PressAcademia
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JEFA
ISSN 2148-6697
Journal of Economics, Finance and Accounting YEAR 2022 VOLUME 9 ISSUE 2

BLOCKCHAIN TECHNOLOGY AND ITS IMPACT ON AUDIT ACTIVITIES

DOI: 10.17261/Pressacademia.2022.1567
JEFA- V.9-ISS.2-2022(3)-p.72-81

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Date Received: April 30, 2022 **Date Accepted:** June 29, 2022

To cite this document
Gokoglan, K., Cetin, S., Bilen, A., (2022). Blockchain technology and its impact on audit activities. Journal of Economics, Finance and Accounting (JEFA), 9(2), 72-81.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2022.1567

ABSTRACT

Purpose- Within the scope of this study, it is to conduct a comprehensive literature review on the conceptualisation, functioning, historical process, types, basic features, areas of use of blockchain technology and finally the relationship of blockchain technology in terms of an audit.
Methodology- A comprehensive literature review was conducted on the concept relationship of blockchain technology in terms of auditing.
Findings- The biggest feature of blockchain technology is that it has a decentralized verification system. In this respect, it is shown as one of the most effective areas where digital transformation is experienced. The usage areas of blockchain technology can be summarized as shown: Finance, public service, health, supply chain, education and auditing. The main impact of blockchain technology on the audit profession is to reduce the cost of monitoring and control as blockchain technology becomes more common in organizations thanks to the reliability, transparency and timeliness of the data used in auditing. Blockchain creates a more robust audit trail by using multiple sibling databases instead of a single and central database. The most important part that distinguishes blockchain technology from other technologies is that this technology is far from a centralized structure.
Conclusion- With the blockchain technology, which emerged to question the need for intermediary institutions that provide trust and to show that there is no need for trust in intermediary institutions, it is expected that many sectors from the banking and finance sector, logistics and supply chain to the health sector will be affected, especially cost and time savings. With the increasing number of blockchain technology, the existing risks both continue and new technology brings new risks. This technology inevitably affects audit activities as it does all sectors. Businesses should identify these risks and take the necessary precautions. Internal audit departments should develop themselves on blockchain, and businesses should allocate an additional budget for those working in this department and ensure that they receive training on this subject.

Keywords: Blockchain, audit, database security, distributed ledger technology, digital transformation.
JEL Codes: G10, M10, O10

1. INTRODUCTION

Blockchain technology, which has recently made a great impression in the national and international press, attracted attention by the private sector and various public institutions, and potentially as a stronger technology than the internet, is one of the biggest innovations of the digitalized age. (Celayir & Celayir, 2020). One of the expected technology advances is blockchain technology. Even though today's companies and countries have only recently attracted attention, we see that the mentioned technology has begun to enter our lives step by step, similar to the introduction of the internet into our lives years ago. The Internet's creation of a virtual world by transforming our business and social habits into digital data saves both money and time in the workflow and communication process. Similar to the way the World Wide Web was gifted to the world without obtaining any patents, the blockchain technology that has been heard in our ears recently has been gifted to the world in the same way (Erdoğan & Bodur, 2020). Blockchain with general definition; It is a technology protocol that allows data sharing with trust-based transactions such as identification and authorization in a decentralized distributed network environment without the approval or control requirement of the central authority (Celayir & Celayir, 2020). Blockchain technology offers “a secure, transparent, fast and affordable digital solution to many government problems” (Rooney, Aiken, & Rooney, 2017). The combination of these capabilities is also likely to transform auditing by automating workflows but, more importantly, increasing audit effectiveness and reporting (Rozario & Thomas, 2019). The audit process is constantly moving towards the use of digital tools. The majority of auditors are turning to digital tools and general audits (Celayir &

