



ORIGINAL RESEARCH PAPER

Computer Science

A STUDY OF BLOCKCHAIN APPLICATION IN THE BANKING INDUSTRY

KEY WORDS: Blockchain; banking industry;

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ABSTRACT

Blockchain technology is a core, underlying technology with promising application prospects in the banking industry. As such, blockchains could revolutionize the underlying technology of the payment clearing and credit information systems in banks, thus upgrading and transforming them. Blockchain applications also promote the formation of "multi-center, weakly intermediated" scenarios, which will enhance the efficiency of the banking industry.

I. INTRODUCTION

A blockchain is a distributed, peer-to-peer database that hosts a continuously growing number of transactions. Each transaction, referred to as a "block," is secured through cryptography, time stamped, and validated by every authorized member of the database using consensus algorithms (i.e., a set of rules).Blockchain, mostly known as the backbone technology behind Bitcoin, is one of the emerging technologies currently in the market attracting lot of attentions from enterprises, start-ups and media. Blockchain has the potential to transform multiple industries and make processes more democratic, secure, transparent, and efficient. With high volumes of data getting generated every day owing to digitization of records, it becomes important for every organization to effectively manage the security threats and achieve significant cost efficiencies. This is where Blockchain, with its promises of decentralized ownership, immutability and cryptographic security of data, is catching the attention of the C-suite executives. Multiple use cases are also getting explored across industries as everyone has started realizing the disruptive potential of this technology. A blockchain **consists of individual blocks of data that involve a series of related transactions**, linked together in a specific order. All of the involved parties can share a digital ledger across a computer network without needing a centralized authority or intermediaries.

How can banking benefit from blockchain technology?

Banking executives believe that blockchain will have to fulfill several conditions before becoming a mainstream technology in banking. To make the most of blockchain, banks need first to develop the infrastructure required to operate a global network using matching solutions. Only a widespread adoption of blockchain will lead this technology to disrupt the sector.

Once we consider the specific features of blockchain, it only makes sense that the banking industry will be taking the lead in the adoption of this technology. Just think about why we set banks up in the first place. Banking institutions were created to connect groups of people together and allow all kinds of trade and commerce between them. A blockchain is a tool that can accomplish the same but on a global scale. Moreover, it's secure and transparent.

Blockchain also holds potential implications for global commerce. It could make trade more efficient by removing the manual and paper-based processes and introducing streamlined and automated ones instead. A public blockchain can be a great collaborative tool because it's decentralized, and no single entity can own it. That's why blockchain is more than just the underlying technology for crypto currencies like Bitcoin or Ethereum.

10 essential use cases of blockchain in banking

1. Faster payments

By establishing a decentralized channel (e.g. crypto) for payments, banking institutions can use emerging technologies to facilitate faster payments and lower the fees of processing them. By offering higher security and lower cost of sending payments, banks could introduce a new level of service, bring new products to the market, and finally be able to compete with innovative fintech startups. Moreover, by adopting blockchain, banks will be able to cut down on the need for verification from third parties and accelerate the processing times for traditional bank transfers.

2. Clearance and settlement systems

A distributed ledger technology like blockchain could enable bank transactions to be settled directly and keep track of them better than existing protocols such as SWIFT. An average bank transfer takes a few days to settle because it's limited by the way our financial infrastructure was built.

Moving money around the world is a logistical challenge to many banks. A simple bank transfer needs to bypass a complicated system of intermediaries such as custodial services before it reaches its destination. Moreover, the bank balances need to be reconciled across the global financial system, which comprises a broad network of funds, asset managers, traders, and more.

3. Buying and selling assets

Buying and selling assets like stocks, commodities, or debts are based on keeping track of who owns what. Financial markets accomplish this through a complex network of exchanges, brokers, clearinghouses, central security depositories, and custodian banks. All of these different parties have been constructed around an outdated system of paper ownership. As you can guess, the system is not only slow but riddled with errors and prone to deception.

Executing such transactions electronically is complicated because most of the time, buyers and sellers don't rely on the same custodian banks, and these don't always rely on trusted third parties to hold onto all the paper certificates.

