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Beyond bitcoin

Concerns about an imminent reversal in the bitcoin market are bubbling. Regardless, blockchain, the digital ledger technology upon which it is based is

likely to survive long into the future as one of the major technological innovations of the 21st Century…

Bitcoin, the most renowned cryptocurrency, has rallied some 1700% in 2017 alone. Witnessing relentless price appreciation, it has become increasingly difficult for many to remain on the side-lines as mere spectators. Now, bitcoin and other cryptocurrencies are being played by everyone from sophisticated hedge funds to teenagers on their smartphones. Whilst the very first bitcoin investors were investing in a belief – a new and efficient libertarian exchange system that was free of central bank intervention and national borders – its seems that now, the new wave of investors are largely price speculators. But it is almost impossible to place a fair value on the cryptocurrency – no one really knows how much one bitcoin is truly worth - much of its value is dependent on others continuing to binge-buy the currency.

Behavioral finance advocates would call this 'irrational exuberance' – a term coined by former Federal Reserve chairman, Alan Greenspan at the beginning of the dot.com bubble of the nineties which describes unsustainable investor enthusiasm that drives asset prices up to levels that are not supported by fundamentals.

There are many issues that concern us with regards to bitcoin. First and foremost is the inability to apply a fair value to bitcoin and other cryptocurrencies. Secondly, bitcoin in particular is contradictory in its very nature – a currency subject to widespread speculation and huge price gyrations can hardly serve as a reliable currency for making and receiving payments. Thirdly, governments and central banks are unlikely to easily give up their monopoly on money. We have seen regulators increase scrutiny around the use of bitcoin and other such cryptocurrencies, and the grip of regulators is likely to continue tightening, eroding some of the perceived benefits which make virtual currencies attractive. A crackdown is especially likely given that cryptocurrencies have been associated with tax evasion, circumventing capital controls and also with the purchase of illegal goods on the black market. Governments may also turn their attention to the fact that mining bitcoins is extremely costly in terms of power and fossil fuels. Digiconomist, claims that the amount of electricity used by computers mining bitcoin so far in 2017 outpaces the annual usage of small countries like Ireland. Lastly (though this is not a conclusive list), is the fact that a futures broker has recently announced that it will allow market participants to open short positions, betting against the bitcoin. This is likely to greatly alter the dynamics in the market, making it a two-way street.

The bitcoin tower of cards is looking ever more precarious as it gets taller, with leverage, CFDs, and futures being delicately balanced on top of the basic bitcoin market. At the first sign of trouble, there is a high chance that the herds which have flocked to bitcoin (and other cryptocurrencies) could suddenly stampede towards the exit. Alas, we do not see virtual currencies as a viable investment vehicle at this time.

Separating bitcoin from blockchain

However, we must differentiate between bitcoin and blockchain, the distributed ledger technology at the heart of the cryptocurrency. Even if bitcoin gets de-railed, blockchain, the tracks upon which it runs will remain, potentially playing a pivotal role in re-shaping many traditional industries bringing efficiencies, transparency and trust. According to the Financial Times, blockchain firms raised more than $240 million in venture capital money in the first six months of 2017, with a lion's share of this coming from banks.

What is Blockchain?

At a very high level, the blockchain is a decentralized ledger (or list) of all transactions across a peer-to-peer network. Using this technology, anyone can interact and transfer value across the internet without the need for a central third party for validation. What is special about blockchain is that once a transaction is registered, encryption makes it theoretically impossible to alter; copies are spread around the computers that form the blockchain network meaning any user can check whether something is correct using a cryptographic process. No one person controls or owns the list making the blockchain an independent, tamperproof entity in itself. This enables immutable, shared ledgers which can be used to validate new transactions using consensus without human intervention. For example, when a new bitcoin transaction is entered, using all previous transaction records housed on the blockchain network, the system can verify that the user who logged the transaction genuinely has the bitcoins to spend.

Already various industries are embracing this technology beyond its uses relative to bitcoin, recognising its potential to re-shape everyday operations…

Financial Services

Banks and other financial services firms were at first skeptical about blockchain technology, especially given that it could potentially displace them as the 'middlemen' who validate transactions. However, such organizations are now quickly trying to weave the technology into their operating models in order to avoid being left behind. UBS Wealth Management has estimated that blockchain could add as much as $400 billion of annual global economic value by 2027.

