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SECURITY AND TRANSPARENCY IN FINANCIAL REPORTING: TRANSFORMATION THROUGH TRIPLE-ENTRY ACCOUNTING

Teodor M. Petrović
University of East Sarajevo, Faculty of Economics Brčko, BiH
teodor.petrovic.efb@gmail.com
ORICD: 0000-0003-4813-9127

Ljiljana Ž. Tanasić
University of East Sarajevo, Faculty of Economics Brčko, BiH
ljiljana.tanasic.efb@gmail.com
ORICD: 0000-0003-4602-3446

Željana Jovičić
University of Banja Luka, Faculty of Economics, Banja Luka. Republic of Srpska, Bosnia and Herzegovina
zeljana.jovicic@ef.unibl.org
ORICD: 0000-0002-1988-2969

Abstract: *In the contemporary business environment, traditional accounting systems, such as double-entry bookkeeping, face increasing criticism due to growing demands for transparency and security in financial transactions. While double-entry bookkeeping remains the foundation of modern accounting practices, its limitations are increasingly evident in the context of complex business operations and the need for robust safeguards against errors and fraud. This paper explores triple-entry accounting as an advanced alternative, leveraging blockchain technology to enhance transparency, security, and efficiency. By incorporating a third party into traditional T-accounts through a unique transaction identifier (hash), the system enables both accurate transaction recording and real-time verification, significantly reducing risks of manipulation and errors. Although the concept of triple-entry bookkeeping is not new, its revival is noteworthy given recent technological advancements. These innovations introduce a paradigm shift in financial reporting, with the potential to fundamentally transform business practices. Through a case study, this research examines the practical application of this system in real-world settings, highlighting both its benefits and challenges. The findings suggest that triple-entry accounting has the potential to significantly enhance existing practices, offering deeper insights into financial operations, better risk management, and increased reliability of financial statements. This study establishes a foundation for further research, paving the way for the broader adoption of advanced accounting models. Such models are essential for meeting the escalating demands of modern business complexities.*

Key words: *triple-entry accounting, blockchain technology, transaction ID (hash), transparency, security, financial reporting*

JEL classification*: M41, O33*

1. INTRODUCTION

Accounting, as a discipline essential to economic systems, has deep historical roots, evolving over more than 5,000 years. Single-entry bookkeeping, a cash-based system, records monetary inflows and outflows. While sufficient for basic financial tracking, its limited capabilities cannot address the complexities of modern business operations. In the 15th century, Italian bankers and merchants developed double-entry bookkeeping, which remains the global standard. Grounded in accrual accounting, this method enhances accuracy and

depth in financial analysis, providing a reliable foundation for business decision-making. However, even with advanced accounting software, it fails to deliver real-time insights into organizational performance an essential feature in today's fast-paced business environment.

Recent years have witnessed growing academic and practical interest in triple-entry accounting, a potentially revolutionary system underpinned by blockchain technology. Blockchain's attributes decentralization, transparency, security, and automation not only improve accountability and reliability but also introduce new paradigms in accounting (Tasca, 2019). Triple-entry accounting builds on the principles of double-entry by integrating blockchain. This innovation reduces risks of errors and fraud, automates critical processes, enhances efficiency, and lowers costs, making financial reports more accurate and relevant (Maiti, Kotliarov, Lipatnikov, 2021).

This paper examines triple-entry accounting from its conceptual origins to its current state, offering a concise case study to deepen understanding of this emerging paradigm.

The study has two key objectives: first, to review the historical evolution of accounting practices, and second, to propose a framework for implementing triple-entry accounting with a focus on real-time organizational performance reporting. While the paper does not provide definitive conclusions, it establishes a foundation for future research, paving the way for innovative approaches to accounting practices.

2. THE EVOLUTION OF TRIPLE-ENTRY ACCOUNTING: CONCEPTS AND CONTRIBUTIONS OF RENOWNED AUTHORS

Traditional double-entry accounting, which has dominated business practices for centuries, provides a structured framework for tracking financial flows. However, as global business transactions have grown more complex, its critical limitations have become evident, particularly regarding transparency and auditability. Triple-entry accounting, a relatively new paradigm in accounting theory, often generates confusion and misinterpretation. The term "triple-entry" is frequently misunderstood as involving the inclusion of a third party in accounting processes. However, the essence of triple-entry accounting lies in the introduction of an additional component within the traditional system of debits and credits, serving as a connecting element between two separate entry systems. In this context, blockchain technology emerges as a pivotal tool for the integration and management of the so-called shared ledger. Described as a "combination of the internet, private key cryptography, and consensus" (Petrović, Tanasić, Radovanović, 2022: 48), this technology not only enhances security and transparency but also offers potential applications in external audits, where separate entries can be treated as distinct entities. Table 1 provides a comparative overview of double-entry and triple-entry accounting across various segments.

