ІНФОРМАЦІЙНІ ТЕХНОЛОГІЇ ТА ЕКОНОМІЧНА БЕЗПЕКА

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Muravskyi V.V.,
dr.sc.(econ.), professor,
professor at the department of accounting and taxation,
ORCID: https://orcid.org 0000-0002-6423-9059,
Muravskyi V.V.,
lecturer at the department of economic cybernetics and informatics,
ORCID: https://orcid.org 0000-0002-9625-9572,
West Ukrainian National University, Ternopil

INFORMATION TECHNOLOGIES IN ACCOUNTING AND CONTROL AS A TOOL FOR ENSURING THE FINANCIAL SECURITY OF ENTERPRISES

Муравський В.В.,
д-р екон. наук, професор,
професор кафедри обліку і оподаткування,
Муравський В.В.,
викладач кафедри економічної кібернетики та інформатики,
Західноукраїнський національний університет, Тернопіль

ІНФОРМАЦІЙНІ ТЕХНОЛОГІЇ В ОБЛІКУ І КОНТРОЛІ ЯК ІНСТРУМЕНТ ЗАБЕЗПЕЧЕННЯ ФІНАНСОВОЇ БЕЗПЕКИ ПІДПРИЄМСТВ

Formulation of the problem. Global pandemics, military conflicts, and economic disruptions have significantly undermined the financial security of enterprises. Under such conditions, businesses continuously seek effective approaches to strengthening their financial resilience. Accounting provides the informational foundation for managing enterprise financial security, while relevant, reliable, timely, and comprehensive accounting information is essential for sound managerial decision-making. At the same time, modern threats increasingly target the quality and integrity of accounting information, making information protection an integral component of enterprise financial security.

In the digital economy, information resources have become a key determinant of financial resilience and competitive advantage. Accounting information is increasingly exposed to cyberattacks, fraud, and other malicious activities aimed at causing financial losses or obtaining unlawful benefits. Simultaneously, the accounting system supports financial planning, control, and decision-making, evolving into an effective mechanism for safeguarding enterprise financial security. Information technologies applied in accounting and control play a crucial role in this process. They transform traditional accounting by automating data processing, strengthening information protection, enabling timely risk identification, and preventing financial threats. Consequently, the technological component of accounting has become a key factor in enhancing enterprise financial security, sustainable development, and long-term competitiveness.

Analysis of recent research and publications. The application of information technologies to the digitalization of accounting and control has become an important area of scholarly research. Existing studies mainly focus on the digital transformation of accounting methodologies and organizational practices, while strengthening enterprise financial security is generally considered one of the key outcomes of implementing modern information technologies.

In particular, Melnychuk V. argues that the digitalization of accounting and financial reporting is an effective instrument for strengthening enterprise financial security through accounting automation, improving information reliability, supporting timely managerial decision-making, and reducing financial risks [1]. J. Dai

and M. A. Vasarhelyi demonstrated that Blockchain technology ensures the immutability of accounting records, enhances trust in financial information, reduces data manipulation, and creates prerequisites for automated internal control [2]. Similar conclusions were reached by Demirkan S., Demirkan I. and McKee A., who substantiated that Blockchain integration into accounting information systems protects financial data from unauthorized access, increases business transparency, and strengthens enterprise information and financial security [3].

Shmatkovska T., Mykhailovych P. and Martyniuk R. investigated the application of SAP Business One and other modern information systems, showing that they automate accounting processes while protecting accounting information against cyber threats and unauthorized access [4]. Kogan A. and co-authors proved that the digitalization of accounting data improves financial transparency, automates control procedures, enhances fraud detection, and contributes to enterprise financial security [5]. Sorokolit M. proposed a comprehensive framework for protecting electronic accounting data through multifactor authentication, backup, access management, cyber threat monitoring, and security audits [6]. Chan D. Y. and co-authors demonstrated that Big Data, artificial intelligence, and data analytics enable continuous transaction monitoring, fraud detection, financial risk mitigation, and improved enterprise security [7].

