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Benefits of using Blockchain technology as an accounting auditing instrument

Beneficios de utilizar la tecnología Blockchain como instrumento de auditoría contable

Benefícios do uso da tecnologia Blockchain como instrumento para a auditoria contábil

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Abstract

Purpose: Analyze the possible benefits of using Blockchain technology as a tool for accounting auditing.

Methodology: In order to achieve the objective of this study, a theoretical essay was conducted through a selection of national and international literature on accounting auditing and the potential benefits of Blockchain technology, analyzing the relationship of these potential benefits with the procedures adopted by the accounting auditor.

Results: Findings from the literature show that despite the complexities, Blockchain technology offers an opportunity to improve financial reporting and audit processes. Adoption of this technology may allow auditors to develop procedures to obtain audit evidence directly from Blockchains and to adapt procedures to reap its benefits, as well as address incremental risks and that while the audit process may become more continuous, auditors may still have to apply professional judgment in analyzing accounting estimates and other judgments made by management in preparing the financial statements.

Contributions of the Study: It is believed that this work contributes to an active and continuous dialogue regarding the use of Blockchain in audit processes, as well as the knowledge of advantages that this technology offers to professionals, as well as arouse the interest of research on the use of Blockchain technology in accounting auditing.

Keywords: Accounting Audit. Blockchain Technology.

Resumen

Objetivo: Analice los posibles beneficios del uso de la tecnología Blockchain como herramienta para la auditoría contable.

Metodología: Para lograr el objetivo de este estudio, se realizó un ensayo teórico seleccionando la literatura nacional e internacional sobre auditoría contable y los beneficios potenciales de la tecnología Blockchain, analizando la relación de estos beneficios potenciales con los procedimientos adoptados por el auditor contable.

Resultados: Los hallazgos de la literatura muestran que a pesar de las complejidades, la tecnología Blockchain ofrece una oportunidad para mejorar los procesos de auditoría e informes financieros. La adopción de esta tecnología puede permitir a los auditores desarrollar procedimientos para obtener evidencia de auditoría directamente de Blockchains y adaptar los procedimientos para obtener los beneficios de la misma, así como abordar los riesgos incrementales y que, si bien el proceso de auditoría puede ser más continuo, los auditores pueden todavía tendrán que aplicar el juicio profesional al analizar las estimaciones contables y otros juicios realizados por la administración al preparar los estados financieros.

Contribuciones del Estudio: Se cree que este trabajo contribuye a un diálogo activo y continuo sobre el uso de Blockchain en los procesos de auditoría, así como al conocimiento de las ventajas que esta tecnología ofrece a los profesionales, así como a despertar el interés de la investigación sobre el uso de Blockchain de la tecnología Blockchain en auditoría contable.

Palabras clave: Auditoria Contable. Tecnología Blockchain.

Resumo

Objetivo: Analisar quais os possíveis benefícios do uso da tecnologia *Blockchain* como instrumento para a auditoria contábil.

Metodologia: Para atingir o objetivo deste estudo, foi realizado um ensaio teórico por meio de uma seleção da literatura nacional e internacional sobre a auditoria contábil e os potenciais benefícios da tecnologia *Blockchain*. Além disso, foi analisada a relação desses potenciais benefícios com os procedimentos adotados pelo auditor contábil.

Resultados: Os achados da literatura mostram que, apesar das complexidades, a tecnologia *Blockchain* oferece uma oportunidade para aperfeiçoar os relatórios financeiros e os processos de auditoria. A adoção dessa tecnologia pode permitir que os auditores desenvolvam procedimentos para obter evidências de auditoria diretamente de *Blockchains* e adaptem os procedimentos para usufruir dos benefícios dela, bem como abordar riscos incrementais e que, embora o processo de auditoria possa tornar-se mais contínuo, os auditores ainda terão que aplicar julgamento profissional ao analisar estimativas contábeis e outros julgamentos feitos pela administração na preparação das demonstrações financeiras.

Contribuições do Estudo: Acredita-se que este trabalho traz uma contribuição para um diálogo ativo e contínuo quanto ao uso do *Blockchain* nos processos de auditoria, bem como o conhecimento de vantagens que essa tecnologia oferece aos profissionais e despertará o interesse de pesquisa sobre o uso da tecnologia *Blockchain* na auditoria contábil.

