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Blockchain Technology and its Potential Effect on the Banking Industry (China Case Study)

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Abstract:

The aim of the research is to investigate potential effects of the finance industry and block-chain to general business of financing in particular, as well as its shortcomings and difficulties. To answer the research questions, the researcher used the objective narrative-analytical descriptive approach and included a qualitative analysis of Blockchain technology. The process of Blockchain technology based on their industries, the authors were selected based on their reputation in the Blockchain field. The research found that Blockchain can improve the efficiency of the banking industry's various sections. It has the ability to upgrade and transfer wages across borders, financial reporting and compliance, as well as trade finance and capital markets. It also facilitates the procedure of getting to know your customer straightforward, and in addition to these advantages regulation and technological problems are some of the roadblocks. that must be resolved for effective implementation in the financial system.

Keywords: Industry of banking, Blockchain is a digital type of technology, decentralization, industry of finance

1. Introduction.

From the beginning, the banking industry has been functioning as an intermediary a medium for conducting financial transactions, the basis of their work was to provide the required confidence for the flow of money, and technology. Due to its With improvements in information and technology, there will be an influence on the financial sector, Banks' business models have evolved over time, and today's banks are tied to technology networks for information flow. As a result, the banking industry's day-to-day operations are totally reliant on technology. As a result, the block-chain has the potential to be a significant driver for the banking industry's development.

Traditional banks are often criticized for being less effective, expensive, and laborious, so modern banks like Pay-Pal are disrupting traditional banks through their innovative means. Block-chain proposes a solution to these criticisms as it provides a competitive advertising advantage over the financial industry. Over time, interest in block-chain has grown exponentially intensive, central banks, governments and private banks around the world have recently begun to explore many use cases for this technology because of its great potential.

Blockchain technology does not stop at electronic money applications such as Bitcoin, as it is nowadays starting to attract companies to open uses for it. Banks like OP and Nordea have announced that they will begin employing Blockchains in the housing stock market, and transfer funds, since dealing with this technology takes little time it saves money and effort, too. Santander, one of the largest banks in Europe, has released an app that allows users to send money using Blockchain without any fees or middlemen. By eliminating middlemen and processing costs, this technology has the potential to transform the whole banking sector, thus saving millions of dollars in Banks, can revolutionize the local and as we know it, the global financial system. They also have the ability to revolutionize many existing companies, whatever the significant impact this technology can have on banking uses can also be used in some other activities and businesses such as Verifying digital identities, By lowering the number of frauds, voting, patient archives, shipping, and cybersecurity may all benefit. Blockchain may bring a new technological boom in the future, similar to what the Internet did in the late 1990s and early 2000s.

In this study the objective narrative-analytical descriptive approach will be used and includes a qualitative analysis of Blockchain technology. The process of Blockchain technology based on their industries, the authors were selected based on their reputation in the Blockchain field as well as some experience in this area of research.

Structure Search:

The research can be divided into three main topics:

Research methodology.

The concept of Blockchain.

The impact of Blockchain on the banking industry.

2. Research Methodology

i .Research problem

The research problem is the main question "What is the reality of the use of Blockchain technology in banks in light of the rapid financial technological developments?" From the previous question, some of the following sub-questions can be derived:

• What is Blockchain technology, how does it work, what are its characteristics, and how is it used?

• What are the economic and security challenges and threats to Blockchain technology? What is the obstacle to its spread?

• What is the role of the Blockchain in the development, promotion, and growth of banking and financial institutions?

ii. Research objective

The main objective of this research is to provide perspectives on how and in what areas Blockchain technology can be used to change the banking market, including conducting various transactions, tracing the source, and making banking transactions transparent. It also studies how Blockchain technologies can change the balance of power in the banking market. The research also explores opportunities for using Blockchain technology in the banking market, and finally, it discusses the challenges that organizations may face when dealing with Blockchain in the banking market.

iii. Research importance

The importance of the research lies in the global trend towards technological and financial uncertainty and banking technology, from the invention of a technology that integrates technology with financial, resulting in a field concerned with banking financial transactions, using and exploiting all the results of modern technology, such as smart phones, communication networks, electronic commerce, and digital currencies. ...etc.

iv.Research hypothesis:

The use to the Blockchain in the development, promotion, and growth of banking and financial institutions

3. The concept of Blockchain

i. Blockchain technology.

Blockchain appears to be complicated, and it can be, but its core notion is really simple: Blockchain is a sort of database, and in order to comprehend Blockchain and give it a particular description, you must first comprehend what a database is (Ali et al., 2018).