Only a limited number of studies comprehensively examine both financial security and cybersecurity within accounting digitalization. Resler M. substantiated the interrelationship between accounting digitalization, information security, and enterprise financial security, emphasizing the role of modern information technologies and artificial intelligence in monitoring financial risks and cyber threats [8]. Muravskyi V. developed the concept of accounting as the foundation of enterprise economic and information security, improved the classification of cyber risks affecting accounting information, and proposed organizational principles for an integrated financial and cybersecurity system based on accounting information [9]. Vasylyshyn S. identified digitalization risks within accounting systems and proposed an adaptive mechanism for cyber risk management based on continuous monitoring and integration with enterprise economic security [10]. Semaniuk V. and Zhukevych S. systematized modern management accounting technologies and analytical tools that facilitate timely financial risk identification, support managerial decision-making, and enhance enterprise resilience to internal and external threats [11].

While acknowledging the significant scholarly contributions regarding the prospects of accounting and control digitalization for strengthening enterprise financial security, it should be noted that contemporary research remains focused on a relatively limited range of information technologies. The overwhelming majority of studies examine one or several individual technologies that can simultaneously be applied in accounting, control, and financial security management. At the same time, the necessity of comprehensively considering the functional capabilities of modern information technologies in accounting and control as an integrated instrument for ensuring enterprise financial security determines both the relevance and the objective of this study.

Setting objectives. The purpose of this study is to systematize the information technologies applied in accounting and control and to identify their contribution to simultaneously ensuring information and financial security, protecting the information and financial interests of internal and external stakeholders, and strengthening enterprise financial security.

Presentation of the main research material. Innovative information technologies are fundamentally transforming the theory and practice of accounting and control in enterprise operations. The evolutionary development of information processing technologies has led to the continuous expansion of their areas of application. Under contemporary conditions, information technologies traditionally employed in accounting and control are increasingly being implemented across related functional areas of enterprise management. One of these areas is financial security, where information technologies serve as instruments for mitigating financial risks, protecting accounting information, and providing informational support for managerial decision-making.

At the technological level, financial security is ensured through the digitalization of accounting information processing, which provides the information necessary for the effective management of both financial and security-related processes within an enterprise. Accordingly, the information technologies applied in accounting and control that simultaneously create favorable conditions for strengthening enterprise financial security are systematized into the following groups: digitalization, information security, electronic communications, and data interpretation, as illustrated in Fig. 1.

The use of information technologies significantly reduces the likelihood of errors in accounting data processing that may adversely affect enterprise financial security. Distorted or unreliable accounting information may lead stakeholders to make inappropriate managerial decisions, thereby weakening an enterprise's financial position. Automated data processing virtually eliminates arithmetic errors and substantially reduces inaccuracies arising from the transfer of information between accounting documents, as accounting data are accumulated in integrated databases and automatically used to generate accounting records and financial statements.