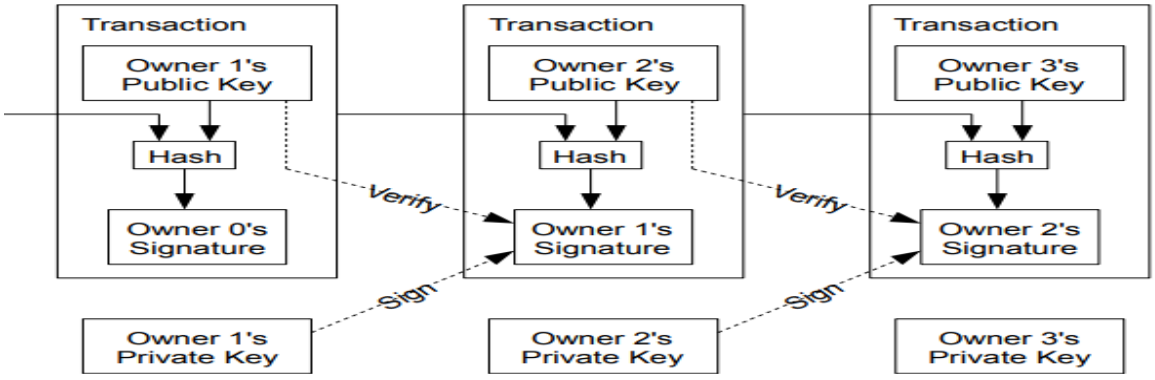
Celayir, 2020). The audit concept may need to adjust its current paradigm to adapt to such a rapidly changing environment. In addition, new audit approaches based on advanced technologies can be used to improve assurance quality (Dai, 2017). Although researchers offer the opinion that blockchain technology will affect financial instruments to a large extent at the first stage, they are of the opinion that over time, it will affect every sector with digital data in accordance with the requirements of the age (Erdoğan & Bodur, 2020). In addition, the results of the literature review show that there is a lack of awareness in the adoption of blockchain technology (Özyürek, 2021). In this article, the block chain and its relationship with the concept of auditing, which is an important subject and application area of blockchain, has been examined. In addition to these basic issues, the functioning, historical process, types, basic features and usage areas of blockchain technology were also examined (Erdoğan & Bodur, 2020).

In this study, first of all, a detailed literature review about the concept of blockchain and its functioning was made. Then, information about the historical development of blockchain technology is given. In the following sections, the types of blockchains and then their basic features and usage areas are mentioned. Finally, detailed explanations on the effects of blockchain technology, which is the main part of the study, on auditing are given.

2. BLOCKCHAIN (BT) CONCEPT AND OPERATION

Blockchain is the technology in which processes can be carried out without an intermediary (a third party). In other words, blockchain technology is a valuable database developed to solve the third-party problem required in the normal system. Blockchain can be defined as a distributed database solution approved by users participating in the network and regularly growing data set records, or data recording technology that records transactions, deals, sales and contracts and distributes them from peer to peer (Kılınç, 2020). Blockchain can generally be defined as the technology that activates the cryptocurrency Bitcoin. The reason for this is that the blockchain technology first appeared with Bitcoin. Today, the blockchain is still most widely used by Bitcoin (Kılınç, 2020). The English word equivalent of the block chain system is basically based on the "Decentralized Distributed Ledger Technology". With this technology, every data is created, its validity is verified and cryptographically blocked, so that the algorithms created can be prevented from being resolved irreversibly by people. In other words, with the blockchain technology, which is created by adding the underlying data of each created block, every transaction is recorded and it is impossible to delete (Akdemir, 2018). On the other hand, blockchain technology also creates a safe, transparent and accountable environment with the 'trust protocol'. Blockchain, which is one of the systems that tries to integrate with energy systems, has just begun to be implemented in Turkey; fault detection in energy units, cost accounting, billing, loss and leakage detection, etc. It can be used in applications (Büyükarıkan, 2021). Blockchain is a decentralized, electronic, replicated and distributed file where transactions are recorded using peer-to-peer protocols, fast digital communication, enormous computing power, and modern encryption technology. For this purpose, computers that are independent of each other are connected to each other to form a network over the internet (Gül, n.d.). The subject of blockchain technology was first encountered in Satoshi Nakamoto's work titled 'Bitcoin: A Peer-to-Peer Electronic Cash System' published in 2009. When Nakamoto's (2009) study is examined, the concept of blockchain technology is not directly encountered. However, it has been determined that the main function of the blockchain technology is to have remarkable explanations and visuals for its structure. In Nakamoto's work, the structure of the blockchain is as shown in figure 1 below (Kılınç, 2020).