Table 1. Double-entry accounting vs. triple-entry accounting

Double-entry accounting	Triple-entry accounting
Transaction recording	
Each transaction is recorded through two equal and opposite entries (debit and credit).	Each transaction is recorded through three entries—the traditional two (debit and credit) along with an additional digital certificate or record, cryptographically logged on a distributed ledger using blockchain technology.
Accounting principles	
Maintains the Accounting Equation: Assets = Liabilities + Equity	Enables a unique, shared, and immutable record in the general ledger.
Record keeping	
Records are kept privately in the company's internal journal and ledgers.	The ledger ensures transparency – all records are visible to authorized participants on the network.
Security	
Prone to errors or manipulation, as records can be altered.	Reduces the risks of fraud, hidden transactions, or manually altered previous records.
Comparative advantages	
--	Transactions can be verified in real-time by independent participants on the network. Automated reconciliation simplifies auditing and enhances regulatory compliance.

Source: Adapted from Weinberg, Faccia, 2024: 2

By integrating a third entry alongside traditional debits and credits, triple-entry accounting expands the narrative of financial transactions to include non-financial contextual data.

This innovative approach addresses key questions Who? What? Where? When? Why? for each financial exchange. Such a level of transparency not only facilitates the auditing of financial decisions and their underlying rationale but also strengthens defenses against fraud and irregularities (Grigg, 2005). Furthermore, the integration of metadata enables advanced analytics, providing deeper insights into:

- organizational performance,
- risk management, and
- operational efficiency.

In an era where trust is paramount, the transparency and evidentiary foundation offered by triple-entry accounting enhance the credibility of organizations among key external stakeholders, including investors, regulators, and auditors (Gröblacher, Mizdraković, 2019).

In other words, triple-entry accounting introduces a third entry for recording each transaction. In addition to traditional debits and credits, this third entry includes a digital certificate or record cryptographically logged on a distributed ledger such as blockchain. This provides a unique, immutable, and transparent record of transactions accessible to all authorized participants within the network (Sangster, 2016). As a result, triple-entry accounting offers significant advantages in reducing the risks of fraud, errors, and data manipulation.

An analysis of the existing literature on this topic reveals two primary research directions regarding the application of blockchain technology in accounting. The first focuses on the concept of the "third entry," while the second examines the practical aspects of implementing blockchain in accounting processes. However, attempts by some authors to merge these two approaches have yet to yield a unified and sustainable model (Faccia, Moşteanu, Leonardo, 2020).

Renowned scholars in this field have contributed to the development of various triple-entry accounting systems across different periods and geographic contexts. Each has provided a unique interpretation of the third entry, further complicating this theoretical paradigm. The following sections highlight some of the leading authors who have theorized triple-entry accounting, outlining the key characteristics shaping this emerging field.

2.1. Fedor Venediktovich Ezersky: The Russian triple-entry accounting system

Russian researcher Fedor Venediktovich Ezersky, in his 1876 book titled "Deceptions, Losses, and Errors Hidden in the Correct Balances of the Italian Double-Entry Accounting System and Revealed Signs of Loyalty in the Russian Triple System", introduced an innovative accounting approach he referred to as the "Russian triple entry". This system was based on parallel bookkeeping across three key components: a journal, systematic accounts, and an account summary. Ezersky employed three main ledgers: the capital ledger, the systematic accounts ledger, and the balance ledger (Platonova, 2015).

The primary objective of this system was to address a fundamental limitation of traditional double-entry bookkeeping inventory updates. Unlike the prevailing standard practice, where inventory values were updated only at the end of the accounting period, Ezersky proposed continuous updates after each sale. This approach aimed to eliminate discrepancies between the actual value of goods in storage and their book value.