A database is a collection of data saved in an electronic format on a computer system. In most databases, the information or data is arranged in the form of a table to make searching and filtering for specific information easier. (LUKE & JULIUS, 2021).

The design of spread sheets for one person or a small group of people to store and access limited amounts of information at any time, in contrast, the database is designed to include much larger amounts of information that can be accessed, filtered, and processed quickly and easily by any number of users at a time. One, large databases achieve this by placing data on servers made of powerful computers. These servers can sometimes be created using hundreds or thousands of computers to obtain the computing power and storage capacity needed for many users to access the database at one time. While a spread sheet or database may be accessible to some people, it is often owned by a company and operated by a specific individual who has complete control over how it operates and the data in it (LUKE & JULIUS, 2021).

Because it is a public database in which digital information for trades is kept and it maintains track of all online transactions safely and anonymously, Blockchain is akin to a general ledger in accounting. This is accomplished by all computers linked to the Blockchain recording these actions. It's critical to document and authorize the transaction so that no one can tamper with it or "game" the system because it will necessitate all computers linked to the Blockchain recording and changing this data in order for it to become "real." Blockchain is also decentralized, which means it is not controlled by any single government, authority, or website. It also keeps the Blockchain safe since it is decentralized and data is spread across multiple computers. (Blockchain, 2019).

Blockchain is a digital technology based on a huge cloud database, through which people can complete transactions or transfer money using a network of decentralized computers spread around the world (Hartikka, 2017).

As for the popular definition of Blockchain technology, it goes back to (Luke Fortney, 2019), where he defined it as a public and decentralized distributed ledger that was created to be the method of accounting for the cryptocurrency Bitcoin. In the opinion of the researcher, this technology is one of the databases that are shared by consensus and updated in real-time with participants all over the world. Participants also act as 'watchers', which makes cyberattacks more difficult, which makes this technology unique because it disables the need for an intermediary and ensures a secure way of transmitting data to each other (Peter Kovary et al., 2018).

ii. Blockchain properties.

Some many features and characteristics characterize this technology, including (decentralization, speed, security, confidentiality, low cost, as well as smart contracts) and this technology solves many of the problems we are currently facing (Drescher, 2017), and Figure No. (1) explains it.

Figure No. 1: Characteristics of Blockchain Technology

Source: Prepared by the researcher.

iii. The different forms of block-chain.

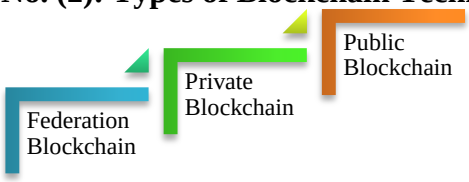
There are currently three different forms of block-chain networks: public, private, and federated (Finck, 2019).

Public Blockchain: This type is distributed to everyone, anywhere, anyone connected to the Internet to participate and send transactions without any restrictions. Currently, Bitcoin, Ethereum, etc. are among the most popular public Blockchains.

Private Blockchain: This type is not distributed to everyone, as an organization controls it and monitors the extent of viewing and sending transactions, such as banks and insurance companies. It is summarized in the implementation of this technology for some accounting and record-keeping operations within the organization, without compromising its independence or the ability to disclose data or information to the public.

Federation Blockchain: Instead of one organization controlling as we saw in the private Blockchain example here, many different organizations allowed access to the chain and each could create a node in such a network. Administrators of such Blockchains restrict a user's rights to read certain parts of the chain as they see fit, and allow them to implement a consensus protocol only on a limited number of trusted nodes.

Figure No. (2): Types of Blockchain Technology



Source: Prepared by the researcher.

iv. Elements of a Blockchain system.

The Blockchain consists of four basic elements represented in the block: the information, the hash, and the time imprint. These elements, in their entirety, represent the Blockchain. The meaning of each of them can be described in this way (BiTAa, 2021):

1) Block: Represents the building block of the chain, which is a set of operations and tasks that are performed within the chain. The block contains the transaction data. The block consists of two parts, the head of the block and its content.

2) Information: It means the sub-process that takes place within the same block, or it is the individual order that takes place within the block, and it represents with other orders and information the same block.

3) Hash: It is the basic and distinctive pillar of the Blockchain, and is sometimes symbolized by a digital signature. It is a code that is generated through an algorithm within the Blockchain program. The hash performs four important functions: distinguishing the chain from others and drawing every piece of information within the block itself. With a distinct margin, the blocks are connected within the chain, and the fragility does not allow modification to the blocks that have been created.

