

# Global Review of Business and Technology (GRBT)

ISSN: 2767-1941

Vol. 4, No. 1, January 2024

# BLOCKCHAIN AND ITS POTENTIAL CHALLENGES IN INCOME TAXATION, ACCOUNTING AND AUDITING

Maher Kareem ALimari, Al Farahidi University/College of Economics and Business Administration, Iraq (ma.acc1992@gmail.com)

Riyadh Aljburi, Al Farahidi University/College of Economics and Business Administration, Iraq (riyadhraad0@gmail.com)

#### **ABSTRACT**

Blockchain applications for crypto assets, smart contracts, and ICOs have experienced record growth in recent years. Taxpayers have encountered an unexpectedly high tax bill as a consequence of misconceptions over how to tax these transactions, exposing many investors, trading platforms, and prospectors in various nations to uncertainty as well as a surprise during tax season. New areas that tax authorities, financiers, and researchers are looking to understand in light of the massive developments in the financial cryptocurrency industry. This research aims to identify potential problems in taxation, accounting and auditing for applications of blockchain technology. The research found that there are many problems related to tax legislation and the problem of lack of accounting standards or auditing guidelines. At the international level, it has been found that many countries impose taxes on blockchain activities and operations, whether they are taxes on profits, trading operations, or capital gains taxes. Also, each country has a different tax treatment for cryptocurrencies according to the country's classification of the cryptocurrency.

Keywords: Tax Concerns, Blockchain, Cryptocurrency, Accounting, International Tax Systems.

#### 1. INTRODUCTION

The Internet has altered our world and revolutionized how information is exchanged. Technological advancements, particularly those related to information and value, are the most significant data of the current century, and reliance on them in business organizations is a manifestation of adaptation and development. The quick rate of digital progress has resulted in the creation of blockchains as a distributed network between two or more parties, although it has turned out to be less beneficial in the domain of value exchange (Wiatt, 2019) The mechanism by which the Blockchain operates, whereby everyone presents or connected to the Blockchain network is the observer of transactions made using cryptocurrencies, has enjoyed a high degree of confidence and an advanced level of security even though there is no entity or regulatory and regulatory authority for the Blockchain. The network data and activities are updated frequently, about every ten minutes, and are logged on all linked devices. If someone decides to hack the network, steal, falsify coins, or rob someone else's property, he is obliged to hack all the devices connected to the network, or at least two-thirds of them at the same time to erase the data already recorded on it and replace it or create other data for him, within a period of fewer than ten minutes, which is almost impossible. Many computer and network specialists believe that hacking the Blockchain is more difficult than the cyber robbery of the US Federal Reserve (Makhdoom, 2019).

The use of blockchain technology and its applications raises several challenges for tax authorities, represented by many questions about the tax treatment of producing, storing, trading and dealing with cryptocurrencies, smart contracts and initial coin offerings, and what are the control and collection procedures in the event of taxes being imposed on blockchain applications. the digital economy, crypto assets are becoming increasingly important in generating value and as a result, it has become easier to avoid taxes by shifting those assets to low-tax countries or tax havens, as fintech companies use the big data they have collected to transform their business models into assets. Encrypted through algorithms, unlike physical assets, moving digital assets across borders only requires a smart contract on blockchain technology (Carpentieri et al., 2019). These developments have increased the motivations of professional bodies and accounting and auditing offices, as great efforts are being made to investigate how traditional accounting systems can indeed be supplanted or altered to integrate with blockchain technology (Vetter, 2018), and all four of the major accounting and auditing companies (Prisco, 2017) have taken significant initiatives. Despite these preparations, it is uncertain how much the disciplines of accounting and auditing will be impacted by future blockchain technology adoption modifications to auditing. The study (Alarcon et al., 2018) indicates that this technology tends to

present two opposing viewpoints, namely enthusiasm and scepticism, and therefore the widespread adoption of this technology depends on the degree of response to the concerns raised by sceptics and providing solutions that eliminate or reduce these fears. From the perspective of blockchain technology proponents, they think that if the Internet has supplied the infrastructure for controlling data exchange, then blockchain technology will serve as a new infrastructure for regulating value transactions in the future and it will fundamentally transform how transactions are processed, recorded, and evaluated (Bonsón et al., 2019).