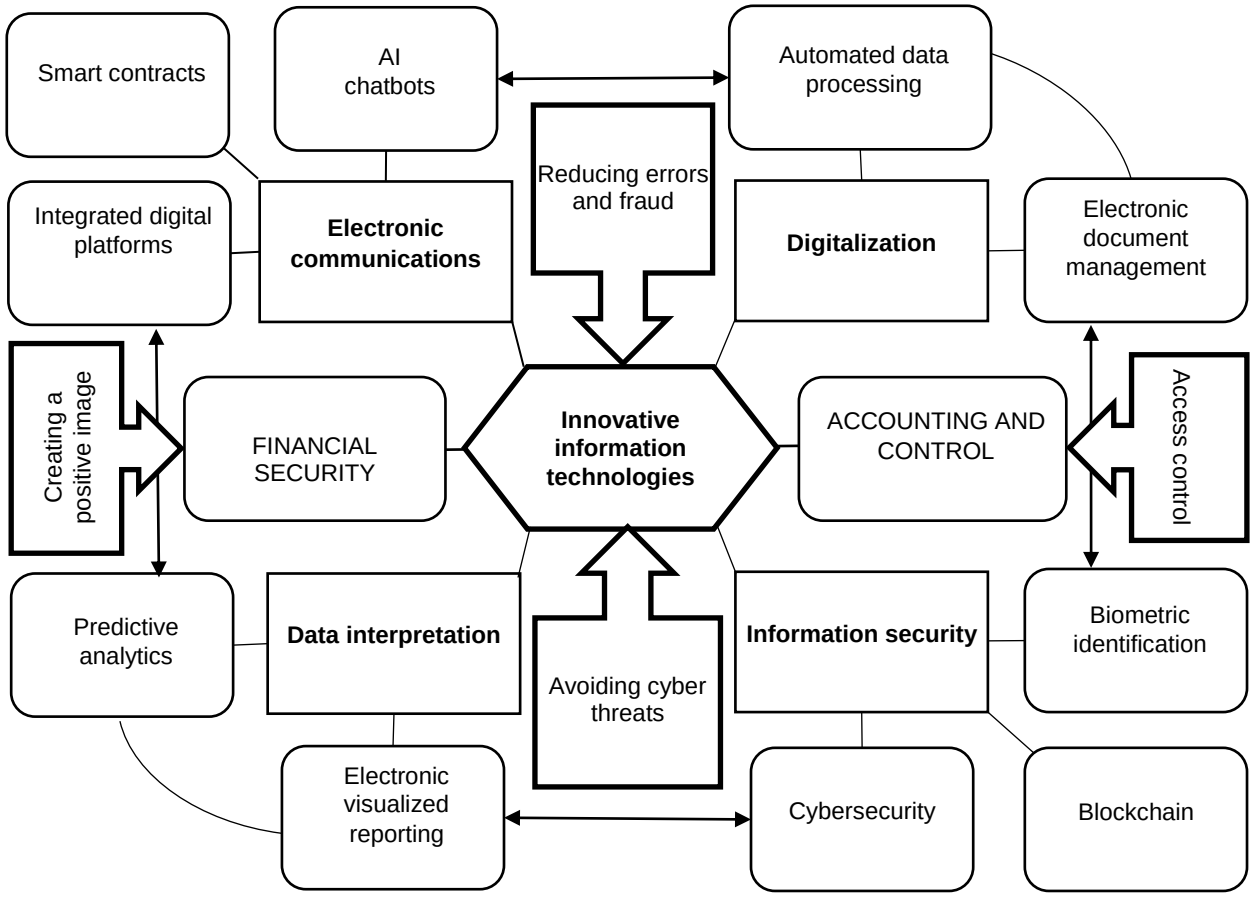


Fig. 1. Information technologies in accounting and control as a tool for ensuring the financial security of enterprises

Source: compiled by the authors

Modern information technologies also provide automated verification of accounting calculations. Using checksum techniques, they reconcile balances in asset and liability accounts, verify interrelated accounting indicators, and repeat arithmetic calculations to confirm data accuracy. Performing these procedures in real time enables the prompt detection of threats to the integrity of accounting information, while detected inconsistencies can automatically trigger notifications requesting verification or correction.

Information technologies in accounting and control are aimed not only at minimizing unintentional errors but also at preventing financial fraud and data manipulation. The digitalization of accounting information processing and its integration with governmental electronic services enhance business transparency by enabling the automatic transmission of accounting data to public authorities, regulatory agencies, and other authorized users.

Certain accounting data should be transferred automatically to fiscal and regulatory authorities without prior modification by enterprise officials. This approach minimizes information abuse and the intentional concealment of financial information, thereby reducing opportunities to misrepresent an enterprise's financial position. Existing systems, including the Unified Register of Tax Invoices, electronic customs information systems, digital services of the State Tax Service of Ukraine, and public administration portals, already demonstrate that the automatic transmission of accounting information directly from its source improves data reliability while reducing the risk of unauthorized interference.