4) Time imprint: It is the timing at which any operation within the chain was performed.

v. How the Blockchain Works.

Blockchain technology works according to the following mechanism (Cottrill, 2018):

1) First stage: When a person initiates a transaction with another party, the requested transaction is recorded in a distributed ledger including information on each completed transaction that is shared and available among all nodes.

2) The second stage: In this stage, after the information is recorded in the ledger, it is then transmitted to the P2P network made up of computers (nodes) so that this network of nodes provides access to copy synchronous copies of the information that is constantly repeated, making the network very secure and resistant for outages and attacks, although all shares can be viewed by anyone participating in the Blockchain, in an encrypted manner, at the same time the network of nodes also works to verify the transaction and user status using sophisticated algorithms.

3) Third stage: Once the transaction is verified, it is combined with other transactions to create a new set of data in the ledger; which maintains an ever-growing list of blocks (formation of a chain) each block contains a timestamp and a link to the previous block (the data in the block is encrypted and cannot be changed), and a new block is permanently added to the existing Blockchain; the transaction between the two parties is completed quickly and securely.

vi. Benefits and motives for using Blockchain technology in banks.

There are several benefits of Blockchain technology in the banking industry, which can be mentioned in the following points (Isukul et al., 2019):

● Decompartmentalization: De-fragmentation refers to the abolition of the boundaries that divide the financial markets, whether the fragmentation of international markets on the one hand, or the fragmentation of markets within the same country, and fragmentation can include the money market, bond market, foreign exchange market, futures market, etc., and leads to the convergence of markets to increase the correlation of equilibrium prices at the local and international levels. (culturebanque.com, 20/11/2019)

Developing countries and financial institutions that cannot increase financial integration through a supportive infrastructure, can resort to block chain technology as the best alternatives that go beyond the limits of financial globalization in its previous phase, and block chain addresses the problem of high fees in time and space, where processing payments through National payment systems are complex, expensive and time-consuming. If fully adopted, this technology can enable accurate and near-real-time payments avoid the problem of transitions from capital markets to money markets and can even cross into goods and services markets, making markets more integrated and convergent than they used to be in the three eras of financial globalization, especially in light of the growing transformation of trading through virtual markets.

● Deregulation: Deregulation means the abolition of national regulations that govern and restrict the movement of capital (exchange control, credit supervision, etc.). Globalization and deregulation are two highly intertwined variables, which undermine attempts to define an efficient and effective framework for regulating capital movements and controlling the trends of international markets. Dimensional competition and interdependence.

These policies include removing excessive bank charges and fees for using personal bank accounts and reducing the documents required to open bank accounts. Oji suggests that in order to improve financial inclusion in developing countries, restrictions regarding minimum deposits required to open bank accounts should be removed, financial institutions provided in rural environments, loosening of control over unnecessary documents and removal of bureaucracy (Isukul et al, 2019). Competition between countries and between different branches and actors interacts with structural changes in international financial markets to promote deregulation and reorganization processes. They are absolutely locally activated with more dynamic elements internationally, and this distinction now makes the difference between markets very minimal (Cerny, 1994).

The global trend in the current period needs to amend many legislative and regulatory aspects of financial transactions, in a way that facilitates financial flows between all poles, and in this context, we find that Blockchain technology provides countries and organizations to work within a self-controlled technical framework, regulation and control and away from interference aiming to restrict the movement of capital, as is currently happening in the traditional systems of many countries, and on the basis of considering that the complex elements of the central dimension (the state, global bodies, influence...) are the essence of restriction or liberalization for considerations related to its being the first supervisor for ensuring the stability and sustainability of the financial system local and international, and therefore this technology exceeds the limits of national authorities in a relative or direct way. Despite this, several bodies of the European Union, the International Monetary Fund and the World Bank are making significant efforts to design a legislative and regulatory reference to frame financial transactions using Blockchain technology, and to a more precise degree, trading in cryptocurrencies, from the perspective of avoiding the global financial system heading towards the unknown, or in other words avoiding any economic slippage possible.

● Remove brokerage: During the 1980s, the composition of financial flows changed drastically, with the relative decline of foreign direct investment and a sharp increase in portfolio investment. This is the transition from a credit-based financial system - where banks act as intermediaries between deposits and savings of households as well as companies - to a system based on a capital market money in which credit is available to large corporations through guaranteed offers. This transition was characterized by a dual process of abandoning mediation and securitization, which developed in response to economic insecurity in the aftermath of the crisis, and which was characterized by high inflation rates and fluctuating interest rates. In this context, banks need to reduce their exposure to non-performing loans by reducing loans in general brokerage and searching for new funding sources for funds (securities).

