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THE ECONOMIC SUBSTANCE OF ACCOUNTING FOR FINANCIAL INVESTMENT AND THE PROSPECT OF USING “BLOCKCHAIN” TO CONTROL INVESTMENT ACTIVITY IN UKRAINE

The **subject** matter of the research is the financial investment and the application of innovative technologies to improve accounting in the context of investment management as one of the most important components of economic development. The **goal** is to study the methodology of reflecting financial investments of domestic enterprises. The **objectives** are to improve accounting of financial investments in the enterprise, to research the development prospects of accounting by introducing innovative technologies through the disclosure of theoretical aspects of research and the estimation of practical aspects of the study, the possibility of using the technology of blockchain in Ukraine to improve the financial reporting taking into account the experience of international partners (foreign countries). The **methods** used are system analysis and structural analysis. The following **results** are obtained. The state of investment accounting was analyzed and the prospects of using blockchain technology for improving auditing efficiency, increasing the transparency of financial investments and for counteracting corruption were found. **Conclusions.** During the analysis of the cause and effect relations of using innovative technologies in accounting, the immaturity of the existing accounting methodology was shown; this immaturity specifies incompleteness, the decline in the adequacy of accounting data in accordance with the realities of investment processes and the development of the industry as a whole. The use of blockchain technology enables restructuring the processes of accounting and their automation and increases the level of transparency of information disclosure by enterprises. Using blockchain for auditing becomes a unique solution as auditing affects all industries and is the foundation that helps global financial markets gain investor confidence. Taking into account the economic problems of Ukraine, the use of blockchain technology will help solve the problems of corruption and capital legalization. Relevant actions will improve the investment climate of Ukraine in the long run.

Keywords: accounting, financial investment, investing, accounts, blockchain, transaction.

Introduction

Investments are an essential factor in the economic development of each enterprise and the source of fixed assets. Financial investment helps distribute and apply investment resources that are the world largest ones. Due to the acceleration of the globalization, the investment sphere has been significantly revived over past decades, which conditioned the transformation of economic mechanisms, the development of business processes of enterprises and caused the urgent need for a qualitative change in the old economic means and the necessity for new innovative ones. In addition, based on the fact that the investment activity belongs to the riskiest types of business, the main problem of development of the innovation sphere in Ukraine is the lack of financing current and prospective activities of enterprises. The most significant factors that stream the activities of enterprises is incomplete and non-objective disclosure of information on investment processes in accounting and financial reporting, the lack of the innovative technologies such as “blockchain”.

To control innovation activity, the theoretical and methodological foundations of accounting for the investment processes of enterprises should be improved.

The analysis of basic literary sources and studies

Some issues of accounting the financial investments of private enterprises are analyzed in the works written by V. Gradiasov [1], A. Peresada [2], Yu. Veryga [3], V. Goncharov [4], A. Makhota [5], E. Mnykha, V. Sopko and others. However, they all considered these issues in general and did not pay enough attention to the rapid development of financing and the complication of

accounting methodology. This work practically studies the relation and prospects of using the “blockchain” technology to improve accounting and auditing in Ukraine.

The presentation of main material

Investing is an integral part of the development of any economic system. According to the Law of Ukraine “On Investment Activity”, investments are all types of property and intellectual property that are invested in objects of entrepreneurial activity and other activities that lead to generating (income) and/or achieving social and environmental effect [6].

The main methodological principles for the formation of financial information on joint actions in accounting and its disclosure in financial reports are determined in accordance with Accounting Principle (Standard) 12 “Financial investments” [7].

The organization of accounting should be rational, that is to stick to the systematic approach, take into account the interaction of different types of accounting and obey the general plans of operational and strategic management of the enterprise; comply with the requirements of the current legislation, particularly the Laws of Ukraine “On Investment Activity” “On the Treatment of Foreign Investments”, “On Accounting and Financial Reporting in Ukraine”, the Concept “Regulation of Investment Activity in the Conditions Of Market Transformation of the Economy”; Accounting Principles (Standards) 7, 12, 19 [8].

