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The role of accounting in ensuring the financial stability of enterprises

Abstract. The purpose of the study was to analyse the impact of the settlement accounting system on ensuring the financial sustainability of enterprises in the context of the digital transformation of the economy. The study used a range of methods, including correlation and regression analysis, expert opinions, and comparative analysis. The study was conducted on the basis of 10 leading enterprises in various sectors of the Ukrainian economy in 2021-2024. A direct link has been established between the level of automation of accounting processes and indicators of financial stability of enterprises. The implementation of ERP systems reduced transaction processing time from 24 to 4 hours and reduced the number of accounting errors by 84.6%. Sectoral peculiarities of accounting digitalisation were identified: the highest level of automation is observed in the IT sector (95%) and the energy sector (92%). The experimental implementation of blockchain technology at three enterprises showed a 75% increase in transparency of transactions. The economic analysis showed a return on investment in the digitalisation of accounting within 1.5-2 years, with a 50.3% reduction in operating

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costs. The introduction of cloud technologies made it possible to process more than 1 million transactions daily with an accuracy of 99.98%. The article offers recommendations for improving the system of accounting for payments, taking into account industry specifics and the scale of enterprises' activities. On the basis of the study, practical recommendations for the introduction of digital technologies in the accounting processes of enterprises in various industries have been developed. A methodology for assessing the readiness of an enterprise for the digital transformation of accounting is proposed, which includes an analysis of technological infrastructure and financial capabilities. The key success factors in the implementation of digital accounting systems are identified, including: an integrated approach to automation, phased implementation of changes and continuous monitoring of efficiency. Particular attention is paid to the issues of information security and data protection when using cloud technologies and blockchain in accounting for payments

Keywords: information technology; business analytics; cloud services; economic efficiency; digitalisation

INTRODUCTION

In the context of growing economic instability and increasing global challenges, the issue of ensuring the financial stability of enterprises is of particular relevance. An efficient payment accounting system is one of the key tools for maintaining financial stability, as it allows optimising cash flows and ensuring timely control over financial transactions. The rapid development of digital technologies and the introduction of new methods of financial management require a rethinking of the role of accounting processes in ensuring the sustainable operation of enterprises. An important aspect of the modern business environment is the integration of innovative financial technologies into the accounting and control system. T. Beck (2020) explored the opportunities and risks of implementing fintech solutions, emphasising their potential to improve the efficiency of financial transactions. Developing this topic, M. Vučinić (2020) focused on the impact of financial technologies on the overall stability of enterprises and the need to adapt accounting systems to new technological capabilities.

The problem of the relationship between the quality of accounting for settlements and the financial stability of enterprises attracts considerable attention of researchers. D. Aikman *et al.* (2019) explored modern approaches to rethinking financial stability in the digital economy and emphasised the need to improve accounting and control systems. The issue of the impact of financial management elements on the performance of enterprises was considered by H.H. Al-Hashimy *et al.* (2022), who emphasised the importance of integrating modern accounting methods into the financial management system. Particular attention should be paid to studies of the specifics of accounting in crisis conditions. In particular, S. Bardash (2024) analysed the role of financial control in ensuring the sustainability of enterprises under martial law, focusing on the need to adapt accounting processes to new challenges. Aspects of managing the potential of financial sustainability of enterprises in crisis conditions were studied in detail by G. Korepanov *et al.* (2020), who proposed an integrated approach to assessing financial stability.

A significant contribution to the development of the theoretical foundations of accounting for settlements was made by Z.M. Zadorozhnyi *et al*. (2018), who studied the features of management accounting for settlements with counterparties in the innovative environment of business communications. The issue of integrating environmental aspects into the management accounting system was considered by R.L. Burritt *et al.* (2019), emphasising the need to consider the principles of sustainable development in the accounting policies of enterprises. A significant contribution to the study of the relationship between accounting processes and financial stability was made by S. Mishchenko *et al.* (2021), who developed innovative approaches to risk management in financial institutions based on improving accounting mechanisms. Their study demonstrates the importance of integrating modern risk management methods into the settlement accounting system to ensure financial stability.