The term intermediation refers to the decline of the traditional role of banks as intermediaries between borrowers and lenders, while securitization broadly describes the process by which financial intermediation has been transferred from banks to the capital markets. More precisely, securitization involves transforming traditional banking assets as collateral into marketable instruments (Perret, 2007). Blockchain technology promotes financial inclusion that provides access to appropriate financial products and services quickly, at minimal costs, in a fair, sustainable and transparent manner. This technology allows customers to transfer

money and build their savings without the slightest intermediary, and it can also be used to reduce the costs of credit and debit card providers, and thus reduce the need for all third-party intermediaries. Therefore, Blockchain technology replaces the traditional role played by banks and financial institutions in a more efficient and secure manner.

● Stripping financial transactions: The recent emergence of modern information and communication technology (NICT) has made permanent and immediate economic exchanges possible by reducing capital. This innovation has facilitated international flows and multiplied transactions in capital markets, becoming available over time. Costs have also been significantly reduced as the connection to remote points around the world has become directly in the electronic environment and with minimal risks, as well as the financial markets have turned into checks from computers, and the physical presence of securities and dealers in general has been stripped away (Tsobjio, 2013). On the other hand, the intangible nature of financial services in particular helped in activating this dimension (Subramanian, Kessler. 2013) and the acceleration of the pace of transactions in financial assets that exceeded the volume and mobility of various traded assets.

In this regard, Block chain technology is an extension of the innovations generated by modern information and communication technology, as it contributes to deepening the perspective of gradually disarming financial assets through the first launch that included the introduction of the cryptocurrency as the first steps to strip classical currencies (Fiat Currencies), and what is new in block chain technology is not in changing the nature of transfers and flows, the financial system has become accustomed to this since the third era due to financial globalization and the presence of leading bodies and systems in this field, such as: Swift, Visa and others, but innovation can be aimed at abstracting the essence of transactions and transaction settlement tools. Through the development of digital platforms supported by technology, Blockchain and the spread of its uses and applications such as Ethereum, concerns have been directed to the possibility of trading securities and strengthening banking systems, insurances, investments and others in the form of smart contracts provided by this technology.

● Impartiality of state intervention: Cohen believes that the importance of financial globalization lies in the fact that it works to disengage the power of the state from its territorial borders or to change the ways in which it exercises its economic sovereignty. As part of this process, financial globalization generates new approaches to understanding state positions, responsibilities, and legitimacy, approaches that raise many long-term expectations regarding the appropriate priorities and powers of the state to adapt or integrate into the global trend (Cohen, 2001). As Langlois sees it, for some small countries with modest market capitalization, the privatization of SOEs collides with the reality of insufficient domestic capital to form a pool of shareholders that can hamper acquisition requests from abroad (Langlois, 2009). The non-interference of the state leads to opening the way for competition between economic dealers, away from the protectionist policies that were pursued with the aim of protecting its banking sector or even the companies and government institutions investing in the local capital markets. Countries derive opportunities to enhance their interventions in financial issues through the principles of centralization and supervision over the control of financial and cash flows, as well as defining specific legislative and

regulatory frameworks for capital movements, which the block chain technology has undermined. As the nature of its design was based on the principle of decentralization and self-regulation, thus isolating the state intervenes as a source of power and influence, but it can participate in the block chain as a free economic dealer like the rest of the people in the chain. The openness of the Internet with the security of encryption, and the development of financial technology leads to greater transparency, efficiency and interaction capabilities, and the block chain technology is considered one of the most entrances that has the ability to provide everyone with information, speed, trust and privacy.

● Decentralization of financial transactions: Transactional Decentralization Fintech is driving global development and leveling the playing field for access to finance in addition to the current progress being driven by a new generation of mobile and internet financial services, however, more than 1.7 billion customers worldwide currently lack basic financial services and do not have access to basic financial services. They can invest, on this basis, Blockchain technology replaces the need for a centralized system, as it allows communication and participation of various segments in the movement of international financial flows. Blockchain technology is structured in the form of a decentralized peer-to-peer (P2P) network that maintains transactions using cryptographic tools to maintain their integrity, and protocol-wide consensus verifies data as well as whether, when, and how the ledger can be updated. A decentralized network makes this technology distinct from a traditional central database that contains a trusted database maintained by a trusted third party (Weinstein et al. n.d). Decentralized digital currencies powered by core Blockchain technology have been proven to be safe in the technical and financial community, and their potential to enable financial inclusion on a global level is being tested. Blockchain technology can contribute to facilitating remittances for migrants, can provide a decentralized global Egyptian account with financial institutions, and can provide the foundation stone for a range of advanced financial services.

