

## Blockchain and cryptocurrencies

What does it do?

*What is the state of the art of this new technology?*

Blockchains and cryptocurrencies were once thought of as a single unit, both coming hand in hand. But now they have evolved as two separate units. Blockchain allows for information to be distributed and as it is not being able to be copied, it was originally devised for digital currency Bitcoin etc. Blockchains is a time-stamped record of data that is unable to be changed and is managed by multiple computers, not owned by a single establishment. Blockchain is made from two parts, blocks of data 'Block' and the tying to each other by using cryptography 'Chain'.

Cryptocurrency is a way to use blockchains to transfer money from one party to another without having to go through a financial institution. By this method there is no transaction fees as one cryptocurrency coin sent is the same value as one cryptocurrency coin received irrespective of it is sent within the same country or across the globe.

*What can be done now?*

Cryptocurrency is much the same as paper money. Cryptocurrency can be traded on exchange markets where the value of the currency can either go up or down. The currency can be bought with cash from ATM around the globe as well as individual traders. The currency is also accepted as cash from many company's both small traders to major company's including Wikipedia, Microsoft and Expedia (with some limitations). Virgin Galactic will allow you to pay for a space travel with Bitcoins. You can store your currency the same way as you store your money in your wallet but with different methods. An electronic wallet, where you store your private encryption

keys on your computer, in the cloud or on a software wallet. A hardware wallet which is where you store your keys on an item like a flash drive and even a paper wallet where your private, public keys and the bitcoin address can be printed on paper and stored.

*What is likely to be able to do be done soon (say in the next 3 years)?*

There is much confused with blockchain as it is perceived to be tied in with cryptocurrency, but as blockchain is an item by itself it needs to distance itself from cryptocurrency. A misunderstood problem with blockchain is its slow performance, which, due to the Bitcoin and cryptocurrency, gives blockchain a falsely perceived negative look. Blockchains are more than just a carrier for cryptocurrency, I feel that It needs to expand on the solutions that has for numerous industries. Cryptocurrency needs to be part of today's economic system for it to grow But that may not be possible as Bitcoin has a limited number of 'coins' that can be mined And when mining has stopped the scenario is that there will be not enough computer power needed to assure transactions.

*What technological or other developments make this possible?*

Blockchain have many technical challenges that it needs to overcome to be a 'program in its own right'. It would need to provide similar foundation technologies as those of the Internet, Financial institutes like banks would also need to adopt blockchain which is an issue with the financial institute's and not with the technology itself. block chains communication protocol will also need to change like HTTP and have a language such as HTML. This will enable the content of blockchain to be more user friendly. There needs to be a common communication protocol for the blockchains as existing blockchains are independent and are unable to interact with

each other. But above all blockchains needs to have regulations and support from international governments and institutions for it to succeed in today's market. For cryptocurrency to succeed it would need to be part of the mainstream financial system. The algorithms that is used by cryptocurrency will need to be more complex to avoid any fraud or hacking, but also the same time be easy for people to understand what cryptocurrency is and what it can do. Safeguards will be needed to put into place as well, for protection and anonymity of its users but also ensuring that it is not an easy way to launder money.

What is the likely impact?

*What is the potential impact of this development?*

The potential impact that cryptocurrency can have is with the World currency market. At this moment of time, the existing global economy is controlled by the US dollar. With several government's trying to end the reign of the US dollar, cryptocurrency could be well placed to replace the US dollar as a global currency. The impact of this development I feel, would have a far-reaching effect.

*What is likely to change?*

Change I feel will affect the way we purchase items we used to purchase items with paper money, that change to now where we tend to pay for items with our credit cards or debit cards and with cryptocurrency this could be the next evolution in money. When travelling overseas the need to change money into foreign currency will no longer be required with the potential of exchange rates being a thing of the past.

*Which people will be most affected and how?*

I feel this type of technology would affect most if not all of the general public. The general public would have to understand how cryptocurrency works, they would have to understand what a virtual wallet was and how to use one. There will be a need to explain to public of any fears that they might have regarding security and hacking. I feel the effect the older generation may have regarding cryptocurrency is fear, the fear that their money would not be physical and the fear that they may lose the money that they do have.

*Will this create, replace or make redundant any current jobs or technologies?*

I don't consider this will create many jobs if crypto currency is more widely used. As cryptocurrency itself is not a physical item the need for financial institutes to hold our money in safes will not be required. I can see that there will be a possible reduction of frontline staff in banks and with the potential of banks themselves in high streets slowly diminishing. Banks themselves may create a cloud for its customers to deposit any cryptocurrency into with the safeguard against theft and hacking, and because of this, I consider financial institutes would employ more IT professionals to safeguard customers currency.

How will this affect you?

*In your daily life, how will this affect you?*

I consider the effect of cryptocurrency in my daily life to be very minimal, like the majority of people paper money is not used as much as it used to be as now any transactions or purchases, are mostly made on the credit card or debit card. Even when purchasing items on the web the credit card is the main form of transferring money. With crypto currency being potentially another form of credit card the use of

it I consider would be the same as using an existing credit card. I feel though that I may have more of a concern with the security regarding the cryptocurrency, this may affect my spending habits and how I'm making transactions.

*What will be different for you?*

If cryptocurrency became part of the mainstream financial system, I feel that it would make no difference to me personally. Like any other currency, Singapore Dollar, German Euro or the United States Dollar, the cryptocurrency to me would be a currency that, if required, I would purchase. As these currencies are not part of my everyday life, having a cryptocurrency become part of the global market this also would not be part of my everyday life.

*How might this affect members of your family or your friends?*

The effect it may have on members of my family or friends I feel would very much depend on there age. Younger members of my family or friends, may find that dealing with a cryptocurrency and blockchains will become part of there normal day. I feel that as cryptocurrency has a future in online games and especially blockchain as a means for an online game to reward a player for playing their game, the younger generation will think of this as a norm. Older members may be sceptical about Blockchains and especially cryptocurrency, maybe having a fear of the unknown.

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