Figure 1: Blockchain Structure



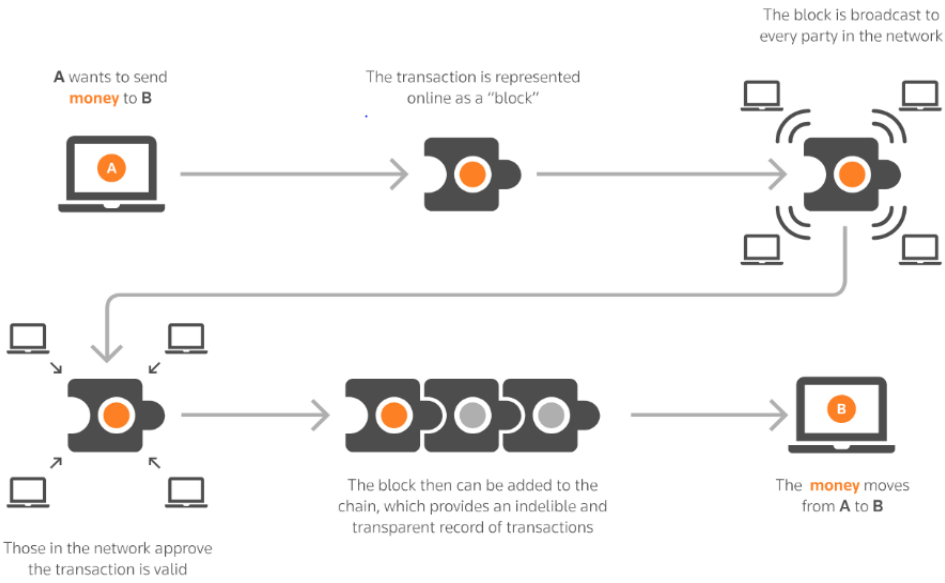
Source: (Nakamoto, 2008)

Figure 1 summarizes the data structures in the blockchain with basic explanation. As can be seen from the figure, the last link of the chain just behind forms the chain structure in such a way that it can form the first link of the next chain. As seen in the figure again, in the blockchain, every transaction made in the blocks is signed with a cryptographic signature or encryption. It is almost impossible to overcome the encryption process developed by the cryptography method. In addition, there is a time stamp for all transactions (Kılınç, 2020).

As can be understood from the above explanations, blockchain technology is an internet-based peer-to-peer network technology that uses cryptography. The peer-to-peer networks available within the system use a distributed application architecture that separates and shares peer-to-peer responsibilities joined to these networks. The network structure assumes that all users participate in the decision and task stages. In addition, this system provides all users joining the network with an identical copy of the datasets in which the information is recorded. The presented identical duplicate datasets are a summary of the operations in the entire process that have been performed before. By sharing the data sets with all users participating in the network in the blockchain operation and saving the data in many parts, it can be ensured that the users participating in the network do not have the opportunity to change their data sets unilaterally (Kılınç, 2020). With the 'trust protocol' provided by this technology, a safe, transparent and accountable space is formed (Tapscott & Tapscott, 2016). Blockchain, which is one of the systems that strive to integrate with energy systems, has recently started to be implemented in Turkey; It can be used in issues such as fault detection in energy units, cost accounting, billing, loss and leak detection, etc. (Büyükarıkan, 2021).

Transactions to be made using the blockchain infrastructure are seen by the computers on the network using the relevant software. Computers first confirm the validity of the transaction using complex algorithms. Confirmation is done by most computers verifying the transaction (consensus-consensus-unanimous). Confirmed transactions are encoded with a unique cipher to form a block. This process is called hashing. The new block is added to the previously created blocks in chronological order. Thus, the structure of the blockchain is renewed. The new chain formed later is recorded by all computers in the network (Gül, 2019)

Figure 2: Working Principle of Blockchain Technology



Source: (Are You Ready For Block Chain?, n.d)

3. DEVELOPMENT PROCESS OF BLOCKCHAIN TECHNOLOGY

In every period, data records and the use of these records have been important in order to maintain order in inter-communal relations. It has been important, especially in developing communities, that the relations between existing institutions and individuals should be regulated and that these rules should be recorded. The first study using the blockchain system was explained by Stuart Haber and W. Scott Stornetta in 1991. In this study, while protecting the confidentiality of documents, it aims to keep records in a retrospective time relationship as in the blockchain system. Later in 1992, in a second article published with the participation of Dave Bayer in Haber and Stornetta, they announced a new system that could report documents in a short time by including the cryptographic summarization function in the previous system and ensuring that the contents of the documents were not revealed (Aksu, 2021).