The World Government Summit Report (2017) indicated that the dimension of decentralization in Blockchain technology includes the following: (WGS, 2017)

- There are no central clearing houses that control the flows through this technology, and the transactions are instantaneous, and are executed or through integrated payments called "blocks".

-The difficulty of falsifying financial transactions or modifying the previous archive, and in the case of targeting a specific device, the rest of the participants in the block are not affected by any fraud, in addition to the fact that the chain contains two copies similar to the original one.

- The possibility of any dealer participating in the block chain, and the authentication is done by most of the participants in the chain.

● Anonymity of customers: Globally, 2.4 billion people do not have a digital identity, and this is one of the major issues related to their access to financial institutions. Working with identity solutions tools, Blockchain technology can help create a decentralized approach to identity management and managing social and financial requirements. Powered by Blockchain technology, the Ethereum application creates profiles based on biometric data, i.e. facial and voice recognition. Potential users are not required to have a passport or an email account. People can use a smartphone to take a picture of themselves or make a

video. Furthermore, solutions powered by Blockchain technology can help detect and prevent illegal behavior and activities, thereby enhancing know-your-customer (KYC) efforts, and reducing the time and cost burden associated with collecting personal information, which is a costly and cumbersome process typically for traditional financial institutions (Lichtfous et al.). It should be noted that the transparency of transactions lies in the possibility for all parties to see the transactions, but without knowing the identity of the participants in the chain.

- **Distributed Consensus: Transaction verification and authentication comes from the consensus of many users, as the blocks are basically designed in the form of a distributed ledger, through a group of nodes contained within a decentralized network (Anonymous 2016), and can be considered as a global memory of a virtual machine distributed among all participants. Consensus is an important part of the contemporary financial flows movement, and Seibold and Samman note that consensus mechanisms in the computer world have recently moved from an abstraction to the backbone of distributed ledger technology. A consensus mechanism represents the way in which a majority agrees that a particular transaction may be carried out, in other words, a consensus mechanism is a set of rules and procedures that maintain a coherent set of facts among the participating nodes (Seibold, Samman, 2016).**

Blockchain technology implementation challenges.

Although the future looks bright for Blockchain in banks, whether Iraqi or global, the use of this technology comes with a slew of problems, without accessing and identifying these difficulties, block-chain cannot become utilized in activity operational, so it can be addressed. These challenges accompany the application of Blockchain technology in the following points (Yli-Huumo et al., 2016):

vii. Regulations and laws.

One of the major issues that Blockchain faces is regulation, due to its decentralized nature, and the regulators have largely discussed the mechanism of regulating this technology, but it is almost impossible to achieve because its system is completely decentralized, that is, to some extent, there is no authority to control the financial institution.

Although governments are seeking for a method to manage the Blockchain, there are no national or international standards in place, and the legal side of the Blockchain is still unknown. "There is also an issue this who will work as a power in a time of Challenges, that the lack of power explains that no one acts as a trauma absorber meantime the evil periods that institutions go through, this can lead to an economic problem, which is why regulators should That they understand the general picture before implementing this technology also, without regulation, how the dispute between two financial institutions will be resolved, thus creating a problem for the rapid adoption of this technology".

vii. Security, confidentiality, privacy and encryption

Despite the fact that Blockchain is the most secure technology available, there are still concerns regarding data security and privacy. A better security and privacy solution, because companies are concerned about security and privacy, the technology must be properly evaluated before being used.

viii. Energy consumption and carbon emissions

Another issue from block-chain is while it consumes a lot from power and has a significant coal impact, for example in a study conducted by the University of Cambridge that the Bitcoin currency consumes as energy as the energy consumption in the whole of Switzerland, also in a study conducted by one of the scientific journals Bitcoin emits about twenty-two megatons of carbon dioxide each year.

ix. Inability to quickly understand and trust technology.

Despite its enormous promise, any lack of understanding of how this technology works would stifle its growth, may lead to negative results. Unless people and organizations work together, are aware of the Blockchain and its importance, they cannot explore modern reflection and investments, that is one from the obstacles that must be overcome before installing the Blockchain.

