

INNOVATIVE PARADIGM OF ACCOUNTING DEVELOPMENT FOR MANAGEMENT

ІННОВАЦІЙНА ПАРАДИГМА РОЗВИТКУ ОБЛІКУ ДЛЯ УПРАВЛІННЯ

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The article discusses current accounting and reporting methods. The author analyzes alternative digital means of payment, typology of cryptocurrencies, their use and volatility. A new paradigm of accounting has been introduced, which is aimed at fulfilling the tasks necessary for the development of the modern economy, based on the need to overcome the periodic crisis phenomena existing in it. Prospects for the development of accounting science to enhance the synergistic effect of information support of the management system are identified. The article proposes a modern paradigm for the development of accounting for management. The place and role of the innovation strategy is determined, and the possible elements of the innovation strategy and their alternatives are considered.
Key words: blockchain; cryptocurrency; accounting; reporting; paradigm; innovation; management; COVID-19.

У статті розглянуто сучасні методи ведення бухгалтерського обліку та звітності. Проаналізовано історичний розвиток застосування парадигмальної концепції в бухгалтерському обліку. Виділено групи факторів, які можуть впливати на виникнення нових парадигм бухгалтерського обліку. Проаналізовані альтернативні цифрові засоби платежу, типологію криптовалют, їх використання. Запроваджено нову парадигму бухгалтерського обліку, яка спрямована на виконання завдань, необхідних для розвитку сучасної економіки, виходячи з необхідності подолання наявних у ній періодичних кризових явищ. Визначено перспективи розвитку облікової науки для посилення синергетичного ефекту інформаційного забезпечення системи управління. У статті запропоновано сучасну парадигму розвитку управлінського обліку. Визначено місце і роль інноваційної стратегії, розглянуто можливі елементи інноваційної стратегії та їх альтернативи. Виявленні тенденції розвитку складників інноваційного потенціалу, що полягає у дослідженні процесів управління та впровадження інноваційних технологій. Обґрунтована обрана та відповідно змістовно наповнена стратегія інновацій. Визначена чітка типологізація та детальна декомпозиція інноваційної стратегії за різними її складниками. Обґрунтовано особливості розвитку системи бухгалтерського обліку в умовах глобалізації економічних процесів. Проаналізовано складові елементи. Розглянуто сучасні парадигми розвитку обліку та висвітлено питання основних тенденцій розвитку бухгалтерського обліку. Визначені основні напрями використання інновацій для обґрунтування особливостей розвитку системи бухгалтерського обліку в умовах глобалізації економічних процесів. Проаналізовано складові елементи. Викладені інновації як стратегія розвитку бухгалтерського обліку для управління. Розглянуто парадигму, що включає методичні функції організації загальноприйнятої та зрозумілої системи наукових поглядів розвитку обліку для здійснення управління.
Ключові слова: блокчейн; криптовалюта; облік; звітність; парадигма; інновації; управління; КОВІД-19.

Statement of the problem in a general form and its connection with important scientific or practical tasks. Society and business cannot exist without an accounting system that collects facts about the financial and economic activities of business at the microeconomic level and turns them into useful information for the management of the enterprise. However, the existing model of

unified accounting has become obsolete due to its use of only one method of double entry, ignoring the unlimited possibilities of data collection and processing and obtaining information using modern computer technology - cloud computing, artificial intelligence, blockchain and others, which requires a new paradigm. The results of the analysis of the historical process of development of science and

practice of accounting knowledge in Ukraine show its inconsistency with the conditions of the economic system, which is formed after 1991. The accounting paradigm retains the features of a bygone era. It is based on the ideology of manual data processing and obtaining information in monetary terms for the enterprise. This information allows you to support only the function of financial management. For the management of economic activity at the operational and strategic levels, accounting gives almost no messages, so a new one should replace the old paradigm of accounting.