The automated disclosure of selected categories of accounting data provides comprehensive protection for the financial interests of both external and internal stakeholders. The transmission of accounting information to public authorities through electronic communication channels creates the informational foundation for administrative, regulatory, and supervisory functions within public governance. At the same time, business owners, shareholders, and senior management receive additional assurance regarding the reliability and completeness of accounting information, minimizing the possibility of its intentional distortion by employees. Automated accounting data exchange also helps prevent financial collusion and manipulative practices while increasing confidence in the enterprise's financial position. Consequently, information technologies become an important instrument for ensuring the reliability of accounting information, which directly affects enterprise financial resilience. Strengthening the financial

security of individual enterprises also contributes to the stability of the national financial system by improving the transparency of economic processes and the quality of information support for public administration.

To ensure an adequate level of financial security, enterprises should implement modern information technologies for access control management. Financial security largely depends on restricting access to cash and other financial resources. Through user personalization and identity verification, employees are granted access strictly according to their responsibilities and authority. One of the most promising identification technologies is biometric authentication, which relies on unique physiological or behavioral characteristics. The implementation of biometric technologies effectively prevents unauthorized access to cash management systems and other critical financial resources, thereby significantly strengthening enterprise financial security.

The authorization of enterprise cash transactions should be based on the principle of collective managerial decision-making. Financially significant transactions should therefore require approval from several authorized officials. Information technologies enable this process to be carried out through automated workstations, and only after electronic approval by all designated officials does the system initiate the transfer of funds. Such an approach enhances payment transparency, increases personal accountability, and reduces the risk of unauthorized use of enterprise financial resources.

Communication with responsible employees regarding financial transactions should be organized through AI-powered chatbots. These digital assistants can provide timely notifications about tax payments, financial reporting, settlements of receivables and payables, and other financial obligations. In addition, chatbot algorithms can automate selected accounting procedures, such as generating and initiating payment documents to ensure the timely fulfillment of financial obligations. Timely settlement of taxes and mandatory payments allows enterprises to avoid penalties, late payment interest, and other financial losses, thereby strengthening financial security.

The timely settlement of obligations with counterparties has a similarly important effect on enterprise financial security. AI-powered chatbots can analyze contractual terms, monitor payment deadlines, and supervise compliance with contractual obligations. To prevent payment delays, enterprises should implement mechanisms for the automatic execution of contractual payment obligations. At the same time, continuous monitoring of incoming payments from debtors ensures the timely replenishment of cash resources, maintaining enterprise liquidity and solvency. Delays in collecting accounts receivable limit an enterprise's ability to finance current operations and fulfill its own financial obligations to other counterparties.

The automation of contractual performance can be effectively achieved through smart contract technology, whereby the conditions for the automatic execution of business agreements are embedded programmatically. AI-powered chatbots can monitor the receipt of electronic primary documents, including invoices and certificates of completed work, and automatically initiate financial settlements based on the information contained in these documents. A key advantage of smart contracts is that their terms cannot be unilaterally modified after entering into force, while contractual conditions are executed automatically. This ensures the proper fulfillment of contractual obligations, minimizes opportunistic behavior by counterparties, and strengthens the protection of the financial interests of all parties involved. If any contractual condition remains unfulfilled, the smart contract automatically blocks subsequent stages of the agreement, providing an additional guarantee of contractual compliance.

Threats to an enterprise's information system may originate from both internal and external sources. However, a considerable proportion of contemporary information security threats arise externally and directly affect enterprise financial security. Most cyberattacks aim to inflict financial losses or obtain unlawful financial benefits. Cyber threats may involve the theft of accounting information containing confidential data or commercial secrets, damaging business reputation and reducing the confidence of customers, investors, creditors, and other stakeholders. As a result, declining business activity, the loss of business relationships, or reduced investment attractiveness may lead to significant financial losses and weaken enterprise financial security.