Palavras-chave: Auditoria Contábil. Tecnologia *Blockchain*.

1 Introduction

The digital transformation is shaping big changes in the way people relate, especially in the business world. With the evolution of the international economy, new forms of negotiation have appeared with more complex transactions and, with them, there are the risks of disseminating incorrect information.

The role of the audit is fundamental in this context to bring reliability to the institution before society, its customers and suppliers. Incorrect information can come from several factors, be it a simple operational error or a fraud resulting from administrative collusion. Although detectable, such inconsistencies pose a risk to the auditor's work with regard to the formulation of the opinion report (Camargo *et al.*, 2006).

Audits are not carried out in real time, making it difficult to base the decision making and analysis of the financial statements. In order to remain relevant, the accounting audit needs a more timely and proactive methodology, since most users constantly need to audit the financial statements.

In this scenario, the emergence of new technologies opens the way for profound metamorphoses in the accounting scope, as well as in the audit field (Andujar *et al.*, 2018). This context covers a wide range of technologies with different degrees of dissemination.

Among them is Blockchain, a technology that came up with Bitcoin which is a form of digital currency, created and carried out electronically, without financial intermediation.

According to Greve *et al.* (2018), Blockchain is seen as disruptive, in view of the digital creation of a non-centralized trust organization, extinguishing the need for another trust party, which may overlap certifying and centralizing organizations of business operations.

In recent years, Blockchain technology has advanced beyond bitcoin and has now been considered to create innovative and disruptive solutions, being tested in a wide range of financial and business applications. Such technology offers the promise of “a secure, transparent, fast and affordable digital solution” (Bashir, 2017).

Blockchain has the ability to change all registration processes, including how transactions are initiated, processed, authorized, recorded and reported. This generates changes in business models, with the potential for greater uniformity and transparency in communication and accounting. Such a scenario requires auditors to understand this technology, as new techniques and procedures based on Blockchain emerge, the role and skill set of auditors may change.

The potential for transformation of this technology is immense and applications are emerging from it in numerous sectors. However, although it is spreading rapidly beyond the financial and banking sectors, it is still poorly studied and widespread in the academic environment, especially in the field of accounting, as stated by Brender *et al.* (2018).

Thus, the present study aimed to answer the following question: What are the possible benefits of using Blockchain technology as an instrument for accounting auditing? Thus, the findings of the literature on accounting auditing and Blockchain technology are presented in order to analyze the possible benefits of using Blockchain technology as an instrument for accounting auditing.

To achieve the objective of this study, a theoretical essay was carried out, through a selection of national and international literature on accounting auditing and the potential benefits of Blockchain technology, analyzing the relationship of potential benefits with the procedures adopted by the accounting auditor.

The systematic review of the literature consisted of an exploratory approach to review the topic of accounting audit, Blockchain and the potential benefits of Blockchain technology in accounting audit. In the literature survey, the Portal of Journals of the Coordination for the Improvement of Higher Education Personnel (CAPES) and Google Scholar were used, using the following keywords “Blockchain”, “Blockchain audit”, “Blockchain audit accounting”. These keywords were used to find articles related to the use of Blockchain technology in accounting auditing. An analysis of the benefits of blockchain technology in relation to the accounting audit procedures was carried out, in order to demonstrate the impacts of this technology on the auditor's performance.

Para determinação da metodologia foi utilizado como base o estudo de Alcântara *et al.* (2019), que analisou a tecnologia Blockchain como instrumento de governança no setor público brasileiro, por meio de achados da literatura e das experiências internacionais sobre o tema.

Thus, this research is justified by the need to analyze the future of the accounting auditor profession in view of the implementation of Blockchain technology, since the profession is inserted in a context of large rigid and regulatory structures. It is believed that it is of great relevance not only for professional auditors, but also for students, teachers, businessmen and investors, in addition to researchers, since it is a technology that breaks many technological, governmental, organizational paradigms and social.