However, from a sceptic's perspective, technology is only useful if it can be trusted, and they contend that this technology is currently unreliable for users, regulators, and professionals. They also warn that the technology lacks maturity, scalability, and standards, and risks are necessary for the event that data is compromised or stolen, and they raise concerns that it could be subordinate to software bugs or security breaches due to a lack of techniques to ensure that the system functions as intended. The creation of new methods of supervision, security, and privacy is evidence of how numerous professional organizations have joined forces to advance definitions of industry standards and improve collaboration while the world is developing quickly (Kokina et al., 2017). The main objective of the research is to explore and study the potential challenges of blockchain technology on tax, accounting and auditing, and this goal can be achieved by studying relevant previous literature.

## 2. HOW ARE CRYPTOCURRENCIES TREATED IN INDIA AND OTHER COUNTRIES?

Speculative products to India's "Virtual Digital Assets" (VDAs) Gains from cryptocurrency trading are subject to a 30% tax rate on profits, with no further deductions allowed outside the acquisition cost. Moreover, the profits from one cryptocurrency transaction cannot offset the losses from another cryptocurrency transaction (Jain & A., 2022). Different countries have different classifications for digital currencies. For instance, the United States, France, and Australia treat cryptocurrencies as intangible assets. Sweden, the Netherlands, Spain, Malta, Thailand, Belgium, and the United Kingdom treat them as securities. Canada, Portugal, and Japan treat them as payment methods. The United Kingdom, Germany, and the Philippines treat them as private money. Switzerland's currency is regarded as a foreign one.

Value-added tax does not apply to cryptocurrency operations in any of the member states of the European Union, in the United States and Australia, in Japan under barter agreements, in the Philippines, Singapore, or any other nation that treats cryptocurrencies as intangible assets exempt from tax on goods and services. Except for tax havens like Singapore, Malta, and the Philippines, or revenue from a professional activity like Belgium and Switzerland, mining is generally taxed on personal income as a normal activity.

Profits from cryptocurrency trading and disposal are taxed differently depending on whether they are long- or short-term investments (as in the US, Canada, and Italy), commercial or private investments (as in Germany and the Netherlands), and whether they are professional or non-professional individual investors for currency trading. While certain tax systems, including those in the US, Canada, Japan, and Australia, are interested in how cryptocurrencies are taxed and how fair value is determined, others are not.

#### 3. THE POTENTIAL TAX CONCERNS WITH BLOCKCHAIN TECHNOLOGY

#### 3.1. Concerns with Tax Legislation

The tax legislation that has been drafted according to the nature of the activities and operations of the traditional economy, faces shortcomings in the tax treatment of the digital economy in general, and technological applications in particular. In other words, there is a legislative gap as follows:

The Problem of a Subject to Tax or Exemption: Perspectives differed about the tax treatment of the blockchain and its applications, as some see imposing taxes on the activities and operations of the blockchain and its applications for the following justifications (Rijswijk & A. R.,2018):

- Not subjecting or exempting crypto-digital asset transactions to taxes will violate the principle of tax fairness.
- Not being subject to or exempting transactions of encrypted digital assets leads to the loss of part of the
  revenues needed to finance the state's public expenditures, especially with the growth of digital economy
  activities.
- Keeping pace with contemporary tax systems and achieving international tax compatibility, as there is a global trend to subject encrypted digital asset transactions to taxes. While some opinions tend not to

- subject or definitively exempt block activities and operations on encrypted digital asset transactions in more than one chain of state and its applications to taxes for the following justifications (Krivtsov, 2019):
- Encouraging investors and business organizations to carry out digital economy activities, in a way that helps to catch up with contemporary technological applications
- Avoiding the problem of double taxation that may occur as a result of the imposition of the tax
- Avoiding the problem of the difficulty of inventory and tax examination of encrypted digital asset transactions due to their special nature

#### 3.2. Concerns with the Occurrence of International Double Taxation

Blockchain technology relies on the abolition of time and places restrictions in its dealings, and with the different tax regulations and legislation between countries, which presents a different concept of tax sovereignty, after the tax was limited to the interest or borders of a single state, it exceeded it to become an extension of the international interest, and in light of the inability of national legislation In keeping with these new challenges posed by the blockchain and its applications, international double taxation may occur.

#### 3.3. Concerns with an Imbalance in Tax Justice

An imbalance in tax justice has begun to arise as a result of the widening disparity in global transactions and tax rates, as well as the flexibility of the movement of encrypted digital currencies facilitated by blockchain technology. permanently from taxes, whereas others just exempt it for a short time.

#### 3.4. Concerns with Control and Collection

In light of the usage of blockchain technology and its applications, the following are the key control and collection concerns:

The difficulty of Inventorying the Tax Community: The use of the blockchain makes it difficult to identify financiers who engage in commercial and financial transactions through the public blockchain network, which leads to the lack of evidence-based on which the tax administration completes the tax accounting process, through which the extent to which the financier is subject is determined. tax or not, in addition to the lack of a known physical existence for natural and legal persons dealing in encrypted digital currencies.