Table 1 shows the definitions of the term “financial investments” given by different sources of economic literature.

Table 1. Scientific views on the notion “financial investments”

Authors	Interpretation of the concept
V. Gradiasov, S. Kravchenko, O. Isaeva [2, p. 102]	Means of providing The mechanism for funding the growth and development of the country economy; it is an instrument in which money can be invested to save or multiply it.
A. Peresada [1, p. 112]	Investing in various financial instruments (paper holdings, bank deposits, currency, precious metals and stones).
Yu. Veryga [3, p. 79]	These are assets held by an enterprise to increase profits, cost of capital or other benefits to an investor.

When accounting for financial investments, their division into current and long-term ones should be taken into account.

Current investments are securities in the form of bonds, shares, treasury obligations, deposit certificates, the maturity of which does not exceed 12 months or investments for profit for no longer than 1 year.

Long-term financial investments are investments that cannot be realized at any time or with the maturity of more than 12 months (shares, deposit certificates, charter capital of other enterprises, etc.) [8].

When accounting for financial investments, the purpose of acquiring investments (selling, making a profit as a result of participating in the capital of another enterprise, etc.) should be taken into account as this affects their further use and reflection in the financial records.

Financial investments as at the balance date are estimated according to the following types of value: fair, amortized, the method of capital participation.

In practice, the following financial instruments that are the objects of financial investment are identified [4]:

1. Basic (shares, domestic and foreign government bonds, local loan bonds, enterprise bonds, government treasury bonds, investment certificates, commercial papers);

2. Derivatives (contracts using derivatives, options, depositary receipts, etc.).

At the enterprises of Ukraine, the organization of accounting for financial investments includes various types of accounting: primary, synthetic and analytical.

Primary accounting helps enterprises to obtain the necessary information for making financial records of any business entity. It includes processing a number of documents (depending on the type of financial investment): a cash receipt, bank certificate, a statement of accounts.

Analytical accounting provides detailed information on the movement of various economic means; it is built for each synthetic account separately. It is maintained in the relevant accounts. Analytical accounting is maintained in Statement 4.2., where is the verification of data on investments in associated and subsidiary enterprises and enterprises with common activities. Data on long-term and current financial investments is compiled separately.

Financial investments while accounting are reflected on the following statements

1) 14 “Long-term financial investments” (sub-accounts – 141 “Investments in related entities on the equity method of accounting”, 142 “Other investments in

related entities”, 143 “Investments in unrelated entities”). The cost of long-term investments – on debit account 14, disposal/decrease in value – on loan. Besides, credit involves obtaining dividends if the equity participation method for accounting financial investments [9];

2) 35 “Current financial investments” (sub-accounts – 351 “Cash equivalents”, 352 “Other current financial investments”). Sub-accounts 351 are reflected on debit and 352 are reflected on their prime cost and revaluation surplus when the market cost increases. The balance cost of realized investments and revaluation surplus are written off on the credit of account 35. The fair value of financial investments at the balance date is reflected in the balance of the debit [9].

Financial investments in relation to other types of assets of the enterprise have a certain dynamics of value that causes the necessity of revaluation to restore the corresponding balance value that is adequate to the modern investment environment.

Financial income and expenses are the result of financial investments; investors receive income providing financial investments, emitters lose money for using the investment.

Income from financial investments have the following forms of implementation (according to Accounting Principle (Standard)15) [10]:

1) income from participation in the capital of associated, affiliated and subsidiary enterprises (72 “Income from equity participation” with corresponding sub-accounts);

2) dividends (373 “Calculations for accrued income”);

3) interest (732 “Interest received”);

4) discount (733 “Other incomes from financial operations”);

5) royalties (733 “Other incomes from financial operations”);

6) income from the growth of value (741 “Income from selling financial investments”).