2 Discussion

2.1 Accounting audit

Frauds in the 1990s and 2000s that resulted in the bankruptcy of companies like Enron, Worldcom and Adelphia, in the United States, from Parmalat, in Italy, and also in global banks like Lehman Brothers, Bear Stearns and Merrill Lynch, brought the need to legitimize the set of data and basic information that make up the financial statements regarding the economic and financial reality of the companies' assets. Evidencing the increased responsibility of the auditor, since society expects the detection of fraud by the audit (Ishikawa, 2002).

Users of accounting information crave more company disclosures, quantitative and prospective information, with the guarantee that they are being disclosed in a fair and accurate manner. In this way, the audit is seen as an important component in establishing trust between the related parties of a business in a globalized world (Association of Chartered Certified Accountants [ACCA], 2016).

The audit is considered an accounting specialization, whose main activity is consistent with the systematic assessment of an entity's transactions, procedures, operations, routines and financial statements, on which the auditor issues an audit opinion and report. It is a substantial activity for the functioning of the securities and securities markets, as it contributes to the significant reduction of the threat of errors, inaccuracies or bias in the financial statements, which can lead investors and creditors to rely on low quality information for your decision making (Boynton *et al.*, 2002; Perez Junior *et al.*, 2011; Attie, 2010).

The Brazilian Standard for Accounting Technical Auditing (NBC TA), in its conceptual structure, places the audit as a job of certification of accounting information. The auditor issues an opinion seeking to increase the level of users' confidence in accounting information (Conselho Federal de Contabilidade [CFC], 2015).

NBC TA 315 establishes that the auditor is responsible for identifying and assessing the risks of material misstatement in the financial statements. To do this, you must seek to understand the business and the environment in which it is inserted. This understanding occurs through procedures that help you to identify the risks caused by fraud or error, in order to provide reasonable security in the judgment. According to Item 6, of NBC TA 315, risk assessment procedures include inquiries from management, internal audit (if any) and others at the entity; analytical procedures; and observation and inspection (CFC, 2016b).

Additional audit procedures must be planned and performed by the auditor, in accordance with NBC TA 330, which addresses the auditor's responsibility when scheduling and implementing responses to the risks of material misstatements assessed in accordance with NBC TA 315 (CFC, 2016c).

According to NBC TA 200, the audit procedures constitute the set of techniques applied by the auditor during the audit procedures. In turn, auditing techniques are the set of investigations applied to gather the evidence necessary to support their opinion, they provide the obtaining of the necessary evidence for the auditor to issue a well-founded report. Among the most cited in the literature, are: physical examination and counting, circularization, checking calculations, document inspection, investigation and correlation (Crepaldi, 2016; CFC, 2016a).

2.2 Blockchain technology

Blockchain technology refers to a shared database system in log, maintained and managed in a distributed and decentralized manner, through a peer-to-peer network (person to person), which allows the maintenance of a transaction record, organized in chronological order, in which all members are responsible for storing and maintaining the database (Lucena, 2016; Chicarino *et al.*, 2017).

It emerged in October 2008 to solve the problem of duplicity in the proposal of bitcoin, a virtual monetary system that sought to distance itself from the centralization of the traditional monetary system, transfer ownership and secure transactions. It works in a similar way to a ledger (ledger) that cannot be edited, it is only allowed to be written on one side, and a record is linked to the front and back like a chain (Surda, 2012; Nakamoto, 2008).

This technology is based on four architectural characteristics: security of operations, decentralization of storage, data integrity and immutability of transactions. In other words, it is a shared and decentralized database whose information is safely registered and publicly shared (Oliveira, 2019).

Iansiti and Lakhani (2017) explain that, for the Blockchain to function, the ledger is repeated and maintained by interested parties who are also called nodes, forming a large number of identical databases. The records are grouped in blocks with date and time identification and by their cryptographic hash and make reference to the hash of the previous block, establishing a link between them and creating a chain of blocks. When changes are made to a file, all other replicas are updated at the same time, as are transactions, value records and exchanged assets permanently recorded in all ledgers.

Users interact with the Blockchain through a pair of private / public keys. Each transaction is signed by the node, using its private key to sign its own transactions and is addressable on the network using its public key and transmitted by the node to its neighboring peers, who ensure that this transaction is valid before relaying it (Katori, 2017).