Lack of Proof Evidence for Blockchain Transactions and its Applications: Tax legislation depends on documenting commercial transactions, but in light of the use of the blockchain and its applications and the electronic transfer of data and values on the network, paper or electronic documents for financial or commercial transactions may not be available, and block technology also depends. Chen on smart contracts and the digital fingerprint in the implementation of commercial transactions and remittances, and thus the inability of the tax authorities to prove contracts, and this requires a review of the means of proof and tax examination.

The Problem of the Difficulty of Identifying Dealers on the Blockchain Network: When using the Blockchain, the two parties to the transaction do not see each other on the network, and they may not know all the basic information about each other, as is the case in traditional business transactions. As a result, the tax community may find it difficult to complete tax filings that legislative authorities restrict compliance with. Some financiers may take advantage of this to evade tax by not recording these transactions in the legal accounting books.

## 4. THE POTENTIAL ACCOUNTING AND AUDITING CONCERNS WITH BLOCKCHAIN TECHNOLOGY

Although Blockchain technology provides many different features and appears to be secure and enjoys a high level of confidentiality, many current challenges require addressing and addressing it so that it can be relied upon in the field of accounting and auditing, which can be addressed as follows:

The Problem of Lack of Standards for Accounting Treatment: This problem is represented in the absence of a standard or interpretation governing the accounting treatment of financial transactions using blockchain technology, in addition to differences of opinion by researchers and professional accounting organizations about the classification of these currencies in terms of considering them as cash or the like. Or consider it a financial asset other than cash, or

ISSN: 2767-1941, Vol. 4, No.1, January 2024

considering it an investment tool, or considering it an intangible asset, or considering it a commodity stock, which may mean the possibility of the emergence of a new class of assets (Kokina, & P. D., 2017).

**Lack of Standards or Guidelines for Review Under the Blockchain**: There are no standards or guidelines issued by professional organizations to review the uses and applications of blockchain technology, such as reviewing the processes of using encrypted digital currencies in money transfers, the use of smart contracts to transfer ownership of assets, and asset verification. and digital obligations (AICPA, 2017).

The Issue of Integration with other Information Systems: Another problem raised by blockchain technology is the problem of blockchain compatibility with project information systems such as the resource planning system, which often includes a variety of functional units such as accounting, control, procurement, supply, warehousing, manufacturing, project management, quality management and others. These systems are widely used in industries today (Weigand & d. K. J. 2020). The researchers add, the importance of the previous data for companies that need to be included in the blockchains when companies adopt the technology of all blockchains.

System Power and Operating Speed: One of the main challenges to blockchain technology is the issue of scalability, which means the ability of a system to continue to function well when size changes. In the context of blockchains, scalability arises when the number of participants increases over time, and scalability includes several elements., including the latency, which is the "transaction confirmation time" (Croman, 2016), and in the current period, the confirmation period takes at least 10 minutes for Bitcoin blockchains and 14 seconds for Ethereum blockchains and is substantially larger than current payments operating systems Moreover, 13% of transactions at the level of public blockchains exceed 20 minutes (Kanaracus, 2016). In the same context, the study (Nyumbayire, 2017) considers that the restrictions imposed on the number of one-second transactions lead to a decrease in the flexibility of the system and that any future development needs to be supported by the majority of users participating in a single network, this problem is of greater importance in the structural construction for public blockchains, although they are more manageable in smaller private designs (Ølnes & J. M. 2017). Therefore, the speed of transaction execution is a potential challenge, mainly because the blockchain system needs approval, add more transactions to the chain and make more copies, costs may rise, and consequently, restrictions and challenges arise on the speed of performance, in addition to that speed may It is affected by the method of processing blockchain technology, which is difficult to improve in the future, and therefore one of the challenges facing this technology is how to reduce costs in light of the multiple copies of transactions without affecting the speed of performance. Also, size and storage capacity are other important components that must be developed and depending on the nature of blockchain design, distributed ledgers contain transactions since the block was formed, so as the number of users and transactions grows, the size of all ledgers increases.