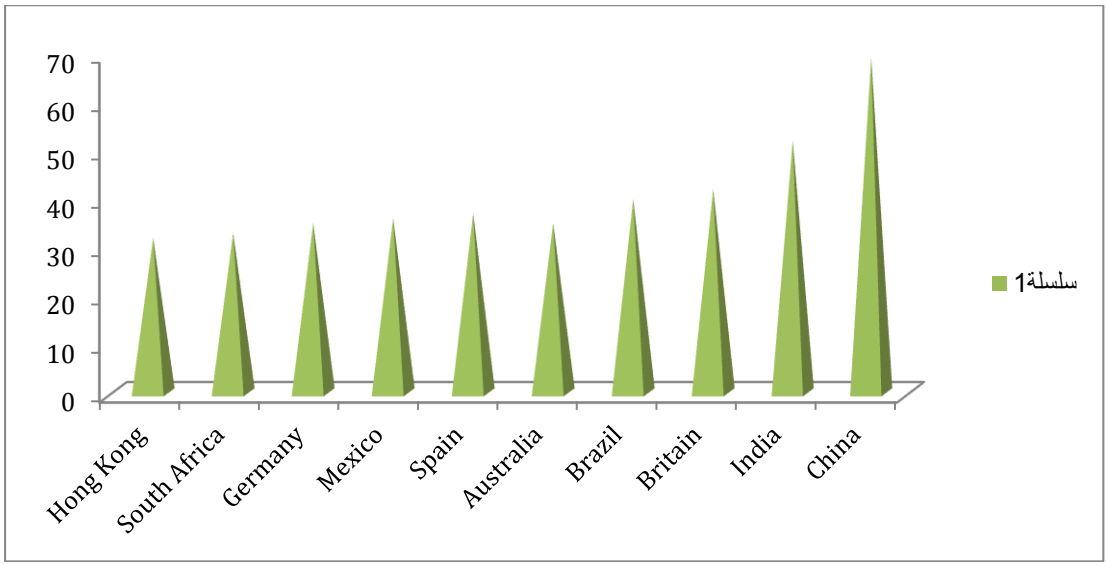
x. Cost and efficiency.

Another big problem is the cost and effectiveness of Blockchain technology. The cost and efficiency of this technology largely depend on the type of Blockchain used and the network participants. The inefficiency problem arises because all nodes in the network have to validate each transaction security but lower transaction speed. The total cost of logging a Bitcoin transaction is worth more than six hundred million dollars annually and rising based on users. Therefore, companies must properly assess expenses before putting technology in place.

5. Case Study.

The financial technology used in banking and financial services has witnessed great growth and development all over the world, as a report issued by EY Global in 2018 indicated that banking and financial technologies such as Blockchain have known an advanced global spread in most countries of the world, where China was the first leader in the world in Embracing financial technology in general and Blockchain and other banking technologies in particular, followed by India and Britain from 20 global markets (see Table 1).

Hong Kong	South Africa	Germany	Mexico	Spain	Australia	Brazil	Britain	India	China
32	33	35	36	37	3	40	42	52	69



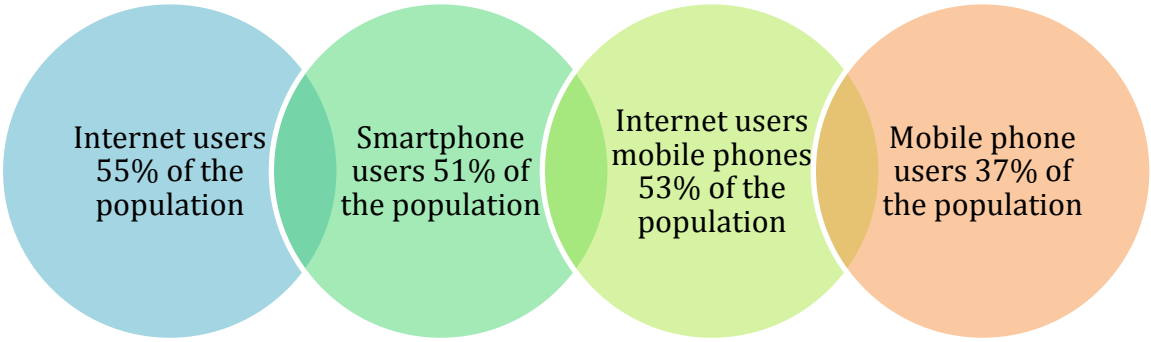
Source: Erik Heller, (May 2018),"EY FinTech Adoption Index and EY FinTech Australia Census", p. 4, online: https://actuaries.asn.au/Library/Events/FSF/2018/P2ErikHeller.pdf

As for the countries that witnessed a rapid growth in financial technology between 2015 and 2017, according to the same report, they were Britain, Australia, the United States of America, Hong Kong, Singapore and Canada.