Losses from financial investments are reflected in the following accounts:

1) 15 “Capital investments” (sub-account 151 “Capital construction”);

2) 96 “Equity participation losses” (sub-accounts – 961 “Losses from investments in associated enterprise”, 962 “Losses from common activities”, 963 “Losses from investments in subsidiary enterprises”);

3) 97 “Other losses” (sub-accounts – 970 “Expenses from changes in the value of financial instruments”, 971 “Cost of financial investments sold”, 972 “Losses from

decreasing the usefulness of assets” 973 “The discount of permanent assets and financial investments”, 977 “Other activities”.

Besides the mentioned above, it should be noted that financial investments are estimated at the following stages [5]:

1) recognition (compliance with the criteria for the possibility of reliable evaluation and the future economic benefits of using a financial investment)

2) initial estimation of a financial investment (according to the primary cost which includes the purchase price, commission fees, customs duties, taxes, fees, mandatory payments and other expenses);

3) classification (grouping into current and long-term financial investments);

4) reflection in the accounts (Table 2)

5) revaluation at the balance sheet date (equity method, amortized prime cost method, prime cost method including impairment of value, fair value method);

6) recognition, estimation and reflection of income on financial investment;

7) disclosure of information (balance sheet, notes to financial statements);

8) derecognition and write-down (at the moment of loss of control of the investor over these assets due to disposal (sale) of a financial investment, expiration of the circulation period of securities that were the objects of financial investment, etc.).

Table 2. Financial investments reflected in the balance and accounts

Types of financial investments	Balance-sheet items (Financial Status Statement)	Balance-sheet items (Profit and Loss Account)	Accounts whose balance is reflected in the relevant articles of the statement
Long-term financial investments	1030 “Long-term financial investments that are accounted according to the method of participation in other enterprises”; 1035 “Long-term financial investments: other financial investments”	040 “Long-term financial investments that are accounted according to the method of participation in other enterprises”; 045 “Other long-term financial investments”	141 “Investments in related entities according to the method of equity participation” 142 “Other investments in related entities” 143 “Investments in unrelated entities”
Current financial investments	1160 “Current financial investments”	220 “Current financial investments”	352 “Other Current financial investments”
Cash equivalents	1165 “Cash and equivalents”	230 “Cash and equivalents in native currency”	351 “Cash equivalents”
Cash equivalents		240 “Cash and equivalents in foreign currency”	

Source: compiled by the author on the basis of [4,7]

Financial investments are unreliably reflected in financial statements which causes the problem of accounting by some domestic enterprises that aim at minimizing taxes in tax reporting based on accounting data, which also affects the minimization of the displayed profit. The position of enterprises (companies) that are interested in demonstrating profitability in order to attract investment funds is fundamentally different. The problem of inaccuracy of information and improvement of the investment environment on the territory of Ukraine can be solved by reforming the Accounting Principles (Standards) according to the International Financial Reporting Standards (IFRS).

According to the hierarchy of IFRS, accounting financial investments is considered in the following provisions (IFRS, IAS, IFRIP) [11]:

1) IFRS 7 “Financial Instruments: Disclosures”;

2) IFRS 9 “Financial Instruments”;

3) IFRS 12 “Disclosure of Interests in Other Entities”;

4) IAS 28 “Investments in Associates and Joint Ventures”;

5) IAS 32 “Financial Instruments: Presentation”;

6) IAS 39 “Financial Instruments: Recognition and Measurement”;

7) IAS 40 “Investment Property”;

8) IFRIC 2 “Members' Shares in Co-operative Entities and Similar Instruments”;

9) IFRIC 16 “Hedges of a Net Investment in a Foreign Operation”.

The standards of IFRS, IAS are obligatory. IFRIC are interpretations that disclose one or another issue of the application of the relevant standards.

Investment accounting should be reflected in the reporting of an investor company in the balance sheet and should be accounted using the equity method of accounting on the prime cost as a financial asset (according to IAS 39 “Financial Instruments: Recognition and Measurement” [12] – at fair cost).

Investment accounting is reflected in reporting according to IAS 28 "Investments in Associates and Joint Ventures" [13], where it is stated that investments in an associate enterprise should be recorded in the consolidated financial statements using the equity method of accounting, except for the cases when the investment is acquired and held for the purpose of selling in the near future (then they should be accounted for on the primary cost).