Challenges associated with implementation costs: The price of adopting blockchain technology within the organization might be substantial in addition to the costs of scalability, although proponents of this technology believe that the transaction costs under this technology will be lower than the current model (Dai, 2017), claims Fuller's study (Fuller, 2019), that certain assertions need a thorough investigation to back them up, that it is impossible to confirm if they refer to particular accounting transaction fees as opposed to just transaction fees for electronic payments, and therefore that cost of installation and accounting transaction fees might be quite high. Even before the invention of blockchain technology, comprehensive prior research has shown that companies frequently display strong resistance if they seek to upgrade and alter their information systems, particularly if a new blockchain system requires to be merged with old systems. (Lapointe, 2005). Users frequently perceive significant concerns in technological change and frequently exhibit a predisposition for the status quo, and such opposition has both behavioural and practical bases. (Kim, 2009). The massive cost and transformation efforts of companies, when companies adopt new technology, especially one that affects the accounting function in the company, many associated costs occur. In the accounting field, achieving the requirements of adequate control over the company's activities to a sufficient degree is mandatory, and those activities require the occurrence of substantial costs, and it is not clear whether companies are willing to bear the costs of transformation to achieve the expected benefits from blockchain technology.

#### 5. THE CHALLENGES ASSOCIATED WITH ACCOUNTING AND AUDITING

Since one of the promising potential benefits supplied by blockchain technology and reliability of accounting data, which attracts the firm's accountants, the growing trend towards financial reporting systems based on this technology has significant implications for many professionals who are involved in the accounting function within companies as well as auditors. The two-party verification process is used by auditors, investors, and other parties to ensure the accuracy of accounting information because the counterparty to a company's transaction serves as an external auditor of the transaction and is a third party to the company. Because this auditor is not biased in favour of the company like

a manager of the company, this is why it is thought to be a source of support for the confidence of accounting information. It is believed that blockchains might revolutionize the external evaluation of confirmed transactions (Lazanis, 2015; Yermack, 2017).

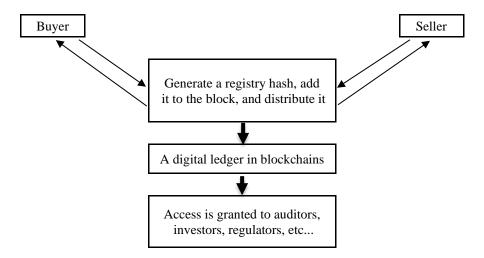


Figure 1: Two-way verification in a blockchain-based accounting system. Source: (Deloitte 2016).

Since all transactions in the system based on blockchains are anticipated to be confirmed and validated by a third party as a result of the role of the verifier embedded in the blockchains, we find that many areas of audit (such as cash, accounts receivable, obligations, etc.) can be reviewed through evidence collected through the balances of companies that represent the third party. Several audit companies have depended on external recognition for such accounts and industry-wide blockchain verifiers (Zhao, 2018), Two-way verification of transactions may improve the collecting of audit evidence in many areas where auditors may now track transaction information, in addition to replacing the evidence connected with the balance sheet. Instances include the collection of cash income and the payment of operational and capital expenses in cash. Most of this is already in place. Since assignments are now carried out by reviewers without consideration for third-party verification, at the very least, the quality of audit evidence gathered in these areas is likely to improve.

Consider the following scenario: Let's say one of the businesses you work with has integrated blockchain technology into its accounting systems. As a result, all aspects of the business's transactions with suppliers are verified twice before being finalized, even though the purchase order has only been sent once. price, shipping, receipt, as well as payments made associated with the transaction, resulting in a significant improvement in the quality of available data to auditors compared to internal company documents lacking third-party verification, which are currently used as audit guides for choosing particulars and are gathered in many areas,

As a result, the time needed for accountants and auditors to confirm these transactions is decreased as a result of this application, and resources are given for audit areas that call for personal and professional judgement while also providing more audit evidence. As a consequence, the company's both auditors and accountants can evaluate each transfer of funds as well as its historical background more efficiently (Deloitte 2016). Reliance on the blockchain network and integrity in the face of possible mistakes and fraud (Newman, 2018), may also cause the formation of other associated dangers. The system's internal control must be evaluated, as well as the audit risks posed by relying only on the data it produces.

Figuring out who will bear the implementation costs is one of the crucial factors that must be taken into account for there to be a growth in the number of businesses that use blockchain technology since the potential advantages increase with the increase in the number of businesses that use this technology, and then the means of value exchange is accessible through it. As it has previously been said, Bitcoin miners are paid to participate in the form of Cryptocurrency, the advantages of blockchain should be seen as increasing the costs of participation, and these benefits include as mentioned earlier. Data encryption is digital, because involvement in information chains may not involve straightforward payments made to participate in the blockchain, rather, the participants in the information chains should see this. There is no doubt that the use of blockchains across a wide range of parties will encounter significant resistance due to the high cost of , 2017integrating blockchains with accounting applications, as it may be challenging

ISSN: 2767-1941, Vol. 4, No.1, January 2024

to analyse the relationship between expected costs and benefits at this time. Data reliability, flexibility, as well as potential cost reductions for accounting and auditing functions in the long run., as it is one of the biggest challenges facing the wide spread of accounting applications based on blockchains (Yermack, 2017).