4. Fundraising

Raising money through venture capital is a complicated process today. Most of the time, it happens like this:

Entrepreneurs put decks together, carry out countless meetings with partners, follow long negotiations over valuation and equity – and, eventually, hope to exchange their company for payment.

Blockchain companies are accelerating the process by raising funds with several alternatives. These include Initial Exchange Offerings (IEOs), Equity Token Offerings (ETO), and Security Token Offerings (STOs). STO is currently the most popular option because it's legally protected. To benefit from this model, projects need to pass a due diligence

process. Pioneers of STOs include Switzerland and Malta where companies like Scerri & Concise Ltd offer such services. The most prominent ETO trading platform today is Neufund.

5. Credit and loans

Traditional banking institutions underwrite loans by using a system of credit reporting. With blockchain, we're looking at the future of peer-to-peer loans, faster and more secure loan processes in general, and even complex programmed loans that can approximate syndicated loan structure or mortgages. Banks that process loan applications evaluate the risk by looking at factors such as credit score, homeownership status, or debt to income ratio. To get all of that information, they need to ask for your credit report provided by specialized credit agencies.

6. Trade finance

Another area blockchain is set to revolutionize the trade finance sector. Trade finance refers to all of the financial activities related to international trade and commerce. Did you know that many trade finance activities today still rely on paperwork such as invoices, letters of credit, or bills? Many order management systems allow carrying out this work online, but the process takes a lot of time.

Blockchain-based trade finance will streamline the trading process by getting rid of such time-consuming manual processes, paperwork, and bureaucracy.

7. Blockchain in banking as digital identity verification

Banks wouldn't be able to carry out online financial transactions without identity verification. However, the verification process consists of many different steps that consumers don't like. It can be face-to-face checking, a form of authentication (for example, every time you log into the service), or authorization. For security reasons, all of these steps need to be taken for every new service provider.

With blockchain, consumers and companies will benefit from accelerated verification processes. That's because blockchain will make it possible to reuse identity verification for other services securely.

8. Blockchain in banking for accounting and auditing

Accounting has been a relatively slow area to digitize. One of the reasons behind that is the need to match the strict regulatory requirements regarding data integrity and validity. That's why accounting is potentially another area that could be transformed with blockchain.

Experts believe that the technology will simplify compliance and streamline the traditional double-entry bookkeeping systems. Instead of keeping separate records based on transaction receipts, businesses can add transactions directly into a joint register. All the entries in the register will be distributed.

As a result, the records will be more transparent and secure. A blockchain would work like a digital notary who verifies all the transactions. Blockchain smart contracts could be used in such applications to pay for invoices automatically as well.

9. Hedge funds

A hedge fund is a type of investment partnership that involves a fund manager and a group of investors who are limited partners. But such participants are usually traders and not your ordinary investors. The idea behind hedge funds is maximizing investor returns and minimizing the risks.

10. Peer-to-peer (P2P) transfers

P2P transfers allow customers to transfer funds from their bank accounts or credit cards to another person online. Currently, there are many P2P transfer applications available

on the market. But they all come with certain limitations. For example, some of them allow you to transfer money only within a certain geographical region. Others don't allow you to transfer money if both parties are located in the same country. Moreover, P2P services may charge large commissions for their services and not be secure enough for storing sensitive customer data.

All of these problems can be addressed with blockchain. The technology will help to decentralize applications for peer-to-peer transfers. Note that blockchain has no geographical limitations, enabling P2P transfer across the entire globe. Moreover, blockchain-based transactions will take place in real time, so the recipient won't have to wait four days until they receive money.

CONCLUSIONS

Banking holds a crucial role in our day-to-day life. We must adhere to the banking system as responsible citizens. There are many benefits associated with blockchain technology. These benefits have allowed banks and financial institutions to provide better service as well as offer more security to customers. With blockchain technology & banking software solutions, many financial institutions have been in a position to improve their operations and become more competitive in the banking industry.

Acknowledgments

I thanks to the President Smitaji Ajmera, Vice-President Mrs. Megha Kamerker our college Director Dr. R. B. Kharat & my colleagues with their expertise and individual assistance throughout all aspects of this study and for their help in writing this paper.

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