Although Ezersky referred to his system as a "triple entry," modern researchers such as Faccia, Moşteanu, and Leonardo suggest that the term "triple ledger" might better describe his approach. They argue that Ezersky's system focused more on parallel tracking across different ledgers rather than on the modern concept of triple entry as cryptographically recorded transactions on a distributed ledger, which defines today's standard (Faccia, Moşteanu, Pio Leonardo, 2020). Ezersky's approach was ahead of its time, offering a significant step toward more accurate and transparent tracking of inventory and capital. While it did not achieve widespread adoption, his concepts laid a foundation for further exploration in the development of modern accounting practices.

2.2. Yuji Ijiri: Momentum accounting

Japanese Professor Yuji Ijiri, during the 1980s, introduced a revolutionary concept for expanding the accounting system through the addition of a third dimension, which he called "momentum" (Ijiri, 1986). Unlike traditional double-entry bookkeeping, which records only debits and credits, Ijiri proposed that triple-entry accounting should also capture the rate of change in wealth, enabling a deeper understanding not only of income but also of an organization's overall wealth and its variations over time (Petrović, Tanasić, 2023).

Ijiri defined his system by introducing a third axis into the accounting framework, aiming to enhance the traditional model without adding a new ledger. His vision was that accounts should not only reflect static states or changes (such as balance sheets and income statements) but also the speed of these changes essentially, the momentum. This approach allowed for the identification of business dynamics that traditional systems could not reveal. Unlike Ezersky, who proposed a triple ledger, Ijiri focused his concept on the structural relationships between three dimensions:

- Wealth – represented by assets and equity,
- Income – the measurement of changes in wealth,
- Momentum – the rate of change in income.

Through this framework, Ijiri sought to empower managers with a better understanding of financial state shifts within an organization, enabling more informed strategic decisions. For instance, tracking momentum could help identify potential issues or opportunities before they become apparent in balance sheets.

However, despite its innovative nature, the practical application of "momentum accounting" remained limited due to its complexity and technical requirements. Introducing an additional axis into the accounting system demands not only education and adaptation by managers but also the development of advanced technologies to facilitate real-time data collection and analysis. As noted by Faccia and Mosteanu (2019), Ijiri's model offered a theoretical framework that did not involve adding a new ledger but rather introduced a new dimension within existing accounting structures. While his concept of momentum has not been implemented in contemporary accounting practices, it continues to inspire future innovations, particularly when combined with technologies such as blockchain and artificial intelligence.

2.3. Ian Grigg: Cryptography as the foundation of triple-entry accounting

Ian Grigg, a prominent researcher in cryptography and accounting, was the first to establish the practical application of the so-called "Ricardian Contract," an innovative legal and technological tool for recording financial transactions. By merging cryptography with traditional bookkeeping, Grigg proposed a triple-entry system that eliminates the need for data reconciliation between parties and enables direct account synchronization through a shared platform. Grigg defined triple-entry accounting as "the recording of transactions for two or more parties using a shared repository structured as signature-signature-signature" (Grigg, 2005: 9). In this model, each transaction includes a digitally signed receipt, cryptographically secured and synchronized in a shared repository (a distributed ledger), after all transaction participants have applied their signatures.

Although Grigg's concept was groundbreaking, it faced practical challenges. Critics, such as Chowdhury (2021), argue that the system requires a reliable and impartial third party, which can be difficult to ensure in real-world scenarios. This reliance increases implementation risks and reduces security in cases where the third party fails to meet expectations. Grigg's system proposes the creation of a new shared ledger, similar to Ezersky's approach, but focused on the transactions of all involved parties. However, as noted by Faccia, Moşteanu, and Leonardo (2020), Grigg's model lacks a third dimension, such as Ijiri's momentum, which would add an additional layer of analysis and consideration to the accounting framework. Nevertheless, Grigg's vision remains a critical inspiration for the development of modern accounting systems, offering the potential to deliver higher levels of trust and efficiency in financial transactions.

2.4. Eric Melse: A new dimension in financial performance analysis

Eric Melse has made significant contributions to the development of triple-entry accounting theory, building on Yuji Ijiri's concept of momentum accounting. In his 2008 study, Melse introduced a three-dimensional temporal framework for measuring and analyzing corporate profitability. This approach provides deeper insights into business performance through three temporal dimensions:

- Wealth – Represents the composition of wealth, including liabilities, equity, and assets, while illustrating how wealth is acquired and utilized.
- Changes in Wealth – Identifies increases or decreases in wealth over a given time period.
- Momentum – Reflects the company's ability to generate wealth in the future, offering insights into the strength and dynamics of costs and revenues.

