

“The introduction of Bitcoin in January 2009 was the single most important FinTech development in history.”

SOHAM MANDAL

STUDENT ID.: 670062233

BEEM061 Main Assignment Part A

INTRODUCTION

Cryptocurrencies are considered as a portion of the emerging new digital currencies and can also be described as a subset of other alternative currencies. Decentralized cryptocurrency is an effort to make transactions more secure and any individual or an organization can do business in private without the intervention of the government. Blockchain is a constantly growing chain of ordered information (i.e. Blocks). The great thing about this is that once they have been created and recorded, they cannot be modified or manipulated with. This system uses a peer-to-peer network. Cryptocurrency uses this network as it offers a high level of transparency. Although Bitcoin became the first decentralized cryptocurrency in 2009, thus revolutionizing the working nature of Financial Organizations, notable efforts were made from the early 1990s.

Early Efforts

Even before there were any kind of efforts towards making digital decentralized currency a reality, the path towards the creation of Bitcoin started way back in the early 1960, when semiconductors removed physical record keeping. It was during that time credit cards were introduced to people which tend to remove physical cash transaction with card transaction. In the next two decades the mainframes and the terminals and pcs came to the market. People started processing overnight and the introduction of automated banks and remote banking facilities came up. This gives a clear sign about the peoples behaviour of trying to make the financial activities smooth and easy to handle by digitizing the activities. It was also during this time that the messaging system and the SWIFT system came into existence thereby paving the path for international payment network, which is one of the largest financial messaging systems in the world. ATMs came a decade later thereby ensuring people that they can have access to their hard-earned fund at any point of time and don't have to depend on the bank to draw out cash. This was probably the first step towards the feeling of privacy. With the advent of internet and local computers people now started monitoring their bank account from their home. By this time, a certain group of people called the cypherpunks were excited to bring out digital currency. In the early 1990s when the internet became more powerful, trading became digital and banking became online and companies started managing their business including large transaction over the internet.

The first attempt towards any kind of decentralized digital currency was made by the blockchain pioneer Nick Szabo in 1998. He called his currency as Bit Gold. It was made to replicate the economic properties of the gold while also improving its security features. Financial organizations required people to have a high level of trust for any transaction to take place which ultimately led to frauds and money laundering issues. The Bit Gold proposed to use the concept of encryption to devise a new trust less financial system. It aimed to give an individual monetary sovereignty that physical gold or cash could not. The vision of Bit Gold was later taken up by Bitcoin, but Bit Gold never got realized as it failed to explain the Double Spending problem.

Around the same time Wei Dai introduced the B-Money. It was a distributed electronic cash system that required a complex mathematical equation, which when solved will generate the value token implemented by the system. B-money was designed in such a way that it can be transferred to a different user anywhere in the world. It was also created so that it can be traded for other goods and services, such as electric power. Dai's B-money still relied on a central authority to verify transactions and prevent fraud and hence suffered from the double spending problem.

Another notable figure who came very close to creating a successful crypto currency was Hal Finney. He followed the path of David Chaum one of the early promoters of digital currency and the founder of the Digi Cash which aimed at putting power into the hands of individuals rather than governments and corporations and thereby protecting the privacy of the individual. Hal Finney brought together the works of David Chaum, Nick Szabo, Wei Dai, and Adam Back's Hash Cash to create a reusable proof of work in 2004 and tried to solve the double spending problem.

Impact of Bitcoin

With the introduction of the bitcoin, cryptocurrencies and blockchain have had a profound effect on the FinTech sector. Bitcoin has disrupted how people transfer funds, make purchases, and raise money. Financial organizations like Commercial banks and loan providers are adjusting their business models to adapt to the new wave of cryptocurrencies. Bitcoin and Blockchain are making access to digital payments, money transfer, banking, and other similar services more accessible. By bringing FinTech to mobile phones, bitcoin can be used to pay bills, transfer money, access loans, and even purchase insurance. All these transactions can be done safely using the Blockchain technology. FinTech services can be divided into five categories—money transfer and payments, budgeting and financial planning, savings, and investment, borrowing and insurance. The most used category is money transfer, followed by insurance.