Analysis of the latest research and publications in which the solution to this problem was initiated and on which the author relies. Analysis of scientific publications of domestic researchers allowed us to conclude that there are innovative forms of reporting that are developing in accordance with modern management concepts:

- Management reporting, which contains credentials at the request of a specific user to justify the best alternative management options, providing communicative interaction between the control and managed subsystems of the enterprise system. Depending on the organizational, technological and economic features of the enterprise, the purpose of internal management reporting can be specified through a unique taxonomy for a particular task [1, p. 271-273];

- Social reporting provides a symbiosis of financial and non-financial indicators in a single model with a focus on ensuring timely fulfillment of obligations to stakeholders. The taxonomy of social reporting is defined by SA 8000 «Social Accountability» and AA 1000 (Account Ability 1000) and its formation requires an individual approach. It should be noted that there is no clear position on the general title of social reporting. In world and domestic practice, such definitions are used as «social report», «Corporate Social Responsibility Report», «Corporate Responsibility Report», «progress report». (Progress Report), «Sustainable Development Reporting» [2, p. 15; 10, p. 80-83];

- Environmental reporting, the emergence of which is due to the need to move from profitable business to environmentally responsible with priority indicators to assess the performance of the following aspects: the results of corporate environmental policy, staff involvement in environmental initiatives, environmental cleanliness of finished products and environmental management system [3, p. 77-78; 22, p. 140-143];

- Integrated Reporting, the main purpose of which is to disclose system information that enables external stakeholders to form an understanding of the company's ability to create added value (value) in the short, medium and long term through financial, industrial, intellectual, human, social and natural

capital. By issuing integrated reports, companies strengthen the business reputation, trust and confidence of stakeholders, as well as the legality of their operations [4, p. 174].

The latest accounting paradigms, in particular the paradigm of international accounting and the paradigm of accounting for the economy of harmonious development, imply the need to improve reporting, as well as expand additions and clarifications in accordance with the requirements of the institutional environment.

In addition to the impact on individual reporting items and the assessment of business continuity, the current situation should be reflected in the description of the business environment in which the company operates (for example, this disclosure may contain the following information: COVID-19 outbreak and brief, impact on the economy in general and the enterprise in particular, etc.).

Under IFRS, management should evaluate the appropriateness of the going concern assumption at each reporting date, considering all available information about the future. Such an assessment should cover at least the next 12 months. The outbreak of COVID-19 has significantly worsened economic conditions for many companies and increased economic uncertainty for others. Management needs to assess whether these events and conditions may cast significant doubt on the company's ability to continue as a going concern and, in particularly complex cases, on whether the going concern assumption is applicable to the company.

Assessing business continuity is usually based on budgets and forecasts for the future. In the current situation, the budgets drawn up in 2020 for 2021 will in many cases no longer be relevant and will require significant revision. This may relate to expected sales volumes and prices, gross margin, changes in working capital, the effect of exchange rate differences, and so on. It is important that the assessment of management considers different scenarios, including a reasonably likely scenario of deterioration [5, p. 16].

Object, subject, and methods of research. Computerization of tasks performed by people reduces the labor costs associated with the creation of financial statements, eliminates human error, improves quality and reduces the risk of non-compliance, reduces the time to prepare financial statements. It is expected that the digital reporting system will eliminate duplication when submitting information to different authorities for identical or similar forms of reporting, depending on the requirements of regulators or regulatory authorities, as it provides for a single window for electronic reporting, accessible to all supervisors' enterprise.

Regarding accounting methods in the digital economy, it is advisable to abandon the stereotypes

of their perception as something once and for all decided, static and inviolable. While maintaining the methodological core of accounting, it is important to develop and expand the range of methods used, while ensuring their compliance with both traditional and new tasks of accounting.

The interest in blockchain technology, which is changing the world as much as the Internet once did, on the part of all civilized nations and international institutions is growing every day. The list of leaders in its implementation includes France, Brazil, Israel, Australia, Canada, the UAE, Georgia, Great Britain, the United States, Germany and Estonia. Ukraine is no exception, for which the scale and pace of digital transformation should become key characteristics of the country's development, and since 2016 this technology has been gradually introduced in various industries.

Innovative technology emerged as part of the invention of Satoshi Nakamoto (1991), which was to create Bitcoin - a new decentralized electronic cash register system that uses a peer-to-peer distributed network to prevent double use of funds [5]. The fact is that the circulation of digital funds requires a network of payments with accounts, balances and transactions. One of the main problems that every payment network has to solve is to ensure that the payment is non-refundable, or to prevent so-called double costs, when the business re-spends the same amount.

A blockchain is a distributed data register that stores information about each transaction made in a closed peer-to-peer system. The data is stored as a sequence of blocks (hence the name - blockchain) with records of transactions. They cannot be forged, as each new entry confirms existing chains. To change certain data, you need to change the information in all other blocks. In this case, as the system is distributed, the current information about the records in it is stored by all its members and is automatically updated when any changes are made.