Melse emphasized that this three-dimensional framework enriches accounting information, enabling more precise strategic planning as well as ex-post analysis of financial statements.

In his later work from 2010, Melse further explored the potential of triple-entry accounting. Through eight case study series, he analyzed:

- The relevance of accounting variables income, wealth, and momentum,
- The explanatory power of these variables, and
- Their predictive capabilities using econometric models.

The findings indicate "the existence of a general relationship between these dimensions, though challenges persist in empirical validation" (Melse, 2010: 25).

Despite its innovative nature, the work of Ijiri and Melse faced criticism. Fraser (1993: 157) argued that "there is insufficient empirical evidence to confirm a general relationship between income, wealth, and momentum." He suggested that the valuable insights derived from triple-entry accounting might be the result of coincidence rather than a systematic predictive approach. Nevertheless, Melse's contributions significantly advanced the theory of triple-entry accounting, with a particular focus on momentum as the third dimension. His models provide deeper insights into corporate financial performance and open avenues for enhancing strategic planning.

3. ADVANCED MODELS OF TRIPLE-ENTRY ACCOUNTING

One of the significant models in accounting is the REA (Resource-Event-Agent) framework, developed as an enterprise information system model by William E. McCarthy (1982) and further refined by Geerts and McCarthy (2006). The REA model supports traditional double-entry accounting artifacts such as balance sheets and income statements (Gal and McCarthy, 1986). However, its primary aim is to replace the classical double-entry bookkeeping system with an information system integrated across all functional areas of the enterprise, extending beyond the accounting sector. With the advent of the internet, the REA model has been expanded to encompass multiple business entities within a trading community, introducing inter-company accounting through a shared ledger system. This approach focuses on integrating enterprise information systems via interconnected ledgers among different entities (Ibañez, Bayer, Tasca, Xu, 2020). Nevertheless, the REA model is not fully compatible with AIS/ERP systems (Accounting Information Systems and Enterprise Resource Planning) as it seeks to replace rather than integrate existing systems, limiting its applicability within established accounting infrastructures.

X-Accounting, developed by Alessio Faccia, builds upon the concepts of the REA model by incorporating blockchain technology and artificial intelligence. This model introduces an innovative "triple-axis" system aimed at enhancing accountability, transparency, and data integrity. Additionally, it provides capabilities for process automation and real-time analytics (Faccia, Moşteanu, Leonardo, 2020).

3.1. X-Accounting: The triple axis of modern accounting

Unlike traditional accounting methods, X-Accounting employs a triple-axis framework for recording and tracking transactions, thereby overcoming the limitations of double-entry bookkeeping. This model integrates additional data into transactions, enabling a more comprehensive view of business processes. Blockchain, as a central component, ensures the immutability and security of records, while artificial intelligence facilitates the analysis of large datasets to identify irregularities and optimize workflows.

Grigg laid the foundation for using blockchain in triple-entry accounting by introducing dual signatures for each transaction prior to its entry into a shared ledger. However, his models do not incorporate a third axis, which would allow for cross-verification and enhanced protection of transactions. The inclusion of an additional axis is a natural progression for enabling cross-identification and safeguarding each transaction, rather than merely ensuring the balance of accounts in a double-entry system. This approach guarantees the full replication of the transaction with the external party involved (Table 2).

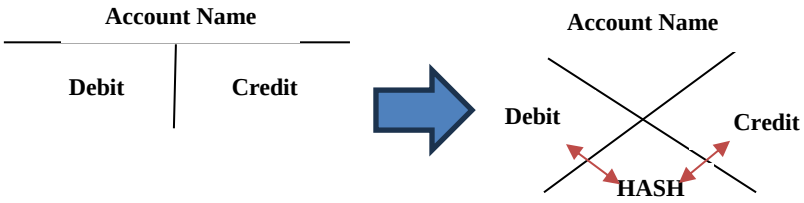
Table 2. Evolution of triple entry

Fedor Esersky **Ruski trojni unos**	**Yuji Ijiri** **Momentum računovodstvo**	**Ian Grigg** **Knjigovodstvo trojnog unosa**	**Alessio Faccia** **X-Accounting**
3 accounting ledgers	*2 accounting ledgers*	*3 accounting ledgers*	*3 accounting ledgers*
Journal	General ledger	General ledger	General ledger
Systematic accounts	Journal	Journal	Journal
Account summary	--	Shared ledger	Shared ledger
2 accounting axes	*3 accounting axes*	*2 accounting axes*	*3 accounting axes*
Debit	Debit	Debit	Debit
Credit	Credit	Credit	Credit
--	Momentum	--	HASH