With the use of the Transmission Control Protocol/Internet Protocol (TCP/IP), which formed the infrastructure for the advancement of the Internet, in 1972, the foundations of blockchain technology were laid. Before TCP/IP, the telecommunications structure was based on 'circuit switching'. With TCP/IP technology, information is transmitted in very small packets that contain digitized address information. A public, shared network has been created without the need for any central authority responsible for the operation of this technology protocol. During the late 1980s and 1900s, companies such as Sun, NeXT, Hewlett-Packard, and Silicon Graphics used TCP/IP technology. It was becoming very advantageous for companies to operate on a low-cost, advantageous network structure that could be connected. So much so that CNET brought

its news to the Internet. Amazon has offered more books for sale from any bookstore, while Priceline and Expedia have streamlined the sale of airline tickets and brought unprecedented transparency. While the foundations of the network structure of the blockchain were laid in this way, Table 1 shows how it developed over time with which events (Carda, 2021).

Table 1: Development Process of Blockchain Technology

YEAR	WORK
1991	First work on secured chain of blocks
1992	Incorporated Merkle trres to the blockchain
2008	A core component of the digital currency bitcoin
2009	Bitcoin v0.1 released and announced on the cryptography mailing list and also first bitcoin transaction
2014	Bitcoin blockchain file size reached 20GB, blockchain 2.0 technologies go beyond transactions
2015	30GB
2016 to 2017	50 – 100 GB
	Pilot project based on the Nxt Blockchain 2.0 - blockchain-based automated voting systems
	An initiative of Chamber of Digital Commerce
	13.5% adoption rate within financial services

Source: (Lavanya, 2018)

The emergence of blockchain technology and the introduction of the first cryptocurrency, Bitcoin, are inextricably linked. In 2008, a study on "Bitcoin: A Peer-To-Peer Electronic Cash System" was published by a person (or a group) named Satoshi Nakamoto. In this published study, a peer-to-peer, distributed system where people can pay directly between each other is mentioned, and how the need for financial institutions or third parties can be eliminated by explaining Bitcoin, the first crypto currency, is explained. Although the blockchain technology made its name known with this study by Satoshi Nakamoto in 2008, the foundations of this technology actually date back to earlier times. Within the framework of all these developments, with the emergence of the financial crisis in the USA in 2008, the trust in financial institutions was shaken and since the 1990s, the works and thoughts of people who have been trying to find alternatives with encryption and other computer techniques for privacy and trust have been brought together and Bitcoin was introduced in 2008. Hal Finney, who has important work in cryptography and is a member of the Cypherpunk group, received 10 Bitcoin from Satoshi Nakamoto in 2009 and made the first Bitcoin transfer. Blockchain has been a technology that has been talked about and studied with increasing interest since the publication of the study (Dinçel, 2020).

4. TYPES OF BLOCKCHAIN

According to the blockchain permission mechanism, there are three types: public, private and consortium blockchains:

4.1. Open Blockchain (Public Blockchain)

In the open blockchain network system, anyone can participate in this network. The system is considered as a blockchain system that does not need a completely central authority. Ethereum and Bitcoin, which can provide the platform and programming language that can enable the use of smart contracts and allow developers to publish distributed applications, can be given as examples of this structure (Uysal & Kurt, 2018).

4.2. Private Blockchain

In the private blockchain system, only authorized users can join the network. Engagement in agreements within networks can be defined in public or permissioned styles. If the system is permission-based and those registered to this system can enter the reconciliation structures without permission, such system structures are called systems that require partial permission. In this network system, the central authority has the authority to change the rules and undo the transactions. It can be used for special system installation, cost reduction and productivity increase. Examples of private blockchain systems are shared software database providers using the blockchain technology system under the name Eris Industries and an open source distributed database provider for financial transactions with the name Multichain (Dinçel, 2020).