Transactions that have been validated by the network are ordered and packaged in a candidate block with timestamp. This is a process called mining, the mining node transmits that block back to the network. The nodes verify that the suggested block contains valid transactions and hash the correct previous block in its chain. If that is the case, they add the block to their chain and apply it to the transactions it contains to update their global view (Swan, 2015). This operation can be seen in Figure 1.

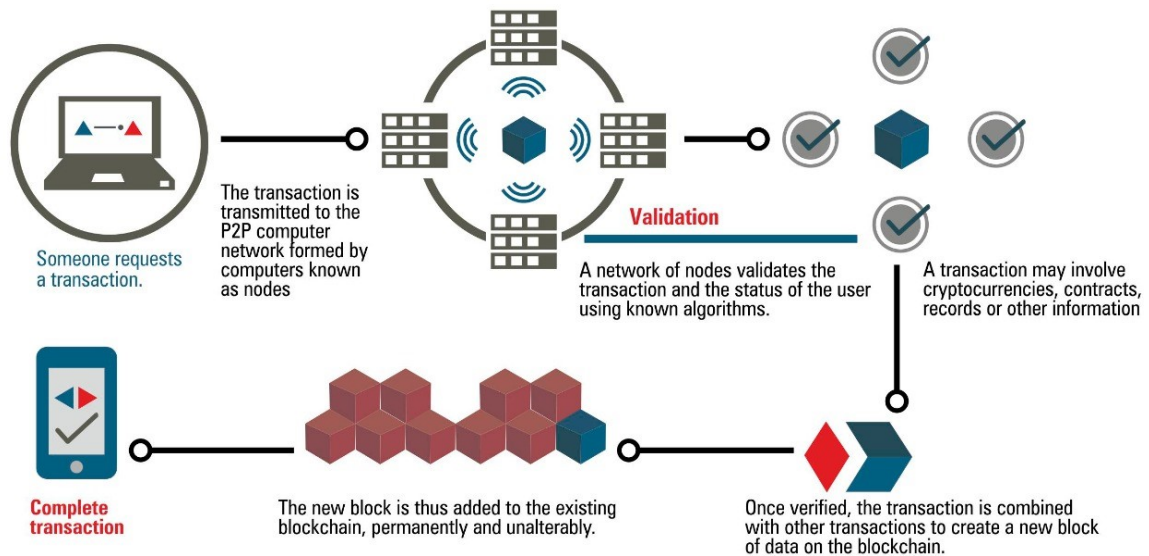


Figure 1: Blockchain operation.
Fonte: Adapted from <https://bit.ly/2KH11dC>.

If all nodes in the network have the same global chain state, with the same content and blocks organized in the same order, the nodes are in consensus. Upon reaching consensus, all nodes now have access to the same information and the distributed global view of the chain guarantees the availability and auditing of the stored information (Tapscott and Tapscott 2016).

There are three levels of application for the technology called Blockchain 1.0, 2.0 and 3.0. In Blockchain 1.0, digital currencies and payment decentralization are implemented, without the need for a financial institution. In Blockchain 2.0, however, there is a decentralization of different types of asset registration and markets in general. Blockchain 3.0 brings with it a new paradigm of internet infrastructure, interoperability and scalability, which would be applications for different segments such as government, health, science and economic development (Swan, 2015).

Atualmente, existem duas classificações principais de redes Blockchain: sem permissão e com permissão (Figura 2).

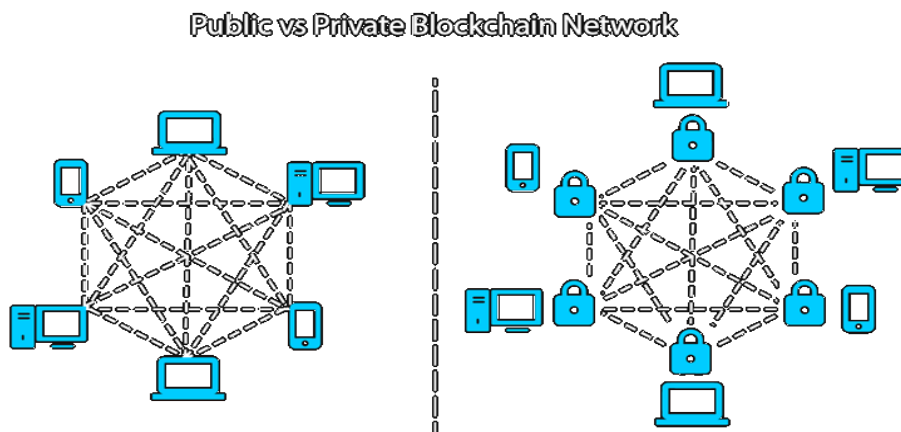


Figure 2: Blockchain public x private.