The researchers consider that, despite the advantages and positive repercussions that result from the application of blockchain technology in accounting, it is known that technology is a double-edged sword, and therefore the study (Coyne, 2017) identified the potential disadvantages of applying this technology as a tool in The field of financial reporting, which is the confidentiality of public blockchains, threats from manipulation of private blockchains, and limited transaction-related verification.

One drawback of public blockchains is that anybody may access them without a user's permission, which raises concerns about confidentiality. However, this problem can be solved simply by substituting transactions in blockchain technology with such a signature of hashes (with that signature substituting for the transaction if desired to be shown to a specific party) to protect confirming a transaction without revealing personal information to the public, Approved private (decentralized) blockchains, according to (Anderson, 2017), maybe more acceptable for enterprises, but they also create a new issue with technology acceptance, claim (Coyne,2017). Regardless of whether every participant in the supply chain uses blockchain technology, various businesses may choose to use different kinds of blockchains. This would compel the business to maintain many duplicated databases of blockchain technology, making the problem more challenging to solve. As this technology evolves, the availability of defined classifications following the business reporting extensible language built on blockchain technology is one of the suggested solutions to this problem. Accordingly, the current security and monitoring measures in this technology are insufficient, placing overall control of the system in the hands of an unauthorized person (Coyne, 2017). As a result, the main challenge is to maximize self-control over the structure intended to reduce cyberattack threats.

#### 6. IMPLICATIONS FOR ACCOUNTING AND AUDITING FIRMS

The adoption of blockchain technology by business projects has some effects on audit firms a study (Axelsen, 2017) has pointed out that the future is characterized by unparalleled organizational and information complexity in light of the rapid development of corporate and business reports, If auditors and audit firms are keen to keep pace with these changes and the current development of information technology, accounting firms must think about what the audit will look like in the future and whether the audit team has the requisite skills (MacManus, 2017).

Indeed, towards real steps to becoming familiar with technological developments and their implications for the activities they practice, and the evidence for this is that the Big Four companies have already invested in the use of new technologies such as data analysis programs and artificial intelligence programs and started serious projects in the field of blockchains, as the four accounting firms expressed The Big Four expressed its interest in blockchain technology, and this interest was reflected in many of the projects that were launched, the prominent professional and financial organizations have collaborated on several projects to investigate the impact of this technology on accounting and auditing practices.

As an illustration, the global accounting and auditing firm Deloitte has introduced Rubix, the first blockchain-based software system, which enables users to design unique blockchains and smart contracts. Customers of Deloitte can already utilize this platform. The company also continuously automates portions of its audits for its clients for a variety of applications, including financial consolidations between internal teams or corporate partners, assurance of real-time examination of financial accounts, and property registration software. Deloitte claimed to already have completed a blockchain audit in 2017 by applying current audit standards to review the processes approved for using blockchains (Das, 2017).

Faster, safer, automating processes, and lowering costs (KPMG, 2018). KPMG and Microsoft collaborated to build their digital ledger services, and their present efforts are focused on developing prototype models to address blockchain deployment issues in the financial products, healthcare, as well as public sectors (Kokina et al., 2017). Similar to this, Ernst & Young is participating in Libra, a blockchain-based initiative that emphasises distributed ledger technology (Allison, 2015). EY Ops, which concentrates on payment transactions, billing, inventory data, and pricing, has also been developed by the company. and Integration of Digital Contracts. A paper on blockchain challenges concerning energy has also been released by PWC (PWC,2017). Additionally, it has developed a platform called De Novo that focuses on integrating blockchain into the blockchain.

International auditing companies anticipate significant reductions in auditing expenses and turnaround times (T.K. (2017). As a result, these (8) companies are actively developing blockchain technology to take advantage of the benefits it produces. For instance, Ernst & Young announced the creation of the EYOps platform, a collection of tools and services to assist businesses in utilizing blockchain technology to drive operations and spur development (Alarcon,

ISSN: 2767-1941, Vol. 4, No.1, January 2024

et al., 2018). KPMG also disclosed a protocol for collaboration with Microsoft, the world's largest software provider, to develop several innovations and other efforts for Apps of Blockchain Technology and N9. In a similar spirit, Deloitte announced the creation of a blockchain team made up of 800 people from 20 different countries with the EMEA Blockchain Lab located in Dublin. In particular, the Rubix project is an illustration of work performed on operational Collaboration Connectivity, Scalability, Speed, Security, as well as Accountability in Audit PwC has developed a Global Blockchain Team that collaborates with industry specialists at a global level. Recent research by PWC of managers in 15 countries revealed that 84% of them thought their organizations were already engaged in a blockchain project (PWC, 2017). In the same vein, another poll by Deloitte was also released. 41% of the 1,053 CEOs of businesses with yearly revenue of much more than \$500 million in 7 countries think their organizations will utilize technology in the upcoming year (Deloitte, 2018).