Thus, investment distribution, which is considered in the financial statements of private business entities (without taking into account banking institutions), requires that the consumers of accounting information understand the accounting reflection of financial decisions. All this makes it difficult to understand the accounting methodology of financial investments. This problem can be solved by using the technology of blockchain.

The blockchain is a means of structuring data whole unit is a block filled with certain information. These blocks are not numbered exactly but time mark is the structuring function. A new block is always added after the last block (according to the time dynamics). This technology is the widely used in cryptology. The blockchain is one of the best data structures as it makes it possible to track changes in information in blocks, to save the record of necessary data.

The effect of this technology can be studied by considering financial transactions using Bitcoin. It should be noted that Bitcoin blocks contain necessary information about the financial transactions that were carried out. It makes it possible to point out that the use of the blockchain significantly reduces the difficulty of verifying financial statements. The main advantage is that the transaction passes only after it is included in the block and is added to the chain, this causes the update of the blockchain state [12].

To check the state of the blockchain, peer-to-peer networks are used. To record a transaction by the blockchain technology in accounting, the passage of the transaction to the user should be checked. The security of the system operation is maintained by saving the updated blockchain on all computers of the network node. However, the main problem of "trust" of users is solved by means of the consensus mechanism (a set of rules that are coordinated by the nodes in the network launching the system software).

This technology has considerable development prospects in the financial sphere due to new products, the optimization of financial transactions [13], the significant

acceleration and reduction of the costs for banking services (Chain Inc) (specialized cryptocurrency exchanges and various exchange instruments).

In addition, the most relevant (for Ukraine as well) are development prospects in the field of accounting – reporting, the transformation of accounting and auditing. The blockchain can be used to create a fully transparent and available recording system for regulators for coding transactions in the area of regulatory reporting (Primechain Technologies, Digital Trade Chain) [14].

Unlike most databases that are a kind of stored data at a certain point of time, block databases generate and update themselves on the basis of their own transaction history. They are an autonomous recording system that enables tracking the movement of financial assets (investments) over a certain period of time among specific participants [15]. Blockchain enables automating the search for business partners which result in more efficient, transparent and reliable models of P2P financing, accounting for dividends and coupon payments. Thus, having the ability to compare accounting entries between two trading partners, maintaining the confidentiality of blockchain data could significantly reduce the dependence on auditors to verify financial transactions. Developing blockchain in the sphere of accounting is a promising item under development.

Conclusions

A high risk of investment requires effective and constantly updated accounting and analytical support to improve economic activities of private enterprises. The imperfection of the available accounting methodology causes incompleteness, the inadequacy of accounting data in accordance with the realities of investment processes and the development of the industry as a whole. To improve the reflection of investment processes in financial statements, the structural reorganization of accounting processes should be carried out and automated and the level of transparency of information disclosure by enterprises should be increased.

The use of blockchain for auditing becomes a unique solution since auditing affects all sectors and is the fundamental basis that helps global financial markets gain investor confidence. Taking into account the economic problems of Ukraine, the use of blockchain technology will help solve the problems of corruption and attempts to legalize capital, improve the investment climate.

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ЕКОНОМІЧНА СУТНІСТЬ ОБЛІКУ ФІНАНСОВИХ ІНВЕСТИЦІЙ ТА ПЕРСПЕКТИВИ ВИКОРИСТАННЯ "BLOCKCHAIN" ДЛЯ КОНТРОЛЮ ІНВЕСТИЦІЙНОЇ ДІЯЛЬНОСТІ В УКРАЇНІ