The theft of valuable accounting information may also provide competitors or cybercriminals with unlawful financial advantages. Another common cyber threat is the blocking of enterprise information resources and infrastructure, which restricts timely access to accounting data and delays managerial decision-making. The destruction or corruption of accounting databases can destabilize enterprise management systems and impair the ability to respond promptly to internal and external changes. Therefore, modern information technologies in accounting should be used not only to automate accounting processes but also to ensure cybersecurity and prevent financial losses. Among the most promising technologies for these purposes is Blockchain.

Blockchain technology should be employed to ensure the integrity and immutability of accounting data repositories. Because accounting information is stored across multiple network nodes, the loss or corruption of individual data elements can be compensated through recovery from other participants, substantially increasing the resilience of accounting systems to cyber threats and technical failures.

A distinctive feature of blockchain is the storage of accounting data within a distributed network whose nodes may be located in different physical locations. If a communication channel is blocked or a particular

node becomes unavailable, the system automatically provides access to information through other nodes. Consequently, blockchain technology virtually eliminates the risk of losing access to accounting information and significantly strengthens enterprise financial security.

Individual lost or damaged information elements can be automatically restored from alternative nodes of the distributed network. If an information fragment is detected that has been modified without authorization and does not correspond to identical records stored by other network participants, blockchain technology automatically reconstructs the authentic accounting record. At the same time, any authorized addition of new data or modification of existing information is synchronized across all participants in the blockchain network. As a result, accounting information stored within a distributed blockchain architecture is characterized by a high level of integrity, reliability, and protection against unauthorized modification. Ensuring the accuracy, completeness, and immutability of accounting information is one of the key prerequisites for maintaining enterprise financial stability.

Furthermore, blockchain technology is based on the chronological sequencing of accounting records. The sequential recording of information enables continuous monitoring of changes to the accounting database. The correction of accidental errors or any modification of accounting information is permanently recorded in the distributed ledger, ensuring a complete audit trail. Authorized personnel have continuous access to the log of all accounting transactions. If unauthorized modifications that may adversely affect enterprise financial security are detected, an internal investigation should be initiated to determine their causes and identify the responsible individuals. Based on internal control results, appropriate corrective or disciplinary measures may be implemented to prevent repeated manipulation of accounting information and minimize financial losses. At the same time, blockchain technology establishes a unified information environment that integrates the enterprise's internal information systems, electronic services, digital platforms, and other participants in business relationships.

The intensification of integration processes within the financial system creates new opportunities for the digital transformation of accounting and control. Accounting and control systems are becoming increasingly integrated with electronic services, digital platforms, and other information systems. Integrated information technologies enable data synchronization within a unified information environment, transforming accounting into an information intermediary between the enterprise's internal and external environments. Through external information resources, the accounting system can automatically obtain up-to-date macroeconomic indicators, including foreign exchange rates, the central bank's policy rate, inflation, GDP, GNP, and loan and deposit interest rates. Based on this information, management can promptly adjust decisions to maintain an adequate level of financial security. Integrated information technologies ensure the real-time receipt of changes in key macroeconomic indicators, while the accounting system automatically generates the information required for responding to economic developments. The timely availability of such information is an essential prerequisite for effective enterprise management and financial stability.

Integrated information technologies also connect the accounting system with financial, insurance, and stock markets. The integration of internal accounting information with current macroeconomic indicators supports prompt managerial decisions regarding the management of enterprise financial assets. At the same time, synchronization with electronic payment systems enables rapid information exchange with banking institutions, financial service providers, and cryptocurrency exchanges. The integration of accounting with electronic platforms establishes two-way information flows: accounting records are generated automatically, while confirmations and instructions concerning changes in financial assets are received. Faster information exchange enables enterprises to respond more rapidly to changes in the macroeconomic environment, thereby strengthening financial security.