Rise of Fintech Firms

Several reports suggested that about 28% of the fintech sector will be taken up by the payments division. The leading players in this field are Square, M-Pesa, Klarna and Paytm. Among these M-Pesa deserves special mention. Built in 2007, this is a mobile money service and also the largest fintech firm of the continent. M-Pesa provides over 41.5 million people with a safe, secure, and affordable way to send and receive money, top-up airtime, make bill payments, receive salaries, get short-term loans. Digital only banks, cybersecurity, Big data, and Artificial Intelligence are some of the key developments after the bitcoin innovation. Big Data helps in mechanisms such as relationship analysis and language comprehension. One of the main sectors that has been positively impacted with Big Data is lending and credit scoring. Notable emerging company that uses AI extensively is Numerai(quantitative and Asset Management) founded in the late 2015. The company

has its own cryptocurrency called Numeraire. The issuance of the new virtual currency successfully makes the incentives of data scientists further aligned with that of Numerai and gives it an edge over the market. The relationship between a customer and a bank has always been complex and it became even more complex with the advent of the challenger banks. Surprisingly, banking which gained a reputation as a closed industry was heavily challenged by several online banks which started using open source blockchain technology. The digital age is the rise of UK banking start-ups such as Atom Bank, Monzo, Revolut, and Starling. Atom bank founded in the year 2014 was the frontrunner in this sector. It transformed the way customers communicated with their banks. The banks moved out of physical contact with their customers and communicated purely through smartphones. At the same time Monzo came to the market with the aim of making money work for everyone. It provides a debit card and an app that has revolutionized personal banking. Revolut offers its customers currency exchange and peer-to-peer payments, allowing consumers to open an account within three minutes that will give them ATM access to multiple currencies and most of its services are free. Some FinTech firms like Earnin are disrupting the paycheck system by empowering consumers with flexible payday options, so they can get paid earlier than their regularly scheduled payroll. There is an increasing concern about data security, regulation, and security in the FinTech industry. Security remains a high priority for customers, and they have in many cases declared that they will not bank with financial institutions who do not clearly communicate and show how they are committed to protecting their financial data.

Future of Bitcoin

Leading companies like Alibaba, PayPal and Amazon are yet to accept digital currency payment method. Jack Ma, founder of Alibaba, has described bitcoin as a bubble. But central banks all across the globe are getting into the crypto game with China leading the race to introduce the world's first central bank digital currency and hence there is a gradual shift towards permissioned blockchain and crypto options worldwide. Bitcoin prices have been making headlines during May 2020. Bitcoin volatility by itself, running up and dropping down by double-digit percentages, is a topic guaranteed to generate headlines. The Internal Revenue Service (IRS) has been active in 2020 which indicates the seriousness with which crypto tax enforcement will be handled moving forward. Bitcoin hype led some to believe that banks are no longer needed for secure global money transfer. The future of blockchain is extremely exciting, new innovations are constantly entering the market promising bigger and bolder uses of the technology. Pragmatic governance models will emerge which will help to standardize information from different sources regarding individual and capture new and more robust data sets. Interconnectivity will come one step closer to reality. Experts will start to combine adjacent technologies with blockchain which will help us to do things that have not been done before.

REFERENCES

- Briggs A. S.(2017, April 8). Top 10 Fintech Payment Companies and Their Worth. Retrieved January 5, 2021 from <https://techbullion.com/top-10-fintech-payment-companies-worth/>
- Brown, T.(2020, August 13). Top Fintech Companies. Retrieved January 6, 2021 from <https://itchronicles.com/fintech/top-fintech-companies/>
- Moskov, P.(2018, May 22). What Is Bit Gold? The Brainchild of Blockchain Pioneer Nick Szabo - CoinCentral. Retrieved January 3, 2021 from <https://coincentral.com/what-is-bit-gold-the-brainchild-of-blockchain-pioneer-nick-szabo/>
- Schlapkohl, K.(2020, April 10). The Future of Blockchain.[weblog]. Retrieved January 6, 2021 from <https://www.ibm.com/blogs/blockchain/2020/04/the-future-of-blockchain/>
- Snelgar, G.(2018, November 7). History of Blockchain Part 3: Wei Dai (1998). Retrieved January 5,2021 from <https://medium.com/the-capital/history-of-blockchain-part-3-wei-dai-1998-1195ab5a4e08>
- The Duke Perspective.(2019, June 27). How Crypto Currency is Changing FinTech. Retrieved January 5, 2021 from <https://sites.duke.edu/perspective/2019/06/27/how-crypto-currency-is-changing-fintech/>
- The Duke Perspective.(2019, June 27). How Crypto Currency is Changing FinTech. Retrieved January 5, 2021 from <https://sites.duke.edu/perspective/2019/06/27/how-crypto-currency-is-changing-fintech/>
- Vodafone(n.d.). M-Pesa. Retrieved January 5, 2021 from <https://www.vodafone.com/what-we-do/services/m-pesa>
- WIRDUM, A. V.(2020, AUGUST 28). The Genesis Files: How Hal Finney's Quest For Digital Cash Led To RPOW (And More). Bitcoin Magazine. Retrieved January 5, 2021 from <https://bitcoinmagazine.com/articles/the-genesis-files-how-hal-finneys-quest-for-digital-cash-led-to-rpow-and-more>