BLOCKCHAIN: TECHNOLOGY AS POWERFUL AS THE INTERNET?

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Much ink has already been spilt on blockchain, with two distinct schools of thought wrestling for space in the headlines: those who proclaim that blockchain will unshackle the world's population from financial institutions and other intermediaries, and those who doubt the technology's chances of success.

Blockchain, did you say?

Blockchain is a type of database – a chain used to store and transmit information and arranged in the form of data blocks – that once saved in the network cannot be changed. Imagine a publicly accessible excel file, where the content can never be erased. Each block contains information about a certain number of transactions. And when the block is full, the next will begin to fill with information. But what is so revolutionary is that an operation carried out by one user is visible to others within a peer-to-peer network without central transaction verification computers (such as a bank). Thanks to a system of such connected computers and a public book, transaction records are difficult to hack – not only through complex cryptographic tools and other security measures, but because would-be pirates would have to break into several dozen, hundreds or even thousands of computers at the same time.

The origins of blockchain can be traced back to the late 1980s and a small group of anti-establishment geeks that Julian Assange termed in a 2012 book *Cypherpunks*. These activists advocated the use of cryptography and privacy-enhancing technologies to minimize risks coming from outsiders and defend personal privacy. Satoshi Nakamoto – the pseudo used by the unknown person or persons who designed Bitcoin – built on this and when he introduced his Blockchain-Bitcoin software solution in 2009, it was the first to align economic incentives in securing a decentralized system of digital cash. Released as an open source, it launched the network and created the first tokens of the cryptocurrency. Bitcoin provided its users with a way to have ultimate control over their financial wealth, its users being able to participate in fast, decentralized and secure global transactions.

Blockchain will disrupt

Not everybody may benefit from the development of blockchain: established market players such as banks and financial institutions are two examples. This is because Bitcoin can be compared to a revenue and expense ledger, with each transaction being visible to the public. Moreover, a newer development within blockchain technology called Ethereum can be compared to an Excel file where users can add formulas or texts, such as an IF THEN statement that auto-executes, but never erases content. Ethereum allows facilitating so-called smart contracts – and these decentralized arrangements might challenge stock exchange operations.

There is also the additional possibility that Ethereum will disrupt the dominant presence of interoperability players such as Visa and MasterCard, simply because transactions via cryptocurrency will no longer have to be conducted through an intermediary. This will cause the high fees customers currently face from remittance services providers to

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reduce. Moreover, as transaction costs between players in the financial sector fall, and instant international transfers become taken for granted, the established order characterized by the Swift solution looks likely to be threatened. To account for the impact, this disruption can be compared to what the introduction of cell phones has done to the landline infrastructure. But so far, another potential competitor has resisted: traditional currencies. The extraordinary price fluctuations of cryptocurrencies, their price often looking like a bubble, and their relatively tiny market – with the combined market value of all cryptocurrencies being less than $40 billion as of May 2017 – mean that the established currencies of, among others, the Dollar, Euro, Stirling and Yen have nothing to fear from the competition – yet.

Look back at the 1990s: even after years into its deployment, many believed that the internet was just a passing fad. Blockchain supports many applications, including smart contracts, asset registries as well as transactions that go beyond purely financial uses. So can it disrupt established players? Think of it in the following way: established currencies are not relevant simply because people believe that they are, but because their respective governments can collect taxes…in traditional currencies. This tells us something about the way in which the majority of transactions will be conducted in the foreseeable future.

Ultimately, the multi-billion dollar question is: can one function in a modern economy without putting their trust in something – be it an independent central bank or a technological breakthrough? Moreover, can we trust an institution without being controlled by it? This is not, however, a rhetorical question. After all, the benefits of having an established organization and the benefits of blockchain technology are not necessarily mutually exclusive.

Blockchain has to be understood to thrive

As with many new technologies, blockchain has faced many challenges in its short lifespan and will need to overcome a few more. It is generally agreed that there are currently three elements which could impact the mass adoption of blockchain: its image, the role regulators and governments will play, and the need for a common set of standards.

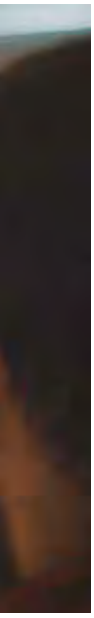
When Bitcoin was first introduced, much media coverage around cryptocurrency carried stories of it being used for heinous reasons and because the concept of blockchain was introduced hand-in-hand with Bitcoin, this often scared off individuals or organizations from considering the technology. However, it is also true that society continues to use cash to pay for goods despite the fact that it is often used in illegal transactions.

Having undergone multiple developments and improvements since its inception, blockchain technology continues to evolve. In this context, governments – while refraining from regulating technology – have created legislation on elements that impact how a blockchain would be used. The effect is that this can determine some of the specifics of how a user sets up his blockchain solution or even the jurisdiction under which he establishes his company. For example, some companies have begun using blockchain technology to raise money – the process being called Initial Coin Offering. And since regulators have not yet commented on this type of crowdfunding, some companies have been hesitant to pursue this avenue of raising money. However, since this improves the bargaining power of market participants when they deal with brokers, the intermediation business should be concerned. The level of adoption of blockchain by regulators and governments can therefore potentially be a catalyst or a hindrance, in the latter scenario people or organizations taking a 'wait and see' approach until they see government bodies leveraging it.

As the blockchain ecosystem continues to grow exponentially, a further stumbling block for future growth and adoption could be the lack of common standards across solutions. Projects are being built on various blockchain fabrics such as the Bitcoin, Ethereum and the Hyperledger blockchain – which carries the risk of creating silos of information. Creating an element of interoperability would exponentially increase the functionally of leveraging a blockchain solution.

The near future: chains of a different, liberating kind

Remember the times when the 'modem' was used to connect to the internet? It was not only expensive, slow and quaintly noisy, but it also blocked the phone line for all family members. Using the simple functions of the internet back in the time of modem or ISDN, it was impossible to imagine that 20 years after we would be downloading applications on our smartphones that allow us to store our credit card data and navigate our car. It can be argued that blockchain technology in 2017 might be somewhere between the fax and modem period: it is general knowledge that it exists but the average Joe might be challenged to say how it might be used in the everyday life.



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AUTHOR PHOTOS
CLOCKWISE FROM BOTTOM LEFT:
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However, the future is only a link away in the chain of things. Already, blockchain is being used in the background – often unpublicized to avoid negative customer reaction – Google and Apple, for example, using blockchain technology instead of Visa regarding interoperability. On a non-financial level too, blockchain is freewheeling into our digital lives. Practical implementations include basic digital spin-offs of blockchain to verify smart contracts, a Singaporean bank which recently saddled up other banks in Asia and Europe and facilitated instant transactions between them that excluded the Swift banking system, and a Stockholm-based company that enables its customers to benefit from blockchain-based crowdfunded insurance solutions. Even the UNO is gearing up into the possibility of using blockchain technology – a Danish company having received a letter of intent for the development of credit scoring models in emerging economies. But these examples are just the tip of the blockchain iceberg. To visionaries, blockchain is the sky. And it has no limit.

ABOUT THE AUTHORS

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