#### 7. A REGULATOR'S PERSPECTIVE ON BLOCKCHAIN TECHNOLOGY

According to a study (Brender et al., 2018) that focused on external auditors, 85% of the study sample felt that more guidance should be added to auditing standards to address the effects of technological advancements and contract strings on those standards and the professional bodies that issue them. Blockchain reviews are currently not guided by any review standards, and it is unknown at this time how frequently and to what degree review standards will be updated when blockchain technology and other forms of technology, such as data analysis and artificial intelligence, are used more widely.

In March 2018, a paper on the potential impacts of blockchain technology on audit and professional assurance services, how the audit of financial statements can change in light of blockchain, and the possibility of offering new assurance services was published by the Association of Chartered Accountants in America and Canada, the University of Waterloo, and Deloitte experts. Considering the future development of new jobs for auditors (Canada, 2018). It concluded that while blockchain technology is unlikely to completely replace the professional judgments of auditors in accounting and auditing firms, auditors still need to keep an eye on developments in the field because they will have an impact on the technology of information systems owned by their clients. They also need to work with experts to review complex technical risks. related to blockchains (Canada, 2018), and auditors should be conscious of the opportunities that can be seized from clients' adoption of blockchain technology, to enhance the data collection process during the audit process, and to take into account whether blockchain technology allows them to create automated review procedures.

The success of auditors and the businesses they support depends, according to Gord Bell, Executive Vice President of Research, Guidance and Support at the Institute of Chartered Accountants of Canada, on early comprehension and integration with novel technology innovations. To fulfil the anticipated demand of the business community with the proliferation of enterprises using blockchain technology, auditors must enhance their skills and expertise. This presents new difficulties and possibilities for the profession of auditing and professional assurance. In the same context, the American Society of Certified Public Accountants, in cooperation with the Wall Street Blockchain Alliance, announced work to determine the impact of blockchain technology on the accounting profession and advance the interests of the profession and the public of dealers.

The International Auditing and Assurance Standards Board have started the process of raising awareness. Mr Chuck Landes, Chair of the Innovation Working Group, presented on a blockchain, and the Data Analytics Working Group held a session on examining the growing use of technology. The committee recommended that the International Audit and Assurance Standards Board incorporate digital technological advancements into professional auditing guidelines in the audit with a focus on data analysis, taking into account other technological advancements, including blockchains, that affect auditing and warrant further research. In light of the growing use of data analytics and new tools based on Technology Foundation Public Company Accounting Oversight Board (PCAOB) Public Company Accounting Oversight Board announced in December 2017 a plan to establish data and technology task forces to investigate the need for new guidance, updating and changing standards issued by the Board, or other regulatory actions (PCAOB,2018).

#### 8. HOW MIGHT AN INVESTOR PROCEED?

• Individuals who wish to trade or invest in VDAs currently need to get familiar with the new tax laws and, in the best-case scenario, speak with a tax professional before starting such operations. If consumers wish to trade VDAs, they would ideally do so on exchanges or marketplaces rather than through off-market deals. Without official direction, this can aid in determining the VDA's fair market value.

- Also, to be considered by taxpayers is the fact that their losses cannot be offset by other profits. However, revenues from VDAs cannot be used to offset capital expenses like the price of cryptocurrency mining or the price of minting NFTs.
- To assess whether the relevant NFTs are VDAs for income tax legislation, anyone looking to buy or deal with NFTs must be cautious and adhere to government regulations.

#### 9. CONCLUSION

The development of information technology has imposed blockchain applications, new models of commerce, companies and business practices that were not accustomed before. Just as business rules differ, it is time for tax rules to keep pace with this phenomenon. This has left many investors, trading platforms and prospectors in some countries suffering from uncertainty and surprise during the tax season, taxpayers have found themselves facing an unexpectedly large tax bill as a result of misconceptions surrounding how to tax these transactions. The potential in tax for blockchain technology applications. The research found that there are many problems related to tax legislation and the problem of the lack of accounting standards or auditing guidelines. On the international level, it was found that many countries impose taxes on blockchain activities and operations, whether taxes on profits, trading operations or imposing capital gains taxes. Also, each country has a different tax treatment for encrypted currencies according to the country's classification of the encrypted currency.

