Financial technology tendencies and blockchain analysis

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1. Introduction

Bitcoin is frequently regarded as a revolutionary advancement in the realm of financial technology. It's use of blockchain technology, which enables safe and transparent transactions without the need for a central authority, is one of its most significant features. This has led to the development of other cryptocurrencies and decentralised financial systems. However, this is not the only trend in fintech at this moment, other financial and technological innovations are underpinning today's financial system differently from blockchain such as mobile payments, digital-only banks, P2P lending: Peer-to-peer, open banking and machine learning. This article discusses the rationale behind Bitcoin, blockchain, and other financial breakthroughs, as well as their consequences for the fintech industry.

2. Bitcoin and blockchain

Bitcoin's popularity has steadily increased, attracting the attention and criticism of financial institutions after a couple of years. On the one hand, cryptocurrencies have been praised by many as the greatest financial innovation of the century, but on the other, they have been derided by some as nothing more than a libertarian craze (Cuccuru, 2017). It is often referred to as "digital gold" due to some similarities it shares with the precious metal. Both Bitcoin and gold have a finite supply, and the rate at which new units are created decreases over time. Bitcoin and gold can both be useful in portfolio risk management during periods of extreme volatility in financial markets (Gkillas & Longin, 2019). In the year 2019, Gkillas & Longin. (2019) used the Extreme Value Theory to analyze the tail dependence structure of international equity markets, and found that the correlation of return exceedances decreases when combining each equity position with Bitcoin or gold. This indicates that both assets can provide diversification benefits in times of extreme price volatility. Additionally, when combining Bitcoin and gold, there is a low correlation of return exceedances, suggesting that both assets can be useful together in times of financial market turbulence.

One of the key innovations of Bitcoin is its use of blockchain technology, which has led to the development of other cryptocurrencies and decentralised financial systems (Treleaven et al., 2017). In simple terms, blockchain is the technology that allows for the creation and maintenance of a continuously growing list of records, known as blocks. These blocks are linked together in a chain-like structure, where each block refers to the previous block's unique digital fingerprint, known as a hash. These blocks contain information such as transaction records. The blockchain is distributed across a network of computers, known as nodes, which work together to verify that transactions are valid.

In summary, blockchains are nothing more than sophisticated accounting products, with Bitcoin merely one of the first and most popular applications. Any digital product, data,

or piece of information may be incorporated and traded within a blockchain due to its adaptable architecture. Similarly, tangible assets can be represented digitally and securely registered in a distributed ledger.

3. Previous history of financial technology

3.1 Smart contract

Even before the advent of blockchain technology, smart contracts were primarily implemented using centralized systems, such as databases or other digital platforms (Cuccuru, 2017). These systems were used to automate the execution of certain tasks or processes based on pre-defined rules and conditions. Some examples of smart contract applications before blockchain include:

Digital rights management (DRM): DRM systems are used to control access to digital content, such as music, videos, and e-books. Smart contracts were used to automate the process of granting access to content based on certain conditions, such as payment or user authentication.

Supply Chain Management: Smart contracts were used to automate the process of tracking goods and ensuring compliance with regulatory requirements. This could be used to track the movement of goods, verify authenticity, and ensure that products meet certain standards.

Those examples show how smart contracts have been implemented before blockchain technology. However, the use of centralized systems come with certain limitations and challenges, such as the need for intermediaries to facilitate the execution of contracts, lack of trust and security, and lack of transparency (Christidis & Devetsikiotis, 2016). With the introduction of blockchain technology, smart contracts can now be executed on a decentralized, trustless network, which greatly increases their security and reduces the need for intermediaries.

3.2 Open banking

Open banking is an innovative model that aims to improve the banking experience for customers by encouraging collaboration between banks and third-party providers (TPPs) such as fintech firms, technology companies, and retailers (Premchand & Choudhry, 2018). It offers benefits for both banks and TPPs, such as increased innovation, scalability, and access to a broader customer base. The goal of open banking is to enhance every aspect of the customer's financial experience through collaboration between banks and TPPs.

Open banking and machine learning can be used together to provide a variety of benefits for customers and financial institutions. Machine learning can be used to

analyze the data that is made available through open banking to provide more personalized and relevant services for customers including fraud detection, credit scoring and personalized financial advice (Chakraborty & Joseph, 2017).

Credit Agricole, BBVA, and Fidor are examples of banks that have already adopted open banking as a valuable element of their banking model and services. Credit Agricole launched their CA app store in 2012, which is an online marketplace that crowdsources new ideas for banking applications from customers and allows third-party developers to respond with new banking applications through the use of open APIs. BBVA operates a well-established global API marketplace, known as API market, which allows companies, start-ups and developers to access these APIs and offer new products and services. Digital bank Fidor offers APIs in areas including identity management, card management and loyalty points and fostering an active developer community. These banks are using APIs to improve the quality of service and create tangible value for the end customer and are likely to see success in the long run.

4. Examples of current trends in FinTech.

4.1 Nasdaq Linq

Nasdaq Linq, a platform that uses blockchain technology to facilitate and record the issuance, trading, and transfer of private company shares. This platform allows private companies to trade digital representations of their shares in a closed market, without the need for intermediaries, which can significantly reduce administrative work and costs. Furthermore, it improves the transparency and efficiency of its market operations, such as its surveillance of market manipulation, and to explore new business models. Additionally, Nasdaq is a member of the R3 consortium, a group of financial institutions working to develop blockchain-based solutions for the financial industry and immutable record of all transactions help to prevent fraud and errors.

By providing a streamlined and efficient way for private companies to raise capital, Nasdaq Linq could help to democratize access to funding for growing businesses, which enhance the overall financial experience for private companies and investors.

4.2 Revolut

Revolut, a fintech company, offers international money transfers with no hidden fees using cutting-edge technology and a novel business strategy. Using real-time exchange rates enables them to avoid the markup that conventional banks and money transfer providers frequently add to their exchange rates. Revolut also offers a variety of other features such as the ability to hold and exchange multiple currencies in-app, and the ability to make international money transfers with no hidden fees. It also offers a variety of additional features such as budgeting tools, and the ability to hold and manage cryptocurrency. They have been growing rapidly and have gathered millions of

customers globally.

Revolut faces competition from other fintech companies such as TransferWise and CurrencyFair, as well as from traditional banks and currency exchange bureaus. These competitors also offer foreign currency exchange services, but typically at less favorable rates or with more restrictive terms and conditions. Revolut differentiates itself by offering a more comprehensive platform with better exchange rates, and more features and services.

5. conclusion

It is hard to argue that Bitcoin is the most important invention in fintech. Bitcoin, and blockchain technology, has opened up the possibility of decentralised transactions and banking systems, which will play an important role in the future development of fintech. Bitcoin is at this stage used more as a means of investment. Other technological innovations have already had a significant impact on people's lives and underpin today's financial system, such as open banking, machine learning, artificial intelligence and more. Together, these technologies underpin today's financial system. However, the blockchain technology that underpins bitcoin can be used in a number of ways, reducing transaction costs by a significant amount. This will require a range of financial innovations and collaboration between a number of parties.

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