Communication with internal and external users of financial information is carried out through the reporting system. Information technologies substantially transform the preparation and presentation of financial reporting. Electronic reporting is designed to satisfy the information needs of different stakeholder groups as comprehensively as possible. For internal users, digital technologies virtually eliminate the limitations of traditional reporting periods. Accounting information can be generated in real time or for any specified period without waiting until the end of the reporting period. This provides management with up-to-date information for continuous monitoring of the financial position and timely adjustment of managerial decisions. The availability of detailed accounting information for any reporting period facilitates the rapid identification of financial risks and supports enterprise financial security.

Information technologies in accounting and control should also be employed for forecasting enterprise performance. Based on accumulated accounting information, enterprises can model their future financial position and assess the projected impact of managerial decisions on financial security. Scenario modelling enables the comparison of alternative courses of action and the identification of decisions that minimize financial risks while ensuring stable financial performance. Consequently, modern information technologies create the prerequisites for developing a long-term enterprise strategy focused on maximizing financial security.

For external stakeholders, the digitalization of reporting facilitates a more convenient perception and interpretation of financial information. Modern electronic reporting platforms make it possible to adapt both

the content and format of reports to the information requirements of specific users. The use of graphical, interactive, and multimedia elements significantly enhances the clarity of financial indicators. A comprehensive and structured information model of enterprise operations supports better managerial decision-making and minimizes financial losses resulting from irrelevant or insufficient information. A promising direction in the evolution of electronic reporting is the application of augmented reality technologies, which simplify the interpretation of financial indicators even for users without specialized economic expertise. Under such conditions, information technologies not only generate financial reports but also provide intelligent explanations and interpretations of financial information. Furthermore, modern accounting analytics can automatically propose several alternative managerial decisions together with forecasts of their potential financial consequences, while leaving the final decision to the user. The principal directions for the application of information technologies in accounting, control, and enterprise financial security are systematized in Table 1.

Table 1

Directions for using information technologies in accounting, control and ensuring financial security of an enterprise

Information Technology	Use in accounting and control	Impact on the financial security of the enterprise
Automated Data Processing	Automates the entry, processing, verification and generalization of accounting information. Performs arithmetic control, automatically compares interrelated indicators, provides continuous monitoring of the correctness of accounting records.	Minimizes human errors, timely detects inaccuracies and manipulations, increases the reliability of accounting information, ensures the adoption of high-quality management decisions and reduces the risk of financial losses.
Electronic Document Management	Automates the exchange of primary documents and interaction with government agencies and counterparties.	Increases transparency, reduces the risk of forgery and concealment of information.
Biometric Identification and Access Rights Delimitation	Provides user identification by biometric features, personalizes access to information resources, distributes employee authority and supports multi-level electronic approval of financial transactions.	Prevents unauthorized access to assets and confidential information, makes it impossible to conduct risky transactions alone, increases personnel responsibility and reduces the risk of fraud.
Chatbots and AI	Controls payment terms, reporting, contracts, provides recommendations.	Reduces fines, supports liquidity and settlement discipline.
Smart Contracts	Automatically fulfills contractual terms after the occurrence of certain events.	Guarantees the fulfillment of obligations and minimizes financial disputes.
Blockchain	Creates an immutable distributed register of accounting records and change history.	Protects data from forgery, loss and cyberattacks.
Cybersecurity	Database protection, backup, monitoring of cyber threats.	Prevents information leakage and financial losses.
Integrated Platforms	Synchronizes accounting with banks, government services and markets.	Increases the efficiency of financial risk management.
Electronic Reporting and Visualization	Generates interactive reporting for internal and external users.	Improves the validity of management decisions.
Predictive Analytics and AI	Models development scenarios and assesses the consequences of management decisions.	Allows for early detection of financial risks and maintains financial stability.

Source: compiled by the authors

The isolated application of individual information technologies in accounting and control provides only a limited contribution to enterprise financial security. Each accounting information processing technology serves a specific functional purpose and therefore cannot comprehensively address all aspects of protecting the financial interests of a business entity. The implementation of individual digital tools leaves room for internal and external threats that may adversely affect financial stability. Only the integrated application of various information technologies makes it possible to establish a comprehensive system for protecting accounting information, financial resources, and business processes, thereby mitigating most potential risks.