Current digital technologies, and above all, the blockchain, can be seen as a prerequisite for a revolution in accounting methods, in particular, the system of accounting registration of business transactions. «Instead of creating and locally storing individual transaction records, entities can record them in a consolidated register, creating a distributed and interconnected system of reliable accounting information,» Deloitte said in a statement. «Because all records are distributed and cryptographically protected, their falsification or destruction becomes virtually impossible. Bitcoin Magazine calls it a triple account» [6]. It is a method of registration and storage of the database of economic facts, which can be developed into a database of generalized data, financial and non-financial reports and filters of their reliability, as an information resource of the global information economic environment.

An integral part and important attribute of the digitalization of the new economy is the accelerated development of the crypto industry, which led to the emergence of cryptocurrencies (Blockchain 1.0), and later other types of tokenized assets (Blockchain 2.0). There is a growing interest in society in this type of information technology products, as evidenced by the growing number and volume of mining, issuance, placement, acquisition, alienation and implementation of other agreements with them.

Even though cryptocurrencies operate in a non-physical dimension that can only exist in digital format, as well as for use as a means of payment, they have created an extremely dynamic, fast-growing investment and speculative market, trading above European stock exchanges [7].

Compared to traditional assets, the volatility of cryptocurrency is quite high. If the average daily volatility of fiat money, as a rule, does not exceed 3-4%, then for cryptocurrencies exchange rate fluctuations within 20% are acceptable, sometimes they reach 50%, and in some cases during the day exchange rate fluctuations exceed 100% [7]

According to the KPMG report, there are currently more than 2,000 significant crypto assets, however, many of them do not actually have a related functional product [8]. Crypto assets can be classified according to various criteria (purpose, functions, valuation models), however, the most important of them are: the purpose (origin) of the asset and how its value is formed.

The use of cryptocurrencies helps speed up payments, access to financial resources, increase business activity, and open new business opportunities. However, the official use of cryptocurrencies in the economy remains unregulated, and the crypto industry is in dire need of institutionalization.

Accounting, as a business language, must master this latest «lexicon», work with new categories and objects to adequately reflect this economic reality, both in its own accounting system and in financial reporting, to ensure their sufficiently transparent disclosure of in order to meet the information needs of users. At the same time, the theory and practice of accounting are in a fairly strict system of regulation and focused on activities under current legislation, subject to certain rules and principles established by international or national accounting standards. These issues were discussed at meetings of various levels of national and international councils on accounting and financial reporting, no official document on this issue has yet been adopted. [9, p. 295]. Therefore, the state of cryptocurrencies, as potential objects of the accounting and reporting system, remains completely uncertain.

The problem of recognizing cryptocurrencies (cryptocurrencies and other non-cryptocurrencies, tokenized assets) as objects of accounting becomes especially relevant, as they have somewhat different characteristics from traditional assets. To correctly reflect the operations with crypto tokens in accounting, an appropriate regulatory framework is required. Based on its current state, it is necessary to solve the following problems: recognition of crypto objects as assets that meet the established requirements in their characteristics; in terms of documentary evidence of business transactions with cryptocurrency and other cryptocurrencies; finding out the type of assets to which certain tokenized assets should be attributed; determining the method of valuation of cryptocurrencies in order to ensure accurate reflection of the value of their value.

Due to the fact that there are no special directives (accounting standards) that would directly relate to cryptographic assets and sufficient industry practice has not been developed, when developing an accounting approach, entities should refer to current international standards of IAS and IFRS and apply the established their basic approaches [10]. That is, existing standards may apply to cryptocurrencies in accordance with paragraph 7 of International Accounting Standard 8 (IAS 8), Accounting Policies, Changes in Accounting Estimates and Errors, which requires the use of a specific IFRS, if applicable.

Crypto assets can demonstrate certain characteristics of assets that belong to different groups of assets (classes of accounts). For example, the name of the term «cryptocurrency» suggests that this asset should be treated as a currency; however, this does not mean that cryptocurrency is necessarily cash or cash equivalents. Cryptocurrency combines the characteristics of such types of assets as cash and cash equivalents, goods, financial instruments, intangible assets, investments [11, p. 78]

It should be noted that the construction of the accounting system is determined by the type of activity of the entity, the purpose and method of obtaining the asset and its purpose for further use. It is one thing for holders of cryptocurrency stocks purchased from third parties to be accounted for, and it is another to register with entities engaged in mining or initial offers of coins (coins) or tokens (tokens, tokens). Certain specifics will be the registration of cryptocurrency holders as investors, intermediaries or agents. Therefore, in each case, a certain special approach should be applied, considering all the circumstances, the characteristics of both the crypto asset and the market for it.