Fonte: Adapted from <https://bit.ly/2YCTne4>.

The biggest difference is the determination of which parts allow access to the network. A Blockchain can be shared publicly with anyone who has access to the Internet (public Blockchain) or shared with only a few participants (private Blockchain). The public Blockchain is an open system where all devices can access freely without any kind of permission. The ledger is shared and transparent. For private Blockchains, the user must have permission from the Blockchain authority before he can access the network. The user can only participate in the Blockchain if invited (Bashir 2017; Antonopoulos 2017; Cachin *et al.*, 2016).

2.3 Related research

Among the works that are related to the Blockchain theme and the audit, Nakamoto (2008) is the reference for the creation of technology, making it, certainly, the most relevant publication on the theme, where in his whitepaper, he detailed it as a electronic “peer-to-peer” system. Nakamoto formed the genesis block, from which other blocks were extracted, interconnected, resulting in one of the largest chains of blocks that carried different information and transactions.

Melanie Swan (2015), founder of the Institute for Blockchain Studies, in her book, explains that Blockchain is essentially a public book with potential as a decentralized world registry for the registration, inventory and transfer of all assets - not just finance, but properties and intangible assets such as votes, software, health data and ideas, demonstrating how blockchain is in a position to become the fifth disruptive computing paradigm after mainframes, PCs, the Internet and mobile / social networks.

Zyskind and Nathan (2015), in their study, discussed possible uses of Blockchains and implemented a protocol that turns a Blockchain into an automated access control manager that does not require trust by a third party. Users are always aware of the data being collected about them and how they are used. In addition to being recognized as owners of your personal

data. Companies, in turn, can focus on using data without worrying too much about protecting and compartmentalizing it properly.

Lucena (2016) presents a brief introduction to Blockchain technology, the main problems faced by Bitcoin and Ethereum Blockchains and the guidelines for considering Blockchain efficient.

Kraft (2016) presents a new model to update the difficulty control of Blockchain-based consensus systems. The proposed method performs much better by ensuring stable average block times for longer periods, which were verified both in simulations of artificial growth scenarios and with real-world data.

In another study, Tapscott and Tapscott (2016) published a book on how the impact of blockchain will not be limited only to banking, value transfer and other financial services, providing several examples of how Blockchain technology is changing businesses. In each of the examples, the authors illustrate how the technology is being implemented and how it could change other businesses as well. Smart contracts, protection of digital goods and exchange of values (money) with security and speed, secure communication and negotiation of digital goods between algorithms and things are some of the topics covered in the book. The book also cites examples of crypto projects that have changed the economy of different countries, through ICOs, in Switzerland, USA, Canada, United Kingdom among other countries.

Cai and Zhu (2016) bring a study where it explores classification fraud, differentiating subjective fraud from objective fraud. He then discusses the effectiveness of Blockchain technology in objective fraud and its limitation in subjective fraud, especially classification fraud. Finally, it systematically analyzes the robustness of Blockchain-based reputation systems in each type of classification fraud. And they concluded that Blockchain technology offers new opportunities to redesign the reputation system. Blockchain systems are very effective in preventing objective information fraud, such as loan application fraud, in which fraudulent information is based on facts. However, its effectiveness is limited in subjective information fraud, such as classification fraud, where the basic truth is not easily validated.

Chicarino *et al.* (2017) carried out a study with the objective of providing concepts on the structure and functioning of Blockchain and, mainly, analyzed how the use of this technology can be used to provide security and privacy in IoT. Concluding that this combination can be quite powerful, since Blockchain can give resilience to attacks and the ability to interact with peers in a reliable and auditable way. The continuous integration of Blockchain in the IoT domain will cause significant transformations in several sectors, bringing new business models and generating reflections on how the existing systems and processes are implemented.

