate this means of exchange) in order to purchase another token of greater utility. Initial Coin Offerings (ICOs) rely on the same mechanism, offering future services in exchange for project financing. The automated and secure nature of the Ethereum network brings an efficiency to that process never witnessed before. Ripple focuses on financial transaction of scale, looking to one day potentially replace the interbank SWIFT system. Again both Ethereum and Ripple's value is based on the belief that they will become mainstream, and they do hold value, but you will never be able to buy your morning coffee with them.

"The other main issue surrounding Bitcoin is that it is currently limited to 7 transactions per second."

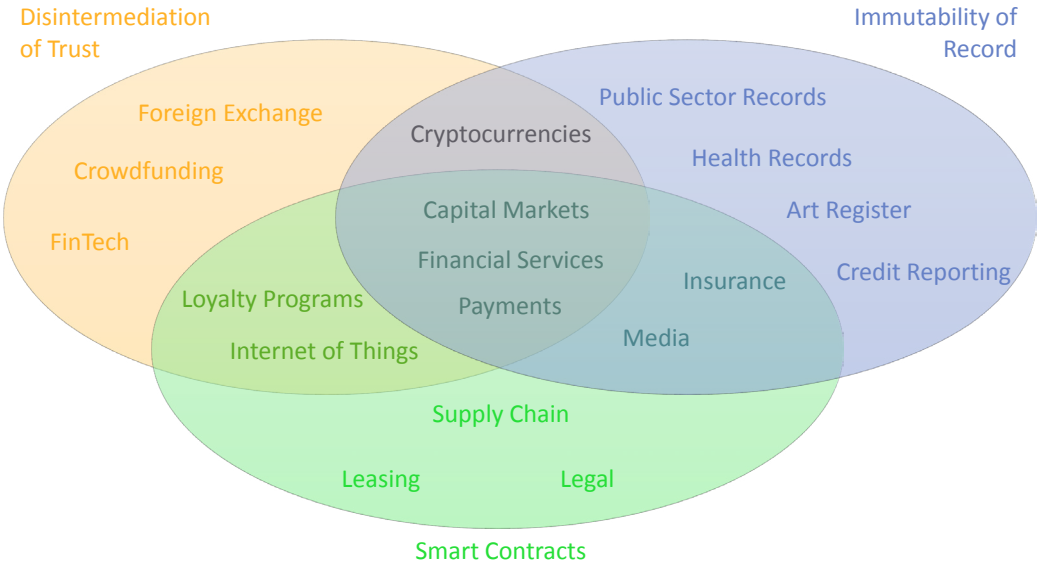
In 1991 Linus Torvalds released the first version of Linux, a computer operating system which was free, open-source (the opposite of proprietary), and both more robust and secure than the Windows and Macintosh software of the time. Despite these attributes, it required a level of technicity which the mainstream did not possess, became overly fragmented with many forks coming to market and never reached consumer computers. As testament to human nature, consumers picked the most closed-out and expensive product out there, the Mac. By analogy, while there is a quasi-philosophical case for virtual currency schemes, they are not viable in their current shape and form as a physical, scriptural or digital currency replacement. Bitcoin has never reached the required Network Effect for wide adoption. If anything vendors who initially looked to bank on the hype have since pedalled back, unable to cope with its volatility. Any attempt to destabilize the status quo will probably be met with regulation and sanctions, as it is central banks' mandate to ensure price and financial stability. In other words, the solution to central banks' over-reach on financial markets will probably be political. However, blockchain as a technology has far and wide implications and its impact will certainly be felt in areas much different from the ones cryptocurrencies are aiming at. Ultimately, it is all about trust. Is it fair to deem Visa and MasterCard so untrustworthy to be willing to switch to cryptocurrencies with all their caveats? Probably not. But blockchain, with its decentralized and highly secure backbone, could provide great advances in the field of supply management, allowing customers to get a full trail of a product's parts or food's provenance. It could enhance the underwriting quality of insurance contracts, again doing away with the issue of trust. Or it could even help advance democracy, granting greater access to secure voting systems which are currently plagued by fraud.

If the terms hot wallet, cold wallet, github, ERC-20, SHA-256 or GPU are foreign to you, refrain from "investing" in Bitcoin. If you do, limit it to a reasonable portion of your portfolio, hide your private key and go get it in a couple years' time.

"Ultimately it is all about trust."

The cryptocurrency market is heavily influenced by regulatory risk, arbitrage, and a slew of other variables which undoubtedly keep its best traders awake at night. If you want exposure to the blockchain technology, invest in those industries where blockchain will likely bring true disruption and in the companies at the forefront of blockchain integration.

Mikaël Safrana, CIIA



SOURCE: CREDIT SUISSE RESEARCH

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