4.3. Consortium Blockchain

This blockchain network can be considered as a combination of public and private blockchain networks. They are systems in which nodes can be pre-selected by authorized persons or institutions. The data in the chain can be found in public or private form. This blockchain can be extended to a certain number of nodes with literacy capability in a blockchain. The consortium system is used by institutions or organizations that try to produce various models by coming together and cooperating with

each other. IBM's Hyperledger project is known as the most important example of the consortium chain type. In addition, the three types of blockchains described above are comparatively given in the table below (Ünal & Uluyol, 2020).

Table 2: Comparison of Blockchain Types

Characteristics	Public Blockchain	Private Blockchain	Consortium Blockchain
Permission Read	Public Class	Could be public or restricted	May be public or restricted
Determination of Consensus	All Miners	Only one organization	Designated set of nodes
Efficiency	Low	High	High
Immutability	Impossible to Tamper	Could be tampered	Could be tampered
Centralized	No	Yes	Partial
Consensus	Permissionless	Permissioned	Permissioned

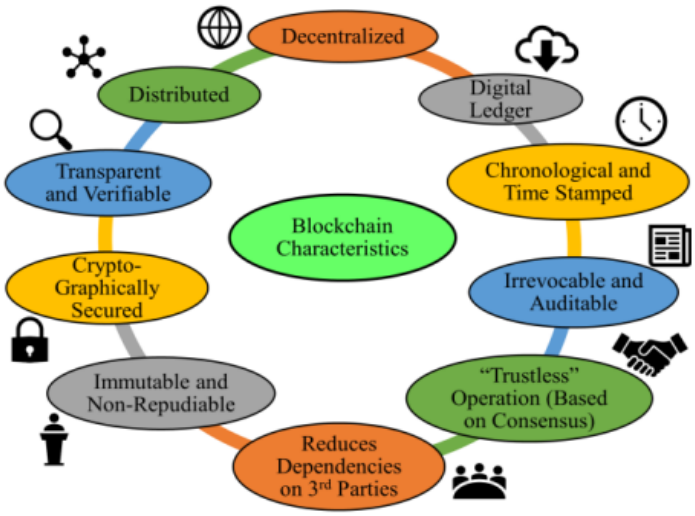
Source: (Hussain, Madni, & Shafie, 2019)

5. KEY FEATURES OF BLOCKCHAIN TECHNOLOGY

Blockchain technology has certain basic standards and is built on these criteria. These factors are explained in general below (Ünal & Uluyol, 2020).

- **Decentralization:** In the central operating systems, there is a need for a third party institution (for example, the central bank) to approve the transactions. Unlike this type of transactions, there is no other (third) party involved in transactions made on the blockchain. The approval process provided by the third party is carried out thanks to the algorithms in the initial block created in the blockchain and approved by the parties in question, allowing data consistency to be maintained (Onay, 2021).
- **Persistence:** Transactions made in blockchain technology are approved quickly. Transactions that are not valid at this stage will not be accepted. After being included in the blockchain system, it is almost impossible to undo or delete a transaction that has been performed and approved. Block discovery with invalid transactions is very simple, as there will be millions of users who have been confirmed to join the network.
- **Anonymity (Confidentiality):** It is ensured that every user in the system is entered into the system with an address that will prevent the disclosure of their identity, and it is also possible to ensure their interaction in the block chain with this address or user name.
- **Auditability:** With this feature, the system stores the balances of its users based on the transaction output model. As soon as the current transaction is recorded in the blockchain system, unspent transaction outputs turn into spent transaction outputs. With it, transactions become easily verifiable or traceable. (Kilinc, 2020).
- **Distributed:** The main feature of the blockchain is the ability to not keep data in one place, its ability to be recorded, stored and updated in a distributable format (Ünal & Uluyol, 2020). Distributed Ledger Structure The peer-to-peer distributed network allows for the historical classification of commercial transactions. A blockchain includes a distributed, highly accessible and secure proof of transaction (Uysal & Kurt, 2018).
- **Transparent:** With the blockchain system, data records are transparent at every node and the data can be verified retrospectively. For this reason, the blockchain system is considered reliable. In addition to these features, when the block chain technology is considered in its entirety, these technologies belonging to the system appear with their characteristic structures shown in Figure 3 below (Ünal & Uluyol, 2020).