Simoyama *et al.* (2017), in turn, present a new structure for improvements in the audit system, highlighting the opportunities of Blockchain for the audit and control of public agencies. They applied the structure in the context of Brazilian legislation and the Federal Court of Accounts, presenting the benefits for the TCU audit, but emphasized that the proposal is applicable to a wide range of countries that face serious corruption.

Ferreira *et al.* (2017) carried out a systematic mapping, 21 primary articles were extracted from scientific databases, in order to verify how this technology has been used by organizations. The result of the study highlighted the disruptive potential of Blockchain technology and how it was shaped for many industries.

Katori (2017) analisou sob o enfoque crítico-reflexivo, o impacto do surgimento das Fintechs e do Blockchain no sistema financeiro, com base em relatórios e na literatura acadêmica. Os resultados desse levantamento bibliográfico revelaram que a evolução das

Fintechs esboça grandes mudanças no cenário financeiro.

Rooney *et al.* (2017) carry out a study to verify whether the internal audit is ready to face the challenges and opportunities of Blockchain. They present the impacts of changes and the adjustments that the internal auditors will need to undergo. While the Institute of Chartered Accountants in England and Wales [ICAEW] (2018) describes technology and its likely impact on business, in particular, the accounting profession. Detailing the blockchain's potential, its implications for auditors, and how the accountant profession can lead and what skills are needed for the future.

Rocha *et al.* (2019) study how Blockchain can be used within the accounting system and the level of perception of professionals. In their findings, they found that accounting professionals have a low level of knowledge about Blockchain, making it difficult to perceive applications within accounting.

Finally, from the studies raised in this investigation, Alcântara *et al.* (2019) who analyzed Blockchain technology as an instrument of governance in the Brazilian public sector, through findings from literature and international experiences on the topic. Literature findings show that the use of blockchain technology can represent great potential in the sector, offering new opportunities for better service delivery and governance in the public sector.

2.4 The potential of Blockchain technology for accounting auditing

From the literature review, the main benefits of Blockchain technology for accounting auditing were shown, shown in Table 1.

Table 1
Benefits of Blockchain technology

Profits	Literature	Explanation
Access to information and transparency	Swan (2015); Lucena (2016); Chicarino et al (2017); Simoyama <i>et al.</i> (2017); Ferreira <i>et al.</i> (2017); Katori (2017); ICAEW (2018).	Possibility of storage in different locations and verification of the transaction history, providing greater security and speed of access to information.
Data security and trust	Zyskind e Nathan (2015); Kraft (2016); Simoyama <i>et al.</i> (2017); Ferreira <i>et al.</i> (2017); ICAEW (2018).	The fact that the data is practically immutable and the verification mechanisms increase the confidence and control of the data.
Predictive data capacity	Tapscott e Tapscott (2016); Simoyama <i>et al.</i> (2017); Ferreira <i>et al.</i> (2017); ICAEW (2018).	In addition to higher data quality, transaction history increases the data's predictive capacity.
Efficiency	Cai e Zhu (2016); Tapscott e Tapscott (2016); Simoyama <i>et al.</i> (2017); Ferreira <i>et al.</i> (2017); ICAEW (2018).	Cost reduction due to the need for less inputs and reduction of human errors.
Data quality	Tapscott e Tapscott (2016);	Immediate availability, ease of

	Lucena (2016); Chicarino et al (2017); Simoyama <i>et al.</i> (2017); Ferreira <i>et al.</i> (2017); ICAEW (2018).	transaction and reliability of the data generates a higher quality of the data.
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Source: Adapted from Alcântara *et al.* (2019).

Based on the literature, Blockchain technology offers new possibilities for auditors, namely: transparency and access to information, trust and security of data, predictive capacity of data, efficiency and a higher quality of data. These characteristics can be instruments for a more effective and efficient audit and these aspects can be better addressed if the transactions related to the audited company are visible in the Blockchains. This proposal would mean a profound change in the way audits operate (ICAEW, 2018; ACCA, 2016).