The systematic implementation of information technologies in accounting and control creates a synergistic effect whereby the functional capabilities of individual digital tools complement one another and substantially enhance the effectiveness of financial security management. Under such conditions, automated accounting processes, digital communications, cybersecurity technologies, predictive analytics, and integrated information platforms function as a unified information ecosystem. The comprehensive digitalization of accounting and control through the integrated use of modern information technologies creates the prerequisites for sustainable financial development, enhanced enterprise competitiveness, and long-term financial security.

Conclusions from the conducted research. The financial security of an enterprise largely depends on the quality of accounting information. Within the digital economy, information has become one of the key resources for ensuring the financial stability and sustainable development of enterprises, while information protection has become an integral component of financial security. The digitalization of business activities is accompanied by the widespread implementation of information technologies in accounting and control systems, transforming them into essential instruments for ensuring enterprise financial security.

Contemporary trends in the digital transformation of business activities require the active implementation of information technologies, which can be systematically classified into four interrelated groups: digitalization (automated data processing and electronic document management), information security (biometric identification, blockchain, and cybersecurity), electronic communications (AI-powered chatbots, smart contracts, and integrated digital platforms), and data interpretation (electronic visualized reporting and predictive analytics). The application of information technologies in accounting and control enables the automation of accounting information processing and the minimization of human intervention, user identification and differentiated access to financial resources and confidential information, prevention of information manipulation and cyber threats, improvement of stakeholder communications, application of artificial intelligence in managerial decision-making, as well as enhanced visualization, interpretation, and predictive analysis of accounting information.

Only the integrated and simultaneous application of information technologies in accounting and control is capable of establishing an effective enterprise financial security system. The combination of their functional capabilities generates a synergistic effect that facilitates the timely identification and mitigation of financial and cyber threats, improves the reliability of accounting information, enhances the efficiency of financial resource management, and supports the development of a long-term strategy for the sustainable financial development of the enterprise.

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Муравський В.В., Муравський В.В.

ІНФОРМАЦІЙНІ ТЕХНОЛОГІЇ В ОБЛІКУ І КОНТРОЛІ ЯК ІНСТРУМЕНТ ЗАБЕЗПЕЧЕННЯ ФІНАНСОВОЇ БЕЗПЕКИ ПІДПРИЄМСТВ

Мета. Систематизація інформаційних технологій, що застосовуються в бухгалтерському обліку і контролі, та ідентифікація їхнього впливу на одночасне забезпечення інформаційної і фінансової безпеки, захист інформаційних та фінансових інтересів внутрішніх і зовнішніх стейкхолдерів, а також зміцнення фінансової безпеки підприємства.

Методика дослідження. У дослідженні використано системний підхід, методи наукового узагальнення, логічного аналізу, групування, систематизації та структурно-функціонального аналізу, що дало змогу комплексно дослідити функціональні можливості сучасних інформаційних технологій у бухгалтерському обліку і контролі та визначити їхній вплив на забезпечення фінансової безпеки підприємства.

Результати дослідження. Систематизовано сучасні інформаційні технології, що використовуються у бухгалтерському обліку і контролі та одночасно забезпечують фінансову безпеку підприємства, шляхом їх об'єднання у чотири взаємопов'язані групи: цифровізація (автоматизоване опрацювання даних, електронний документообіг), інформаційна безпека (біометрична ідентифікація, блокчейн, кіберзахист), електронні комунікації (чат-боти зі штучним інтелектом, смартконтракти, інтегровані цифрові платформи) та інтерпретація даних (електронна візуалізована звітність, прогнозна аналітика). Обґрунтовано вплив кожної групи технологій на автоматизацію облікових процесів, підвищення достовірності облікової інформації, запобігання фінансовим махінаціям і кіберзагрозам, удосконалення електронних комунікацій зі стейкхолдерами, підтримку управлінських рішень та прогнозування фінансового стану підприємства. Доведено, що комплексне використання сучасних інформаційних технологій формує єдину цифрову екосистему бухгалтерського обліку і контролю, яка забезпечує синергетичний ефект у процесі зміцнення фінансової безпеки підприємства.