Figure 3: Features of Blockchain



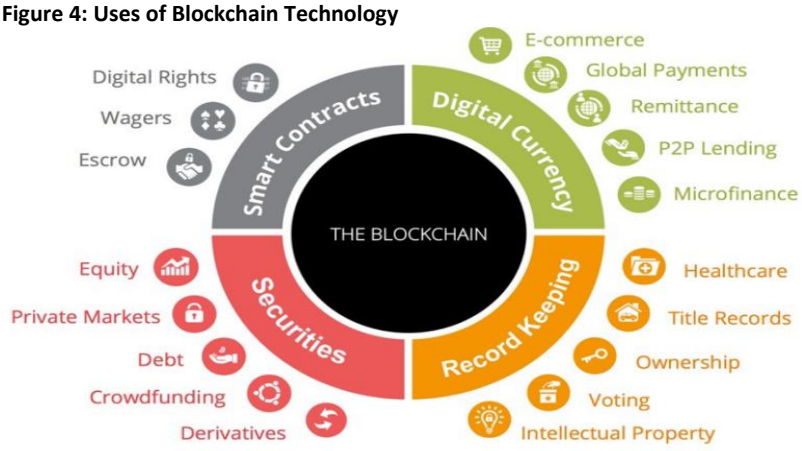
Source: (Puthal, Mohanty, Malik, & Kougianos, 2018)

The above-mentioned qualities can enable the system to be transformed into a storage medium on the basis of technology and to operate it without any central administration or authority controls. However, these features also constitute the parts of the system that receive the most criticism. Because, it brings with it important concerns about the operation of a system that cannot be controlled from both the enterprises and the state and about the access of each participant to the data. This, while using the development and advantages of blockchain technology, brings two basic classifications or application forms to the agenda (Uysal & Kurt, 2018).

6. BLOCKCHAIN USAGE AREAS

Due to the creation of an infrastructure that can develop the technologies of applications on the blockchain, this application is similar to the situation in the first formation of the internet. This technology, which is similar to the Internet, has been demanded by many sectors. However, not every work or every registration process in existing systems is suitable for the purpose of using the blockchain (Özyürek, 2021). Before making the decision to use the technology, it is necessary to determine the strengths and weaknesses of this system. The most important element of blockchain technology is its decentralized verification method. In this regard, it is demonstrated to be one of the most successful sectors where digital transformation is observed. The usage areas of blockchain technology can be summarized as shown: Finance, public service, health, supply chain, education and auditing.

Figure 4: Uses of Blockchain Technology



Source: (The Ohio State University, n.d)

Financial Services

It is widely and widely used in the financial sector through applications called virtual money. Examples of these applications are Bitcoin, Ethereum and Ripple etc. applications are displayed. Apart from virtual money applications, it is possible to come across blockchain applications in many areas. These; Currencies, Private and Government Equities, Bonds, Bonds, Future Contracts from Derivatives, Options, Swaps, Forwards etc. Voting Rights Attached to Financial Instruments, Commodities, Expenditure and Trade Records, Pledge-Mortgage/Credit Records, Service-Service Records, Crowdfunding, Micro Finance and Micro Assistance (Aksu, 2021).

Public Services

Public services are one of the areas where blockchain technology are being used extensively. The majority of government bodies are investing in blockchain technology in various sectors. According to the 2018 OECD study, whereas 26 countries launched 117 blockchain service initiatives and apps in 2017, 45 nations launched 202 initiatives and applications in 2018 (Tanriverdi, Uysal, & Üstünda, 2019). Laws and regulations, records of offending parties, passport and identity records, voting documents, title deeds, land records, records of automobiles, licenses, records of opening and closing of businesses, security and health inspections, weapons, construction permits and licenses, judicial and court records can be given as examples of areas that benefit from this system chain (Aksu, 2021). Government agencies can greatly benefit from instant and simultaneous access to a distributed database that stores records in public form. In financial transactions, each transaction can be taxed automatically because it is visible to the relevant tax offices and because the transfer of assets in this book is tracked. This transaction structure reduces the burden in terms of filing and auditing taxes and reduces the need for other intermediaries in the process (Ünal & Uluyol, 2020).