Source: Adapted from Faccia, Moşteanu, Leonardo, 2020: 3

Adding a new axis to the account structure necessitates modifying its traditional "T-Account" format into a more complex "X-Account" configuration (Figure 1). This third axis, referred to as the "X-Account" (i.e., the unique transaction identifier or hash), links each transaction to its digital signature, ensuring its validity and transparency through a cryptographically secured shared ledger (Faccia, Mosteanu, 2019). The blockchain hash provides an immutable, time-stamped record, making every transaction transparent and easily accessible to all relevant parties. The integration of artificial intelligence further simplifies accounting processes by automating routine tasks and enabling continuous auditing. This combination enhances efficiency, accuracy, and the overall reliability of financial records.

Figure 1. From the "T-Account" to the "X-Account"



Source: Adapted from Faccia, Moşteanu, Leonardo, 2020: 3

Today, organizations utilize sophisticated accounting software based on the principles of double-entry bookkeeping.

However, these systems are unable to provide real-time insights into business operations (Maiti, Kotliarov, Lipatnikov, 2021).

This limitation is significant, as businesses increasingly demand transparency and real-time information about their future financial position. The transition to a triple-entry accounting system remains challenging and is currently more of a conceptual exercise for theorists, with case studies being almost entirely isolated.

Nevertheless, the following discussion aims to outline the potential architecture of a triple-entry accounting system.

3.2. Practical example of the application of the X-Accounting model

Let us examine the following case study on the X-Accounting model. In September 2024, Company "P" conducted the following transactions:

1) September 1, 2024: Company "P" issued Invoice No. 42/24 for transportation services rendered to Company "T" in the amount of 2,000.00 KM, plus 340.00 KM VAT.
2) September 10, 2024: Company "T" made a partial payment of 1,200.00 KM on Invoice No. 42/24 (NLB Bank Statement No. 15).
3) September 20, 2024: Invoice No. 61/24 was received from lessor "J," and rental expenses of 500.00 KM, plus 85.00 KM VAT, were paid as per NLB Bank Statement No. 29.
4) September 30, 2024: A cash withdrawal of 100.00 KM was made from the transactional account and deposited into the cash register (NLB Bank Statement No. 43).

This case study illustrates the operational aspects of the X-Accounting model through real-world transactions.

Now, assume that all three companies ("P", "T" and "J") hold transactional accounts at the same bank (e.g. NLB Development Bank), allowing us to identify four distinct entities that must access the integrated system (on a blockchain platform) to approve only the transactions in which they are directly involved. As demonstrated in the general ledger accounts (subsequent overview), each transaction adheres to the principles of double-entry bookkeeping.

However, in addition to the transaction date, each entry is linked to a sequentially assigned hash a unique identifier specific to that transaction. Among the four entities participating in the transactions, not all (except for Company "P") are involved in approving every transaction. Instead, they participate only in those directly relevant to them.

The approval process requires the application of a digital signature (e.g. smart cards) accompanied by an automatically generated timestamp.

Accounting entries at Company "P"

201 – Customers from the Republic of Srpska (RS) („T“)

1) 0109.’24. **2.340,00**	**1.200,00** 10.09.’24. (2

HASH

1) a1b2c3d4e5f6g7h8i9 01.09.’24.
2) j9k8l7m6n5o4p3r2s1 10.09.’24.

241 – Transactional account - domestic currency

0) 01.09.’24. **X**	**585,00** 20.09.’24. (3a
2) 10.09.’24. **1.200,00**	**100,00** 30.09.’24. (4

HASH

2) j9k8l7m6n5o4p3r2s1 10.09.’24.
3a) 444ddd555eee666fff 20.09.’24.
4) ggg999hhh888iii777 30.09.’24.