The study by L. Wang & Y. Wang (2022), who considered the possibilities of using blockchain technologies and the Internet of Things to improve the management of financial services in supply chains. Their study demonstrates the potential of using modern technologies to increase the transparency and efficiency of accounting operations. Developing this theme, D.A. Zetzsche *et al.* (2020) explored the prospects of decentralised finance and its impact on traditional accounting and control systems. Of considerable interest is also the research by M.F. Malik *et al.* (2020), who studied the relationship between the effectiveness of enterprise risk management and its financial performance, pointing out the important role of risk committees in ensuring financial stability. Their conclusions confirm the need to integrate risk management systems with accounting processes to achieve optimal results in ensuring the financial stability of enterprises.

At the same time, an analysis of the scientific literature shows that there are certain gaps in the study of the relationship between the system of accounting for settlements and the financial sustainability of enterprises. In particular, the issues of the impact of digitalisation of accounting processes on financial stability, the peculiarities of organising accounting for settlements in conditions of economic turbulence, as well as the mechanisms for integrating modern financial technologies into the system of accounting for settlements remain insufficiently researched. In this regard, this study aimed to develop the theoretical and methodological foundations and practical recommendations for improving the system of accounting for settlements as a tool for ensuring the financial stability of enterprises. To achieve this goal, it was necessary to solve the following tasks: to analyse modern approaches to the organisation of accounting for payments, to assess the impact of the quality of accounting processes on the financial sustainability of enterprises, to identify areas for improving the system of accounting for payments, taking into account the current challenges and opportunities of the digital economy.

LITERATURE REVIEW

The problems of accounting for settlements and their impact on the financial sustainability of enterprises are in the focus of attention of scientists. Fundamental works on financial accounting by R.G. Schroeder *et al.* (2022) and J. Hoggett *et al.* (2024) reveal the essence of settlement accounting as a system for recording, summarising and controlling the movement of an enterprise's financial resources. Research by M.S. Fridson & F. Alvarez (2022) demonstrates the close relationship between the quality of financial reporting and enterprise sustainability. P. Vernimmen *et al.* (2022) considered this issue through the prism of corporate finance.

Digital technologies are significantly changing the accounting and control systems of enterprises. T. Beck (2020) identifies the advantages and disadvantages of implementing fintech solutions in the financial sector. M. Vučinić (2020) reveals the mechanisms of influence of financial technologies on the overall stability of enterprises. L. Wang & Y. Wang (2022) suggest using blockchain technologies to improve the management of financial services. G. Korepanov *et al.* (2020) developed approaches to managing the financial stability of enterprises during the crisis. M.F. Malik *et al.* (2020) developed a comprehensive methodology for integrating risk management, including quantitative metrics for assessing the effectiveness of risk management and its impact on financial stability. S. Mishchenko *et al.* (2021) created new approaches to risk management in financial institutions. The study by R.L. Burritt *et al*. (2019) presented practical mechanisms for integrating environmental indicators into the management accounting system, including methods for quantifying environmental risks. M.M. Čihák & M.R. Sahay (2020) found a direct link between financial innovation and economic inequality.

H.H. Al-Hashimy *et al.* (2022) found a link between financial management elements and financial performance. C. Gartenberg *et al*. (2019) mathematically proved the correlation between corporate goals and financial performance. J.F. Hair *et al.* (2019) proposed methods for analysing research results. N. Shmygol & M. Kasianok (2020) developed accounting and analytical tools for assessing financial stability. I. Makarenko (2018) proved the connection between accounting practices and sustainable development of enterprises. C. Channuntapipat *et al.* (2020) compared the sustainability practices of different service providers. Yu. Aleskerova *et al.* (2024) proposed approaches to optimising bank settlements. M.D. Korinko (2020) and S. Bardash (2024) identified the peculiarities of organising financial control during economic instability. D.I. Shypenko (2019) and A.M. Shysh (2023) included the analysis of financial stability in the accounting and analytical system of an enterprise. M.S. Ullah *et al.* (2019) confirmed the dependence of management effectiveness on the transparency of accounting information. E.F. Brigham & P.R. Daves (2019) proposed methods for managing financial resources.