Results. Thus, due to their digital nature and ambiguity of features, as well as depending on the purpose of their acquisition and the expected period of use, the possibility of unambiguous classification of cryptographic objects to a particular type of asset

(and not only in the balance sheet asset but also in its liabilities) in the accounting system is a rather complex methodological problem. In many cases, the answer to the question of assigning a certain asset to the appropriate group can be both positive and negative, or uncertain.

As interest in the crypto industry grows so will the number of intermediaries interested in buying, selling and storing these assets. This increases the importance of implementing prudent accounting policies and ensuring their consistent application to such transactions, as well as appropriate disclosure in the financial statements to inform users.

In the absence of special standards and directives, in order to identify the crypto received in exchange for goods or services, a particular type of asset and accurately assess it, companies need to make decisions based on professional judgment or seek professional help. It may be necessary to consider information from many sources to determine the fair value of a retained crypto. There is no doubt that each crypto asset must be considered according to its specific characteristics.

However, the practice of applying IASs and IFRSs, which were created before the digital economy and did not involve cryptographic assets, does not help to reflect cryptocurrencies in accordance with their economic substance and provide quality information for users of financial statements. This new and innovative direction would benefit significantly from the revision of current accounting and reporting standards. The display of new objects of accounting requires not just the addition of existing methods, but the formation of new principles of systematization and taxonomy, highlighting the criteria for their recognition, metrics, descriptors and principles of reflection in the accounting system.

There are a number of other significant issues that need further research. It can be argued that the current accounting system is completely unprepared to adequately reflect the facts that will soon become common practice, not to mention the full transition of accounting to future blockchain technologies, and regulators are still determined by acceptable accounting approaches. However, information technology and virtual markets continue to grow rapidly.

The expansion of the information potential of the objective economic space leads to the development of theory and improvement of accounting practices. The set of trends and factors of accounting in the digital economy determine the accounting methodology, principles, procedures, content and characteristics of the information product, internal structuring, selection and integration, identification and systematization of accounting objects, establishing criteria for their recognition and taxonomy.

Theoretical studies were embodied in the development of methodological recommendations, the practical implementation of which will contribute to the effective implementation and development of the accounting system [12, p. 85-86].

Digital financial reporting frees both professional accountants who generate these reports and financial analysts and regulators who use the information from these reports from tasks such as assessing the quality of the material substance and providing formal objective aspects such as logical and mathematical consistency of report indicators, which will allow professional accountants and users to focus on professional judgments and other subjective aspects that cannot be automated [13, p. 117].

Conclusions from this study and prospects for further research in this direction. Thus, without revolutionary changes in the paradigm, accounting is doomed to remain a craft or, at best, the art of writing in books and reporting forms. Prospects for the development of accounting science is impossible without a reorientation from the stereotypical set of rules of data processing for financial reporting to the system of obtaining information at the intellectual level for management. For such a reorientation, the formation of a developed accounting theory based on the principles of the theory of cognition and computer science becomes an urgent problem.

Significant technological and informational changes caused by digitalization of the economy, as well as the growth of information potential of the economic space stimulate the modernization of accounting science, contribute to the development of methodology and organization of the accounting process, raise the issue of accounting system.

In the development of the information, society and digital economy there are a number of prerequisites for the formation of a new paradigm of accounting, the outlines of which are just emerging, so it is important to further scientific achievements in this area.

The COVID-19 outbreak and the risks associated with it have a material impact on companies' accounting and financial reporting. At the same time, the impact is not limited to companies in the most vulnerable industries, as the impact on the economy as a whole is significant, and the high degree of uncertainty significantly complicates forecasting the future. The areas of focus analyzed above are likely to be relevant to a large number of companies. However, this list is not exhaustive and, depending on existing transactions, selected accounting policies and many other factors, may have a significant effect on other areas (e.g. fair value measurement, recognition of reserves, accounting for state aid, valuation of deferred tax assets, accounting for leased assets and liabilities, etc.).

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