Наукова новизна результатів дослідження. Удосконалено систематизацію інформаційних технологій бухгалтерського обліку і контролю шляхом їх групування відповідно до функціонального впливу на забезпечення фінансової безпеки підприємства. Обґрунтовано концепцію комплексного використання інформаційних технологій як єдиної цифрової екосистеми, що забезпечує синергетичний ефект завдяки одночасному поєднанню автоматизації облікових процесів, інформаційної безпеки, електронних комунікацій та інтелектуальної інтерпретації облікових даних.

Практична значущість результатів дослідження. Результати дослідження можуть бути використані під час цифрової трансформації систем бухгалтерського обліку і контролю підприємств. Запропонована систематизація інформаційних технологій може бути використана для підвищення достовірності облікової інформації, захисту фінансових ресурсів, мінімізації інформаційних і фінансових ризиків, удосконалення взаємодії зі стейкхолдерами, автоматизації управлінських процедур та формування ефективної системи забезпечення фінансової безпеки підприємства. Практичне впровадження комплексного підходу до використання інформаційних технологій сприятиме підвищенню фінансової стійкості, конкурентоспроможності та довгострокового розвитку суб'єктів господарювання.

Ключові слова: облік, контроль, інформаційні технології, цифровізація, фінансова безпека підприємства, інформаційна безпека, блокчейн, комунікації.

Muravskyi V.V., Muravskyi V.V.

INFORMATION TECHNOLOGIES IN ACCOUNTING AND CONTROL AS A TOOL FOR ENSURING THE FINANCIAL SECURITY OF ENTERPRISES

Purpose. The aim of this article is to systematise information technologies applied in accounting and control and to identify their impact on simultaneously ensuring information and financial security, protecting the information and financial interests of internal and external stakeholders, and strengthening the financial security of the enterprise.

Methodology of research. The study employs a systems approach, scientific generalization, logical analysis, grouping, systematization, and structural-functional analysis, which made it possible to comprehensively investigate the functional capabilities of modern information technologies in accounting and control and determine their influence on ensuring enterprise financial security.

Findings. Modern information technologies used in accounting and control that simultaneously contribute to enterprise financial security have been systematized into four interrelated groups: digitalization (automated data processing and electronic document management), information security (biometric identification, blockchain, and cybersecurity), electronic communications (AI-powered chatbots, smart contracts, and integrated digital platforms), and data interpretation (electronic visualized reporting and predictive analytics). The influence of each technology group on the automation of accounting processes, improvement of accounting information reliability, prevention of financial fraud and cyber threats, enhancement of stakeholder communications, support for managerial decision-making, and forecasting of enterprise financial performance has been substantiated. It has been proved that the integrated application of modern information technologies creates a unified digital ecosystem of accounting and control, generating a synergistic effect in strengthening enterprise financial security.

Originality. The systematization of information technologies in accounting and control has been improved by grouping them according to their functional impact on ensuring enterprise financial security. The concept of the integrated use of information technologies as a unified digital ecosystem has been substantiated, providing a synergistic effect through the simultaneous combination of automated accounting processes, information security, electronic communications, and intelligent interpretation of accounting data.

Practical value. The obtained results of the study can be applied to the digital transformation of enterprise accounting and control systems. The proposed systematization of information technologies can be used to improve the reliability of accounting information, protect financial resources, minimize information and financial risks, enhance stakeholder interaction, automate managerial procedures, and establish an effective enterprise financial security system. The practical implementation of the integrated approach to the use of information technologies will contribute to improving financial stability, competitiveness, and the long-term sustainable development of enterprises.

Key words: accounting, control, information technologies, digitalization, enterprise financial security, information security, blockchain, communication.

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