The benefits blockchain offers banks are abound. In the area of clearing and settlement, Accenture estimates that the biggest investment banks could save up to $12 billion per year by using blockchain technology to reduce inefficiencies and cumbersome back-office processes. As it stands, banks must reserve capital until transactions are cleared, resulting in billions of dollars being tied up for days and even weeks on end. Recently, in conjunction with the Blockchain startup Axoni, Goldman Sachs, JPMorgan and other investment banks, explored the use of blockchain in the $2.8 trillion equity swaps market over a six-month period. The project, which was completed with a 100% success rate, recorded swap contracts whilst accounting for items such as amendments, the termination of deals, stock splits and dividends. If this was to be

transposed into real-life operations, the idea would be that each member bank would have access to a live shared ledger, so when payments need to go from one participant to another they would be processed almost instantaneously. This would result in huge time savings, fewer valuation disputes, less need for post-trade reconciliations, and a higher degree of accuracy.

Payment procedures will also potentially be revolutionized by blockchain technology. Currently, cross-border payments can take several days to clear. Essentially, blockchain allows value to be transferred between parties as if it were a fiat currency in real-time, skipping the need for manual processing and authentication by intermediaries. This would also leave a clearer audit trail. Fintech firm R3 and 22 of the largest global banks have already developed an international payments network that would allow traditional currencies and any new digital ones to be transacted on a blockchain network. MasterCard and IBM have already launched payment processing using proprietary blockchain systems.

In an era of cybercrime and stringent regulatory requirements, immutability and the ability to validate records is becoming ever more crucial. Further, regulators dictate that banks must perform due diligence on customers and counterparties and hold them responsible if they fail to detect illicit actors. Blockchain has the potential to store almost any type of records – not just financial or numerical data. Some have suggested that a shared and incorruptible list of counterparties that is constantly updated by all banks in the network could be created on blockchain to garner economies of scale across banks when it comes to know-your-customer (KYC) protocols. Already, the UN and Microsoft have explored a similar project, creating a blockchain identity system for people without identity papers.

So vast are the opportunities associated with blockchain, even central banks are test-piloting ideas on how they can leverage the technology. This could help catalyze its progression from a marginal innovation to a mainstream method of transacting.

Insurance

Another facet of blockchain technology is the ability to create 'smart contracts' which could reshape the global insurance industry. These are digital agreements held on the blockchain that execute automatically based on real-world data, thereby reducing the potential for human error, time delays and corruption. For example, the French insurance company – AXA – already offers flight insurance using the Ethereum blockchain. The buyer of the insurance takes out a smart contract which is designed to pay out if their flight is delayed or cancelled. The contract will automatically obtain data from an official flight tracking database and should the flight not arrive on time, the contract will automatically transfer the insurance amount to the holders account. This is highly efficient for both AXA and its customers, reducing costs in terms of both time and money. There is basically no human intervention and trust is increased because there are no grey areas: if X happens, the money will be paid.

Charities

A common complaint when it comes to charitable donations is that it is often opaque in terms of where the money actually goes. This can even prevent people from giving in the first place. Using blockchain technology to track donations could avoid corruption and inefficiencies and let the donor be sure that the money arrives at its intended destination.

Automobiles

In the case of the car industry, customers are often afraid of being 'sold a lemon'. With blockchain, this fear could be completely diminished. Attached to a car's initial record on the blockchain that could state when it was manufactured and where, new immutable files could be added detailing previous owners, repairs and tracking its odometer. Altogether, this data would form a 'digital twin' of the car.

Already, Robert Bosch Venture Capital GmbH (RBVC) - the corporate venture capital company of the Bosch Group uses IOTA distributed ledger technology which goes beyond blockchain, allowing machines to exchange data and money between themselves. Bosch has recently demonstrated its dedication to the technology by building up reserves in IOTA tokens (a form of cryptocurrency). A potential use of IOTA could be to enable a car to send or receive information from Bosch about a malfunctioning car part. According to the company behind IOTA, the technology has already enabled more than $10 billion in transactions and is being used for feeless micropayment-based electric vehicle charging and parking...

Voting

Even voting in national elections may become more transparent if transferred to a blockchain system. National voting systems are not always airtight – even the 2016 US election was surrounded by controversy. Blockchain technology could be used to house electoral registers and for subsequent identity verification. After the votes have been submitted, an electronic count would eliminate the chance of illegitimate votes being considered and the occurrence of votes being altered or withdrawn. Creating an immutable, publicly-viewable ledger of recorded votes would dramatically enhance democracy.

Here we have floated only a few ideas concerning certain industries in which blockchain technology could be transformative, however, the possibilities are vast. Whilst we believe that investors in cryptocurrencies like bitcoin will be living dangerously over the next months in a bubbling market fueled by speculation, we do believe that there is great potential for long-term investors with exposure to fintech firms associated with the blockchain infrastructure. One way to invest in blockchain indirectly is through major players in the industries which are already undergoing transformations related to blockchain (payment services for example) and ramping up investment. However, investors must be sure that the companies activities pertaining to the

technology are not just cosmetic for the sake of jumping on the blockchain bandwagon.

Inexperienced investors could consider professionally managed mutual funds with a fintech investment theme.

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