246 – Cash register - domestic currency

4) 30.09.’24. **100,00**	

HASH

4) ggg999hhh888iii777 30.09.’24.

270 – VAT on received invoices

3) 20.09.’24. **85,00**	

HASH

3) aaa111bbb222ccc333 20.09.’24.

432 – Suppliers from RS ("J")

3a) 20.09.’24. **585,00**	**585,00** 20.09.’24. (3

HASH

3) aaa111bbb222ccc333 20.09.’24.
3a) 444ddd555eee666fff 20.09.’24.

470 – VAT on issued invoices

	340,00 01.09.’24. (1

HASH

1) a1b2c3d4e5f6g7h8i9 01.09.’24.

533 – Rental expenses

3) 20.09.’24. **500,00**	

HASH

3) aaa111bbb222ccc333 20.09.’24.

621 – Revenue from services provided in RS

	2.000,00 01.09.’24. (1

HASH

1) a1b2c3d4e5f6g7h8i9 01.09.’24.

Accounting entries at Company "T"

531 – Transportation service costs

1) 01.09.’24. **2.000,00**	

HASH

1) a1b2c3d4e5f6g7h8i9 01.09.’24.

270 – VAT on received invoices

1) 01.09.’24. **340,00**	

HASH

1) a1b2c3d4e5f6g7h8i9 01.09.’24.

432 – Suppliers from RS ("P")

2) 10.09.’24. **1.200,00**	**2.340,00** 01.09.’24. (1

HASH

1) a1b2c3d4e5f6g7h8i9 01.09.’24.
2) j9k8l7m6n5o4p3r2s1 10.09.’24.

241 – Transactional account - domestic currency

0) 01.09.’24. **X**	**1.200,00** 10.09.’24. (2

HASH

2) j9k8l7m6n5o4p3r2s1 10.09.’24.

Accounting entries at Company "J"

201 – Customers from RS ("P")

3) 20.09.’24. **585,00**	**585,00** 20.09.’24. (3a

HASH

3a) 444ddd555eee666fff 20.09.’24.

470 – VAT on issued invoices

	85,00 20.09.’24. (3

HASH

3) aaa111bbb222ccc333 20.09.’24.

241 – Transactional account - domestic currency

0) 01.09.’24. **X**	
3a) 20.09.’24. **585,00**	

HASH

3a) 444ddd555eee666fff 20.09.’24.

621 – Revenue from services provided in RS

	500,00 20.09.’24. (3

HASH

3) aaa111bbb222ccc333 20.09.’24.

Knjiženje kod NLB banke

400 – Transactional deposits of company "P"	
3a) 20.09.'24. **585,00**	**1.200,00** 10.09.'24. (2
4) 30.09.'24. **100,00**	
HASH	
2) j9k8l7m6n5o4p3r2s1 10.09.'24.	
3a) 444ddd555eee666fff 20.09.'24.	
4) ggg999hhh888iii777 30.09.'24.	

400 – Transactional deposits of company "T"	
2) 10.09.'24. **1.200,00**	
HASH	
2) j9k8l7m6n5o4p3r2s1 10.09.'24.	

400 – Transactional deposits of company "J"	
	585,00 20.09.'24. (3a
HASH	
3a) 444ddd555eee666fff 20.09.'24.	

001 – Cash register	
0) 01.09.'24. **X**	**100,00** 20.09.'24. (4
HASH	
4) ggg999hhh888iii777 30.09.'24.	