Health Services

It has a high level of potential to cope with the problems of interoperability of applications in the field of health. Blockchain can be utilized as a standard to securely communicate electronic health knowledge bases across parties such as healthcare facilities and pharmaceutical researchers (Tanriverdi, Uysal, & Üstünda, 2019). The most important problems in the health sector are the problems of selling counterfeit drugs and drug-based drugs without supervision. The drug needs to be audited as well as verified until it reaches patients from production. Thanks to the blockchain system, this transaction process has been systematized and facilitated. For example; Pharmaceutical packages leaving the factory can be authenticated and then time-stamped at each intermittent delivery point. During the drug distribution line, their identities are verified and the task of monitoring these drugs is ensured (Ünal & Uluyol, 2020).

Supply Chain

The supply chain system is another application area for the internet of things and blockchain technology. Food processing, transportation, logistics, and other industries may benefit from blockchain-based system automation, transparency, and security without the need for a third party. In their experiments, Xu et al. (2018) indicated that blockchain and RFID technologies may be utilized to monitor food quality and safety. According to the findings of a research done by Gökolan and Atalan (2022), the application of blockchain technology to traditional supply chain technology would result in a less expensive structure with the exit of more efficient and more intermediate organizations.

Education

According to the paper titled 'Innovating Pedagogy 2016' issued by the Open University in England, educational content, course credits, and certificate data may be saved and shared in a distributed framework using blockchain technology. The European Commission, on the other hand, produced a paper titled "Blockchain Education" in 2017. In this paper, blockchain technology is used for certification, lifelong learning, tuition fee payments, and student scholarship payments, among other things. Suggestions for field use are provided. Furthermore, participants can use the blockchain to manage all higher education institution applications and transactions, such as document verification. The certificate module, which is active inside the Moodle program, was coupled with the blockchain in Karataş's study, and digital certificates may be maintained within the blockchain (Dinçel, 2020).

7. THE USE OF BLOCK CHAIN IN AUDIT

The audit process first begins with the examination of the accuracy and validity of the transactions-records that are the source of the creation of financial information. This is a relatively long and laborious effort (Gül, 2019). Depending on the need for the continuous expansion of the activities of the enterprises, the need to outsource the financing has also arisen. For this reason, companies have to gain the trust of capital providers in order to reduce their capital costs. Capital providers, including lenders and investors, need financial data to monitor the financial position and performance of the firm to ensure the security of the capital they put in.

In addition, auditors are required to advance their work processes within the patterns of auditing standards by showing the necessary professional care and diligence. During the audit process, the auditors should answer with reasonable assurance,

necessary professionalism and impartiality, whether the financial information of the company complies with the principles and standards of accounting, whether it reflects the current situation of the company, whether there is an effective internal control mechanism (Kılınç, 2020). The main impact of blockchain technology on the audit profession is to reduce the cost of monitoring and control as blockchain technology becomes more common in organizations thanks to the reliability, transparency and timeliness of the data used in auditing (Cagle, 2020). This will be thanks to the real-time audit trail enabled by blockchain technology. Since the accuracy and accuracy of all transactions in the information systems will be time-stamped with real-time audit trails, the auditor can spend a significant part of his working time on performing other valuable steps of the audit process (similar to checking the internal control mechanism) instead of checking the authenticity or accuracy of these transactions. In addition, auditors can use the audit techniques they have used much more effectively and faster. For example, the auditor, who will use verification as audit techniques, will send the necessary documents to the customers of the firm in the audit process or the banks he works with, and will be able to carry out the audit processes with the feedback he receives. Even if these audit techniques are effective, they will be time consuming and will not enable the auditor to obtain objective data at all times. Instead, through public blockchain systems, the auditor will be able to easily examine the transactions he wants to examine through these systems.