Предметом дослідження статті є фінансові інвестиції та застосування інноваційних технологій для покращення обліку з позицій інвестиційного менеджменту як однієї з найважливіших складових економічного розвитку. **Мета** – дослідження методології відображення фінансових інвестицій вітчизняних підприємств. **Завдання:** вдосконалення обліку фінансових інвестицій на підприємстві, дослідження перспектив розвитку бухгалтерського обліку через впровадження інноваційних технологій за допомогою розкриття теоретичних та оцінки функціонування практичних аспектів дослідження та можливість використання технології blockchain на території України для покращення ведення фінансової звітності, враховуючи досвід міжнародних партнерів (зарубіжних країн). Використовуються загальнонаукові **методи:** системний аналіз, структурний аналіз. Отримано такі **результати.** У представленій роботі проведений аналіз стану інвестиційного обліку та знайдені перспективи використання технології blockchain для покращення ефективності аудиту, підвищення прозорості фінансових інвестицій, протидії корупції. **Висновки.** Під час проведення аналізу причинно-наслідкових зв'язків використання інноваційних технологій у бухгалтерському обліку була виявлена недосконалість існуючої методології бухгалтерського обліку, що обумовлює неповність, падіння адекватності облікових даних відповідно до реалій інвестиційних процесів та розвитку галузі в цілому. Використання технології blockchain дозволить провести структурну перебудову процесів обліку, їх автоматизацію та підвищити рівень прозорості розкриття інформації підприємствами. Використання блокчейна з метою аудиту стає унікальним рішенням, тому що аудит впливає на всі галузі та є фундаментальною основою, за допомогою якої глобальні фінансові ринки отримують довіру інвесторів. Враховуючи економічні проблеми України, використання технології блокчейн допоможе розв'язати проблеми корупції та спроб легалізації капіталу. Відповідні дії дозволять покращити інвестиційний клімат України в довгостроковій перспективі.

Ключові слова: бухгалтерський облік, фінансова інвестиція, інвестування, рахунки бухгалтерського обліку, блокчейн, транзакція.

ЭКОНОМИЧЕСКАЯ СУЩНОСТЬ УЧЕТА ФИНАНСОВЫХ ИНВЕСТИЦИЙ И ПЕРСПЕКТИВЫ ИСПОЛЬЗОВАНИЯ "BLOCKCHAIN" ДЛЯ КОНТРОЛЯ ИНВЕСТИЦИОННОЙ ДЕЯТЕЛЬНОСТИ В УКРАИНЕ

Предметом исследования статьи являются финансовые инвестиции и применение инновационных технологий для улучшения учета с позиций инвестиционного менеджмента как одной из важнейших составляющих экономического развития. **Цель** – исследование методологии отражения финансовых инвестиций отечественных предприятий. **Задача:** совершенствование учета финансовых инвестиций на предприятии, исследования перспектив развития бухгалтерского учета путем внедрения инновационных технологий с помощью раскрытия теоретических и оценки функционирования практических аспектов исследования, возможность использования технологии blockchain на территории Украины для улучшения ведения финансовой отчетности, учитывая опыт международник партнеров (зарубежных стран) . Используются общенаучные **методы:** системный анализ, структурный анализ. Получены следующие **результаты.** В представленной работе проведен анализ инвестиционного учета и найдены перспективы использования технологии blockchain для повышения эффективности аудита, прозрачности финансовых инвестиций, противодействия коррупции. **Выводы.** При проведении анализа причинно-следственных связей использования инновационных технологий в бухгалтерском учете было обнаружено несовершенство существующей методологии бухгалтерского учета, что обуславливает неполноту, падение адекватности учетных данных в соответствии с реалиями инвестиционных процессов и развитии отрасли в целом. Использование технологии blockchain позволит провести структурную перестройку процессов учета, их автоматизацию и повысит уровень прозрачности раскрытия информации предприятиями. Использование блокчейна с целью аудита становится уникальным решением, так как аудит влияет на все отрасли и является фундаментальной основой, с помощью которой глобальные финансовые рынки получают доверие инвесторов. Учитывая экономические проблемы Украины, использование технологии блокчейн поможет решить проблемы коррупции и попыток легализации капитала. Соответствующие действия позволят улучшить инвестиционный климат Украины в долгосрочной перспективе.

Ключевые слова: бухгалтерский учет, финансовая инвестиция, инвестирование, счета бухгалтерского учета, блокчейн, транзакция.