The study also found that some nations, like the United States, France, and Australia, treat cryptocurrencies as intangible assets, while others, like Sweden, the Netherlands, Spain, Malta, Thailand, Belgium, and the United Kingdom, treat them as securities; other nations, like Canada, Portugal, and Japan, treat it as a payment method; and other nations, like the United Kingdom, Germany, and the Philippines, treat it as private money; The tax treatment of cryptocurrency activities and businesses is decentralized in European Union nations. Depending on how each nation defines cryptocurrencies, each country has a varied tax treatment for them. In the case of the United Kingdom, cryptocurrency is treated as private assets or funds, while in Germany it is Classification of cryptocurrency as private money.

Thus, it is recommended, audit companies must either train and develop the skills of their auditors on the applications of blockchains, or appoint and seek advice from data analysis specialists to provide advice to audit clients, and thus blockchain technology affects the knowledge structure of auditors, as current technological developments impose a change in the personal components of auditors. , due to the use of advanced technology by the auditees.

The Indian Association of Accountants and Auditors shall conduct seminars and training sessions for accounting and auditing firms to increase public awareness of the profession's future state and take proactive measures to close the knowledge gap that surrounds it. the need to broaden external auditors' skill sets to meet the demands of blockchain technology and prepare them for many of the newly created professions of the future.

To enable accounting and auditing firms to play a leading role in this industry, professional and regulatory bodies that oversee the accounting and auditing profession must update audited accounting standards to reflect technological advancements and address some of the issues raised by these techniques. Accounting and auditing courses must take into account the effects of technological advancements, such as blockchains, on the accounting and auditing profession to clarify the current state of affairs and the impossibility of predicting the profession's future status. This will allow these offices to be better prepared for the challenges that may arise in the future.

#### REFERENCES

Allison, I. (2015). The work of auditors in the age of Bitcoin 2.0 technology. International Business Times, Deloitte, Libra, Accenture. Retrieved from https://www.ibtimes.co.uk/deloitte-libraaccenture-work-auditors-age-bitcoin-2-O-technology-1515932.

AICPA (2017). Blockchain technology and its potential impact on the audit and assurance profession. Retrieved from https://www.aicpa.org/.

Alarcon, J. L. & N. C. (2018). Blockchain and the future of accounting. *Pennsylvania CPA Journal*, 88(4), 26-29.

Anderson, A. (2017). CPA, 4 keys to the future of audit. Thomson Reuters White paper.

Axelsen, M. G. P. C. P. a. R. G. (2017). Explaining the information systems auditor role in the public sector financial audit. *International Journal of Accounting Information Systems*, 24, 15-31.

Bonsón, E. & B. M. (2019). Blockchain and its implications for accounting and auditing. *Meditari Accountancy Research*.