The most important part that distinguishes blockchain technology from other technologies is that this technology is far from a centralized structure, as mentioned before. This helps to obtain completely objective data. Thanks to this, the audit risk will be reduced to the minimum level. Because with blockchain technology, it will be possible to detect or prevent fraudulent financial reports (Kılınç, 2020). Blockchain creates a more robust audit trail by using multiple sibling databases instead of a single and central database. Even if a block in a database is deleted, other databases synchronize themselves, fix the damaged database and undo the deletion (Gül, n.d). Confirming that a transaction has taken place is only one of the important aspects in a financial statement audit. Financial statement auditing also includes evaluating that recorded transactions are supported by relevant, reliable, objective, accurate and verifiable evidence (Bible et al., 2017).

One of the issues that blockchain technology will affect independent auditing is audit procedures or evidence collection techniques. Auditors can develop new audit procedures so that they can obtain audit evidence directly from the blockchain. The audit procedures specified in the independent auditing standard 500 have a retrospective nature (first financial statements, then book records and last documents). A small part of the financial data of the institution is taken as a sample and verification is provided. Then, a meaning is made for this sampled data set. Although the audit procedures are applied at the time of the audit activity, the transactions discussed in the sample belong to one year ago. It is foreseen that trend analysis, time series analysis and comparative evaluations can be made with continuous evidence collection (Dinçel, 2020). Auditors can use blockchain technology to automatically check the enormous number of transactions that create financial statements. For example, if all stock movement data is stored on the blockchain, auditors may calculate the stock balance remotely and in real time. As a result, the audit will progress in such a way that the auditors will be able to devote more time to other activities (Alarcon & Ng, 2018). Because blockchain allows transactions to be verified and audited without the need for a third party, it provides unparalleled clarity and confidence in internet-based transactions. As a result, portions of the audit process are effectively automated. Again, blockchain has the potential to improve the circulation of financial information (Gül, 2019).

Table 3: The Effect of Blockchain on Audit

1. Facilitation of Certification Services	The data recorded in IT is in an unchangeable structure because the auditor using the blockchain database can perform. This is a cost for the auditor but increases efficiency and time savings.
2. Supervision of All Transactions	The functionality of IT gives the auditor flexibility and accuracy since it provides an opportunity on the transactions where there is no need for sampling in the audit. Hence, it significantly increases the level of reasonable assurance.
3. Real-Time Audit	Blockchain-based accounting information systems enhance the approval of the transactions, and increase the ability for all users participating in the network. Hence, there will be no need to wait for the end of the period to carry out audit process, and audit activities can be carried out at any time.
4. Reduction in Transaction Risk	Distributed ledger structure of IT offers an advantage to add the transactions recorded in the blocks to the chain after they are approved by the parties where the risk of errors or omissions in the transactions are reduced. Therefore, the parties participating in the network transactions not agreed can not be approved.
5. Irreversibility - Irreversibility	Transactions recorded and confirmed in blocks can no longer be changed and cannot be reversed. However, in case of a faulty transaction, adding a new block with a correction to the chain can easily eliminate the problem.
6. Changing the Traditional Understanding of Control	With all these features of IT and the benefits blockhain provides, auditors enhance a better view on the businesses. New auditing models can be explored in auditing studies.

Source: (Kılınç, 2020).

8. CONCLUSION

Today, with digitalization, the way businesses do business is changing and businesses need to keep up with the change. Incorporating new technologies into existing business processes is no longer a choice but a necessity. By understanding the requirements of these technologies by the business management and with the regulations of this technology by the legislators, the highest level of efficiency will be achieved from the blockchain technology. With the increasing number of blockchain technology, the existing risks both continue and new technology brings new risks. This technology inevitably affects audit activities as it does all sectors. Businesses should identify these risks and take the necessary precautions. Internal audit departments should develop themselves on blockchain, and businesses should allocate an additional budget for those working in this department and ensure that they receive training on this subject. Thanks to the immutable, decentralized, transparency and timestamping features of the blockchain, data security is ensured and data manipulation is seriously prevented. As a result, it is expected that many sectors from the banking and finance sector, logistics and supply chain to the health sector will be affected, especially cost and time savings, with the blockchain technology that has emerged to question the need for intermediary institutions that provide trust and to show that there is no need for trust in intermediary institutions.

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