(Mullen, 2017) indicated that there are a number of factors that make China export the world in financial technology, due to its possession of a large group of financial centers that provide integrated, diversified and distinct services, in addition to being considered a distinguished home for many companies and financial institutions factors through the following points:

- **The rise in Internet and mobile phone users: The huge amount of Internet and mobile phone users is the most important driver of financial technology, with the number of Internet and mobile phone users reaching about 700 million users, which means more or twice the population of the United States, for example 40% of consumers use in China Electronic payment methods, compared to 4% in Singapore. This does not depend only on payments but continues to include insurance technology, wealth management and lending (Mullen, 2017).**
- **Evolution of mobile payments and e-commerce use: In 2016, Chinese consumers spent about $22.8 trillion through mobile payment platforms, far exceeding the $112 billion in transactions in the United States, resulting in more than 90% of mobile payments. This amount of mobile payment applications belonging to the two largest technology conglomerates in China (54%) Alipay and (37%) Tenpay. In the major e-commerce platforms there was a need for fast, easy, secure and inexpensive electronic payments that could be made using financial technology such as Blockchain. This has not only created opportunities in the scope of Blockchain payments, but also in the framework of lending, insurance, investment and wealth management. Many companies in China have been able to capitalize on Chinese e-commerce trends and leverage their big data, messaging, search, social media and other internet-based services to personalize customer experience, provide new services and benefit from efficient operation (Mullin, 2017).**

Figure 3: Internet and mobile phone usage in China



Source: Sergio Gorjón, (30 October 2018), «The growth of the FinTech industry in China: a singular case », ECONOMIC BULLETIN 4/2018, analytical ARTICLES, p 3.

● Pioneering the adoption of Blockchain and virtual currencies: New Chinese Blockchain and crypto players such as NEO and Bitshare have begun to shift capital in the crypto world and specifically in relation to Bitcoin, where it is still in a legal grey area. China remains the undisputed world leader in Bitcoin mining. Chinese mining pools control more than 70 per cent of the mass crowds of the Bitcoin network as massive mining farms can tap into cheap electricity and real estate in some of China's poorest regions in the western part of the country. Test and explore Blockchain use cases for social management and as a method for Chinese currency exchange.

● Government interest in the regulatory environment: To accelerate the modernization of its financial industry and to boost consumption through greater financial integration, the Chinese government has supported digital technology and promoted innovative technologies as one of the pillars of its five-year development plans. Taking into account these conditions, the Chinese authorities have gradually since 2015 begun to change course. While still moving forward with reforming the financial system, the focus has shifted towards safeguards to protect client interests and ensure financial stability (Gorjon, 2018).

In June 2015-October 2016, the Chinese government put in place a comprehensive framework outlining who and how it would regulate each business sector in the "online finance" industry while placing more checks and balances on corporate fintech practices, particularly with regard to compliance, financing models, as well as Consumer protection. On May 15, 2017, the Central Bank introduced the new FinTech Committee, which will be responsible for coordinating the various financial regulators and industry participants. The regulators are constantly reviewing existing rules, and in some cases creating opportunities for existing incumbents. For example, a recent regulatory update issued by the CBRC halted internet lenders access to the student homework market, but instead encouraged banks to quit such services, a market they had previously not been allowed into (Research, 2017).

China has reached record levels in financial technology, in peer-to-peer (P2P) borrowing via electronic platforms. Peer-to-peer loans are borrowing without a financial intermediary such as banks, but rather obtaining direct financing through an electronic platform located on the Internet, and this sector

has grown as a branch of technology China's finances rapidly. According to a report by DBS Bank of China issued in 2018, the value of online traded loans reached 1.2 trillion yuan, growing at a compound annual growth rate of 128% during the 2014-2017 period and accounting for 3% and 21% of retail and credit card loans respectively. Government policy tightening on online lending platforms will lead to further expectations that the number of platforms will shrink to 800 by the end of 2018. According to the same report for September 2018, Luifax, founded in September 2011 and headquartered in Shanghai, is the dominant leader with a market share of 22%, specializing in personal lending and wealth management, has 8.8 million borrowers. It is active and has granted loans of 314 billion yuan, has 9.9 million active investors on the wealth management platform, has assets of 835 billion yuan, and has partnerships with 300 other financial institutions (DBS, 2018). As for the Blockchain, China is the earliest adopter of the Blockchain, and this technology also receives government support. For example, the Chinese Communist Party website issued a preliminary book on Blockchain technology that included points for discussion about its main features, use cases and challenges, and the Central Bank of China and the People's Bank also supported China (PBoC) is developing a Blockchain-based trade finance platform that would simplify interbank payments and help small and medium-sized businesses access a broader range of financing tools. The two banks revealed investment plans to develop both fintech and Blockchain, and the Supreme People's Court of China issued New rules state that Blockchain technology is an approved method for storing and authenticating digital evidence (Ehrlich, 2018). In the Deloitte report on Blockchain in 2018 (Deloitte, 2018), where a survey of 1,000 CEOs around the world was conducted, the survey showed that China was the country that used the most Blockchain in production with 49%, followed by Mexico with 48%, while only 14% In the USA they used Blockchain.