The analysis of scientific sources allows to conclude that it is important to further improve the methodology of accounting for settlements to ensure the financial stability of enterprises. The introduction of digital technologies, such as cloud computing, artificial intelligence, and blockchain, opens up new opportunities for automating accounting processes and increasing their efficiency (Shevchuk & Radelytskyy, 2024). However, along with the benefits, technological innovations also bring new risks that need to be taken into account when developing financial management systems. Effective integration of risk management into accounting processes helps to minimise the negative impact of uncertainty on the financial results of enterprises (Danchuk *et al.*, 2021). In addition, in the context of growing attention to sustainable development, an important area for improving accounting is the consideration of environmental and social factors in assessing financial sustainability.

The specificity of management accounting in the context of digital transformation requires the development of new methodological approaches that would allow to effectively use the benefits of technology and minimise the risks associated with it. In particular, it is important to introduce methods of accounting for settlements with counterparties in the context of digitalisation, optimise bank settlements, and organise effective financial control in times of economic instability. The inclusion of financial stability analysis in the company's accounting and analytical system allows timely detection and prevention of possible problems with liquidity and solvency (Berisha & Rexhepi, 2022). The transparency of accounting information is a key factor in the efficiency of managing an enterprise's financial resources. Systematisation of modern approaches to assessing the effectiveness of digital transformations in the financial sector contributes to a better understanding of the prospects for the development of accounting systems in the context of Industry 4.0.

MATERIALS AND METHODS

The study was conducted in 2021-2024 on the basis of 10 leading enterprises in various sectors of the Ukrainian economy. The sample includes companies of various forms of ownership and industry. Energy sector: National Joint Stock Company (NJSC) Naftogaz of Ukraine, State-Owned Enterprise (SOE) National Atomic Energy Generating Company (NNEGC) Energoatom, Joint-Stock Company (JSC) Ukrgasvydobuvannya. Transport sector: JSC Ukrzaliznytsia, Limited Liability Company (LLC) Nova Post. Trade: LLC ATB-Market. Food industry: LLC Myronivsky Hliboproduct, Private Joint Stock Company (PrJSC) Obolon. Metallurgy: PrJSC Zaporizhstal. IT sector: LLC SoftServe. All companies have been operating for more than 5 years and provide full financial statements. A system of indicators was used to assess the organisation of settlement accounting, including the ratios of autonomy, financial stability, equity manoeuvrability, provision with own working capital and coverage. The analysis was based on the quarterly and annual reports of the companies for the period of 2021-2024 (ATB, n.d.; Energoatom, n.d.; MHP, n.d.; Naftogaz, n.d.; Nova Post, n.d.; Obolon, n.d.; SoftServe, n.d.; Ukrgasvydobuvannya, n.d.; Ukrzaliznytsia, n.d.; Zaporizhstal, n.d.), which allowed to track the dynamics of changes and identify key trends. Management accounting data and primary documentation on accounting for settlements with counterparties were used.

To assess the financial sustainability of enterprises, a system of indicators was used, including the coefficients of autonomy, financial stability, equity manoeuvrability, provision with own working capital and coverage. The analysis was based on quarterly and annual reports of the

companies, management accounting data, and primary documentation on accounting for settlements with counterparties. Financial indicators were processed using MS Excel software. The study of the organisation of accounting for settlements was based on the analysis of internal regulatory documents of enterprises, provisions on accounting policies, job descriptions of financial services employees, document flow regulations and orders on the organisation of accounting. Particular attention was paid to the study of accounting methods for various types of settlements, organisation of analytical accounting, internal control procedures and the procedure for conducting an inventory of settlements.

To study the best practices of accounting for settlements, the experience of introducing digital technologies into the accounting system of the studied enterprises was analysed. The effectiveness of using ERP software products, electronic document management systems, and blockchain technologies in settlements with counterparties was assessed. A comparative analysis of the capabilities of various information systems for automating the accounting of settlements and their impact on the financial stability of enterprises is carried out. A methodology for assessing the economic efficiency of information systems implementation is used, which takes into account both direct financial benefits and qualitative improvements in the enterprise management system. The methodology for assessing the effectiveness of information systems was based on the calculation of key indicators of their work – the speed of transaction processing, accuracy of operations, reliability of data storage and convenience of analytical reporting. In addition, the economic component of the systems implementation was analysed by comparing the costs of acquisition and maintenance with the benefits obtained in the form of optimisation of business processes and improvement of the quality of management decisions.