From the analysis of the relationship between each benefit of the Blockchain technology, brought by the literature, and the accounting audit procedures, Table 2 was elaborated, which shows which procedures and techniques are positively impacted by each benefit of the technology, with the purpose of illustrating that the benefits of technology help to improve the work of the accounting auditor.

Table 2

Relationship between the potential benefits of Blockchain technology and the accounting audit procedures and techniques

Profits	Procedures and techniques	Explanation
Access to information and transparency	Auditor's inquiries; Observation and inspection; Tests of transactions and balances; Circularization; Inspection of documents.	The technology would facilitate and speed up the availability of information, where the auditor can observe all the acts recorded by the technology, which would enable a quick understanding of the entity and the environment in which it is inserted.
Trust and Control	Control Tests; Analytical procedures.	Blockchain would increase trust and control of accounting data, providing an environment where the auditor would have access to reliable information, allowing for a more timely analysis of the internal controls established by the company.
Predictive data capacity	Auditor's inquiries; Substantive analytical procedures.	The transaction history increases the predictive capacity of the data, which can be used so that the auditor obtains understanding about operations, business risks, deficiencies or control risks, as well as to identify abnormal operations or balances and evolution of certain accounts.
Efficiency	Audit planning.	It could eliminate many of the manual data extraction and audit preparation activities that are time-consuming and labor intensive. Speeding up audit preparation activities would increase the efficiency and effectiveness of the reports.
Data quality	Control Tests; Analytical procedures; Circularization; Inspection of documents.	The insertion of the records in the Blockchain generates a higher quality in the data and this, coupled with the trust and control of the accounting data, produces an environment where the auditor would have access to the entire history of the information, allowing a safer and higher quality analysis, as it would have access to unalterable audit evidence.

Source: Research data (2019).

Audits are still unable to be timely, which may make it difficult to provide a basis for decision making and analysis of financial statements. An audit involves an assessment that the recorded transactions are supported by relevant, reliable, objective, accurate and verifiable evidence.

According to ICAEW, the Blockchain solution, when combined with the appropriate data analytics, could help with the transaction-level assertions involved in an audit, and the auditor's skills would be better spent considering higher-level issues (ICAEW, 2018).

According to ACCA, auditing standards are being improved to address some of these new challenges, auditors are expected to experiment with new ways of working to boost efficiency so that reporting deadlines are shortened without loss of performance. quality. There is a greater emphasis on how the audit is carried out, with a more focused focus on risks, professional skepticism, flexibility, access to information and the quality of the audit (ACCA, 2016).

3 Final considerations

Audits are still unable to be timely, which may make it difficult to provide a basis for decision making and analysis of financial statements. An audit involves an assessment that the recorded transactions are supported by relevant, reliable, objective, accurate and verifiable evidence.

Speeding up audit preparation activities can help reduce the time lag between the start of work and the issuance of audit opinion and report, which could increase the efficiency and effectiveness of accounting reports and audits, allowing these professionals to focus into more complex transaction risks.

Based on this thought, the present study analyzed the use of Blockchain technology as an instrument for accounting auditing, presenting, through a theoretical essay, the findings of national and international literature on accounting auditing and Blockchain technology.

Findings in the literature show that despite the complexities, Blockchain technology offers an opportunity to improve financial reporting and audit processes. In a blockchain world, the auditor can access data in near real time through the records in the technology, providing the information needed for the audit in a consistent and recurring format.

It was found as a potential that the widespread adoption of Blockchain can allow auditors to develop procedures to obtain audit evidence directly from Blockchains and adapt the procedures to enjoy the benefits of Blockchain, as well as address incremental risks and that, although the audit process become more continuous, auditors will still have to apply professional judgment when analyzing accounting estimates and other judgments made by management in preparing the financial statements.

As a weakness, it was found the restriction of works on the theme in the researched databases, as well as the little professional experience of the approached technology, which limited the discussion of the work.

It is believed that this work contributes to an active and continuous dialogue regarding the use of Blockchain in the audit processes, as well as the knowledge of the advantages that this technology offers to professionals in the same way that it will arouse research interest on the use. of Blockchain technology in accounting auditing. Thus, the continuity and deepening

of studies on this theme - how Blockchain technology can contribute to the control of corporate governance levels - remains as a suggestion for future research, studies and analyzes in this area of knowledge.

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