- Brender, N. G. M. M. J. H. & S. A. (2018). The Potential Impact of Blockchain Technology on Audit Practice. *Journal of Strategic Innovation and Sustainability*, 14(2), 35-59.
- Canada, C. (2018). New White Paper Identifies Blockchain Implications for Audit and Assurance. *PR Newswire*, New York.
- Carpentieri, L. M. S. & P. P. (2019). Overhauling corporate taxation in the digital economy. *CEPS Policy Insights No* 2019-15/October 2019.
- Coyne, J. G. a. M. P. L. (2017). Can Blockchains serve an accounting purpose? *Journal of Emerging Technologies in Accounting*, 14(2), 101–111.
- Croman, W. R. (2016). On scaling decentralized blockchains. In International conference on financial cryptography and data security.
- Dai, J. a. V. M. (2017). Toward Blockchain-based accounting and assurance. *Journal of Information Systems*, 31(3), 5–21.
- Das, S. (2017). Big four giant Deloitte completes successful blockchain audit. Retrieved from www.cryptocoinsnews.com/bigfour-giant-deloitte-completes-successful-blockchain-audit/.
- Deloitte (2018). Breaking blockchain open, Deloitte's 2018 global blockchain survey. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/us/Documents/financial-services/us-fsi-2018-global-blockchain-survey-report.
- Deloitte (2016). Blockchain Technology: A game-changer in accounting? Retrieved from https://www2.deloitte.com/. Fuller, S. H. a. A. M. (2019). Should accountants care about blockchain? *Journal of Corporate Accounting and Finance*, 1-13.
- Jain, J. M. B. & A. (2022). How Cryptocurrencies Are Taxed In India. Retrieved from https://www-forbes-com.translate.goog/advisor/in/tax/how-cryptocurrencies-are-taxed-india/? x tr sl=en& x tr tl=ar& x tr hl=ar& x tr pto=sc.
- Kim, H. W. a. A. K. (2009). Investigating user resistance to information systems implementation: A status quo bias perspective. *MIS Quarterly*, 33, 567–82.
- Kanaracus, C. (2016). Don't believe the blockchain hype: Examining the weaknesses and risks. Retrieved from https://www.zdnet.com/article/dont-believe-the-blockchain-hypeexamining-its-weaknesses-and-risks/.
- KPMG (2018). The pulse of fintech 2018, Biennal global analysis of investment in fintech. Retrieved from https://assets.kpmg.com/content/dam/kpmg/xx/pdfr2018/07/h1-2018-pulse-of-fintech.pdf.
- Krivtsov, A. I. (2019). Taxation of Digital Financial Assets. In Growth Poles of the Global Economy: Emergence, Changes and Future Perspectives. *Springer*, Cham, 1231-1239.
- Kokina, J. M. R. & P. D. (2017). Blockchain: Emergent industry adoption and implications for accounting. *Journal of Emerging Technologies in Accounting*, 14(2), 91-100.
- Lapointe, L. a. S. R. (2005). A multilevel model of resistance to information technology implementation. *MIS Quarterly*, 29(3), 461–91.
- Lazanis, R. (2015). How Technology Behind Bitcoin Could Transform Accounting As We Know It. Techvibes. Retrieved from https://techvibes.com/2015/01/22/how-technology-behind-bitcoin-could-transform-accounting-as-we-know-it-2015-01-22.
- MacManus, E. (2017). The audit of the future. The Journal of the Global Accounting Alliance.
- Makhdoom, I. A. M. A. H., & N. W. (2019). Blockchain's adoption in IoT: The challenges, and a way forward. *Journal of Network and Computer Applications*, 125, 251-279.
- Newman, D. (2018). 3 ways Blockchain can help combat fraud. Forbes. Retrieved from https://www.forbes.com/sites/danielnewman/2018/04/17/3-ways-blockchain-can-help-combat-fraud/#15a590692a4b.
- Nyumbayire, C. (2017). Blockchain technology innovations part 1. Retrieved from www.interlogica.it/en/insight/blockchain-technology-innovations-part-i/.
- Ølnes, S. U. J. & J. M. (2017). Blockchain in government: Benefits and implications of distributed ledger technology PWC (2017). Blockchain an opportunity for energy producers and consumers? Retrieved from www.pwc.com/gx/en/industries/assets/pwc-blockchain-opportunity-for-energy-producers-and-consumers.pdf.
- PCAOB (2018). What Auditors Need to Know about Blockchain and Other Emerging Technologies: A Regulator's Perspective. Retrieved from <a href="https://pcaobus.org/News/Speech/Pages/what-auditors-need-to-know-blockchain">https://pcaobus.org/News/Speech/Pages/what-auditors-need-to-know-blockchain</a>. for information sharing. *Government Information Quarterly*, 34(3), 355-364.
- Prisco, G. (2017). Big four accounting firm EY launches ops chain platform, opens blockchain lab in NYC. Retrieved from https://cryptoinsider.com/big-four-accounting-firm-ey-launches-ops-chain-platform-opens-blockchain-lab-nyc/.

- Rijswijk, L. V. H. H. & A. R. (2018). Exploring the future of taxation: A blockchain scenario study. In TARC workshop, 23-24 April 2018.
- T.K. (2017). 5 key issues that merit CPAs attention. In AICPA ENGAGE conference, Snapshot from Las Vegas.
- Vetter, A. (2018). Blockchain is Already Changing Accounting. Accounting Today. Retrieved from https://www.accountingtoday.com/opinion/blockchain-is-already-changing-accounting.
- Weigand, H. B. I. & d. K. J. (2020). Shared ledger accounting—implementing the economic exchange pattern. *Information Systems*, 90, 101437.
- Wiatt, R. G. (2019). From the mainframe to the blockchain. Strategic Finance, 100(7), 26-35.
- Yermack, D. (2017). Corporate Governance and Blockchains. Review of Finance, 7-31.
- Zhao, W. (2018). All —Big Four Auditors to Trial Blockchain Platform for Financial Reporting Coindesk. Retrieved from https://www.coindesk.com/all-big-four-auditors-trial-blockchain-platform-for-financial-reporting.