6. Conclusions:

Through the previous analysis, the researcher reached a set of results:

i. Blockchain technology is on the verge of a major transformation in the banking industry, as it appears to have the potential to solve a variety of bank inefficiency issues through elimination third-broker intermediaries, growth competence, and lowering costs. Five most hopeful areas in which Blockchain will have an impact are cross-border payment, cross-limit settlement, and cross-border settlement. Commerce investment, teach Your client, turnover Markets, Regulation, and deference are just a few of the terms that come to mind when thinking about trade finance.

ii. Banks can use Blockchain to conduct cross-border transactions more quickly and cost-effectively because it reduces or eliminates the need for an intermediary third party, making transactions more efficient and transparent for customers. This technology can also finance trade and the economy more efficiently through framing agreements with the assistance of intelligent contracts and its ability to track trade delivery and reduce risk.

iii. Within the Blockchain network, the intelligent hold may become applied to registration, prove, and disseminate client identification. This shall keep banks a proportion of timing and money, as well as aid regulatory authorities in their efforts to combat money laundering and other terrorist actions.

vi. Real-time transaction settlement may be done with high efficiency and transitory parity in the capital market. Furthermore, banks may use Blockchain to automate processes, financial reporting, and compliance.

v. Banks must overcome challenges like as legislation, technology, trust, energy, and cost before using Blockchain technology. The primary goal of this study is to learn more about the impacts of Blockchain in the banking sector, and the findings suggest that it will have a significant influence on cross-limit payments, commerce finance, teach your customer, capital markets, and system. Finally, Blockchain technology has the ability to completely revolutionize the financial industry.

7. Suggestions:

The next are the suggestions of the study:

i. The need for central banks to adopt and implement Blockchain technology, and to prepare a solid plan for that.

ii. Banks should cooperate with financial technology makers to quickly implement this technology because of its good advantages.

iii. Do more research related to Blockchain technology because its topic is interesting.

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تأثير تقنية البلوكتشين في الصناعة المصرفية ـ دراسة حالة الصين

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مستخلص البحث:

هدف البحث الى دراسة التأثيرات المحتملة لـبلوكتشين في الصناعة المصرفية بشكل عام بشكل خاص إلى جانب تحدياتها وقيودها، وقد تناول البحث شرحًا لتكنولوجيا بلوكتشين، وكيف تعمل ، وتنفيذها في البنوك والتحديات التي تواجهها، وللاجابة على اسئلة البحث استخدام الباحث المنهج الوصفي التحليلي السردي الموضوعي ويتضمن تحليلًا نوعيًا لتكنولوجيا بلوكتشين، نظرًا لطبيعة التكنولوجيا وحداثتها، تم أخذ مصادر الأدبيات المختارة من مجموعة مختلفة من التخصصات، والتي يمكن استخدام بلوكتشين فيها، تم إعطاء الأفضلية للمقالات المنشورة مؤخرًا والتي يناقش المؤلفون فيها الآثار العملية لتكنولوجيا بلوكتشين على الصناعات الخاصة بهم، تم اختيار المؤلفين بناءً على سمعتهم في مجال بلوكتشين.

وقد توصل البحث أن تقنية بلوكتشين يمكن أن تعزز كفاءة مختلف قطاعات الصناعة المصرفية. لديها القدرة على ترقية وتحويل الأجور عبر الحدود ، وتمويل التجارة ، وأسواق رأس المال ، وإعداد التقارير المالية والامتثال. كما أنه يجعل عملية التعرف على عميلك واضحة ومباشرة، بالإضافة الى هذه المميزات هناك بعض العقبات مثل التنظيم والتحديات التكنولوجية التي يجب حلها من أجل التنفيذ الفعال في القطاع المصرفي.

المصطلحات الرئيسة للبحث :الصناعة المصرفية، تكنولوجيا بلوكتشين، اللامركزية، الصناعة المالية.