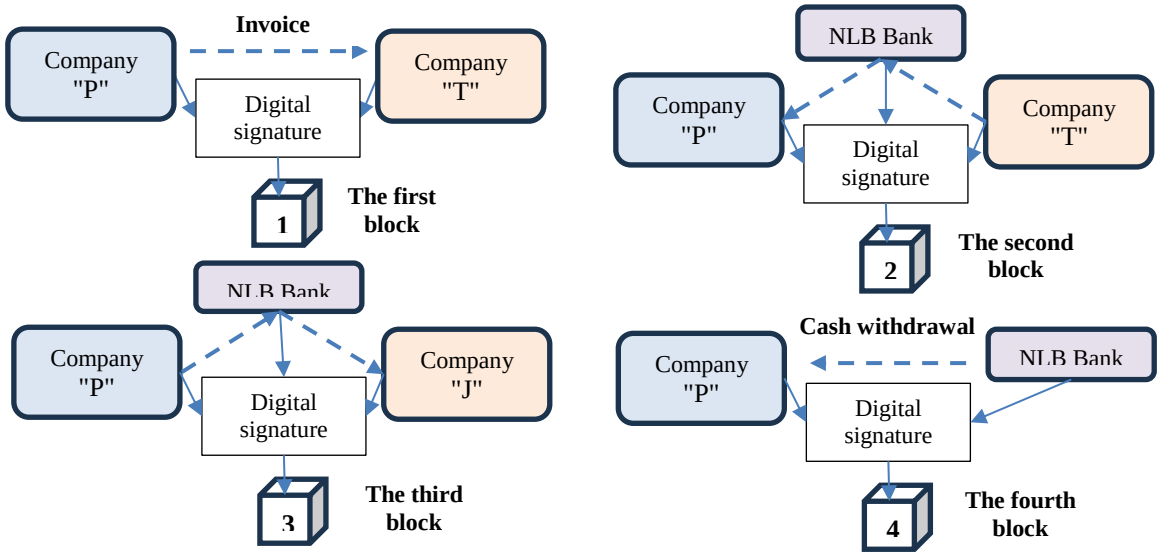
This practical demonstration of accounting integrated into a blockchain system serves as proof of concept, showcasing its feasibility while significantly extending the boundaries of double-entry bookkeeping. However, it also underscores the need for enhanced collaboration between engineers and accounting and finance professionals. Specifically, IT engineers must possess financial literacy to comprehend transaction mechanics, while accountants must acquire knowledge of the underlying technologies driving this system.

The company "P" and its partners (companies "T" and "J", along with NLB Bank) utilize blockchain for automatic synchronization and approval of transactions.

Each transaction involves the following (Figure 2):

- Transaction 1: Issuance of an invoice for services: Company "P" – Company "T".
- Transaction 2: Partial invoice payment: Company "T" – NLB Bank – Company "P".
- Transaction 3: Payment of rental expenses: Company "P" – NLB Bank – Company "J".
- Transaction 4: Cash withdrawal: NLB Bank – Company "P".

Figure 2. The signing process in the X-Accounting system



Source: Authors

A hash can only be assigned if all parties involved in a given transaction approve it by applying their digital signatures, along with the associated timestamp. The absence of a hash could indicate one of two scenarios: (a) negligence or delay by one of the parties in providing their digital

signature, or (b) the identification of an error by one of the parties, resulting in their refusal to approve the transaction. The absence or delay in obtaining hashes, which may occur asynchronously, does not pose an issue from an accounting perspective. The recording process can continue using the double-entry system. Missing hashes can be added later, or adjustments can be made to correct inaccurate entries (Faccia, Moşteanu, Leonardo, 2020: 4).

CONCLUSIONS AND RECOMMENDATIONS

The introduction of triple-entry accounting marks a significant advancement in the development of contemporary accounting practices, particularly in response to increasing demands for transparency, security, and efficiency in financial reporting. Traditional systems, such as double-entry bookkeeping, remain the foundation of accounting practices but increasingly reveal their limitations in modern business environments. Triple-entry accounting, based on blockchain technology, integrates a third entry into the transaction recording process, utilizing cryptographically secured records as a pivotal element. This innovation not only enhances the accuracy and reliability of financial data but also enables real-time transaction verification, a critical feature for contemporary organizations. The benefits of this model are manifold: reduced risks of fraud and errors, improved transparency and efficiency, and substantial enhancements to audit processes. Moreover, triple-entry accounting simplifies compliance with regulatory requirements and strengthens the trust of external stakeholders, including investors and auditors. However, this paper also highlights the challenges associated with implementing this innovative approach. Key issues include high initial implementation costs, significant technological requirements, and the need for additional education and training for accounting and finance professionals. Despite these challenges, triple-entry accounting provides a foundation for a new paradigm in financial reporting, capable of fundamentally transforming how modern organizations conduct business. Future research should focus on developing practical implementation models, adapting existing accounting systems, and creating regulatory frameworks to support broader adoption. Particular attention should be directed towards exploring the integration of artificial intelligence and other advanced technologies to further enhance this model. In this way, triple-entry accounting could become a vital tool for ensuring the long-term sustainability and improvement of global financial practices, offering deeper insights into financial operations and enabling more transparent and accountable decision-making processes.

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