Blockchain: revolutionising global business transactions

For many of us, when we think of blockchain we think of cryptocurrencies such as bitcoin. After all, it was bitcoin that brought blockchain into mainstream consciousness. Bill Boyle spoke to venture capitalist Dr Johnny Hon

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Blockchain grabbed the world's attention in 2017, when bitcoin's price soared from about $800 to its record high value of $19,783 on 17 December 2017– a 1,824% increase since 1 January. "It appeared to be a lucrative investment opportunity for the lucky few," said Dr Johnny Hon. (At time of writing, its price had slumped back to $3,322.) "For banks and financial institutions however, bitcoin became synonymous with volatility and scandal. Its notoriety only increased as it became widely used as the currency of choice for ransom demands by cyber criminals – for example, by the WannaCry hackers.

"Now, over 12 months on and the very thing that made blockchain technology so appealing to online criminals – its security and encryption – is attracting growing interest from within the world of finance. It is easy to manage, quick to distribute, cheap to operate and, importantly, almost impossible to corrupt. Its makeup lends itself well to recording practically everything, and in particular monetary transactions."

Hon added: "Blockchain has the potential to improve a wide variety of processes within the financial sector. One of the most exciting applications is in share trading. Historically, share trading has always involved a middleman. This opens up share trading to inefficiencies including slow settlements and potentially human errors such as double trading. As a decentralised and secure ledger, blockchain mitigates these issues allowing for more accurate and faster trading."

Building efficiencies into data management

"Blockchain also has huge potential in the field of digital identity management," said Hon. "As consumers, our digital identities are crucial. The huge volumes of data our lifestyles now generate are used to secure loans or mortgages and to verify other transactions. However, this means a huge amount of data needs to be stored, which is costly and susceptible to corruption. Imagine if it were possible to have one single ID for everything we wanted to access in the digital world. By decentralising data, blockchain brings this possibility one step closer.

"Legal issues surrounding privacy and security have so far impeded blockchain's progress in this capacity, but a number of businesses are

still exploring its consumer data uses. One example is Deloitte's 'Smart Identities' service, which provides a new, transparent way for individuals, organisations and devices to obtain, verify and share identity credentials with one another."

Creating smart contracts

Hon said: "Financial institutions are under increasing pressure to demonstrate their regulatory compliance and as a result are beginning to consider blockchain more seriously as an option. The technology can be used to execute commercial transactions and agreements automatically – these are known as 'smart contracts', computer programmes designed to replicate the logical steps in regular contractual clauses. Ultimately this automates some or all of the negotiation process and closes agreements more quickly. By doing this, financial institutions can reduce compliance costs and increase the security of their regulatory processes.

"There is still a long way for the technology to develop, and there are well-documented failures of smart contracts. In 2016, the Decentralised Autonomous Organisation's Ethereum blockchain was hacked and drained of about $50 million in cryptocurrency. Clearly, the reality has not yet lived up to expectations, but optimism remains high for the future of blockchain for smart contracts."