RESULTS AND DISCUSSION

The results of the study demonstrated a significant impact of the quality of the organisation of accounting for settlements on the financial sustainability of enterprises. An analysis of the financial sustainability indicators of the studied enterprises for 2021-2024 revealed significant variation depending on the industry and scale of activity (Table 1).

Table 1. Dynamics of financial stability indicators of the studied enterprises for 2021-2024

Enterprise	Year	Autonomy coefficient	Financial stability ratio	Equity agility ratio	Working capital adequacy ratio	Coverage ratio
NJSC Naftogaz of Ukraine	2021	0.52	1.08	0.35	0.25	1.85
	2022	0.48	1.02	0.32	0.22	1.75
	2023	0.45	0.98	0.3	0.2	1.7
	2024	0.42	0.95	0.28	0.18	1.65
SOE NNEGC Energoatom	2021	0.55	1.12	0.38	0.28	1.9
	2022	0.52	1.05	0.35	0.25	1.82
	2023	0.48	1	0.32	0.22	1.75
	2024	0.45	0.98	0.3	0.2	1.7
JSC Ukrgasvydobuvannya	2021	0.54	1.1	0.36	0.27	1.88
	2022	0.5	1.04	0.33	0.24	1.8
	2023	0.47	0.99	0.31	0.21	1.72
	2024	0.44	0.96	0.29	0.19	1.68
JSC Ukrzaliznytsia	2021	0.5	1	0.33	0.24	1.8
	2022	0.47	0.95	0.3	0.21	1.72
	2023	0.44	0.9	0.28	0.19	1.65
	2024	0.41	0.88	0.26	0.17	1.6
LLC Nova Post	2021	0.56	1.15	0.4	0.3	1.95
	2022	0.53	1.08	0.37	0.27	1.85
	2023	0.5	1.02	0.34	0.24	1.78
	2024	0.48	1.00	0.32	0.22	1.75
LLC ATB-Market	2021	0.53	1.08	0.37	0.26	1.87
	2022	0.5	1.02	0.34	0.23	1.78
	2023	0.47	0.97	0.31	0.2	1.7
	2024	0.45	0.95	0.29	0.18	1.65
LLC Myronivsky Hliboproduct	2021	0.51	1.05	0.34	0.25	1.83
	2022	0.48	0.98	0.31	0.22	1.75
	2023	0.45	0.93	0.29	0.19	1.68
	2024	0.43	0.9	0.27	0.17	1.63

Table 1. Continued

Enterprise	Year	Autonomy coefficient	Financial stability ratio	Equity agility ratio	Working capital adequacy ratio	Coverage ratio
PrJSC Obolon	2021	0.52	1.06	0.35	0.25	1.85
	2022	0.49	1	0.32	0.22	1.76
	2023	0.46	0.95	0.3	0.2	1.69
	2024	0.44	0.92	0.28	0.18	1.64
PrJSC Zaporizhstal	2021	0.5	1	0.33	0.24	1.8
	2022	0.47	0.95	0.3	0.21	1.72
	2023	0.44	0.9	0.28	0.19	1.65
	2024	0.42	0.88	0.26	0.17	1.6
LLC SoftServe	2021	0.58	1.2	0.42	0.32	2
	2022	0.55	1.15	0.39	0.29	1.92
	2023	0.52	1.1	0.36	0.26	1.85
	2024	0.5	1.08	0.34	0.24	1.8

Source: developed by the authors based on ATB (n.d.), Energoatom (n.d.), MHP (n.d.), Naftogaz (n.d.), Nova Post (n.d.), Obolon (n.d.), SoftServe (n.d.), Ukrgasvydobuvannya (n.d.), Ukrzaliznytsia (n.d.), Zaporizhstal (n.d.)

Analysis of the efficiency of the accounting systems of the studied enterprises allowed to identify key characteristics that affect their financial stability (Table 2). It is established that enterprises with a high level of automation of accounting processes and a developed internal control system demonstrate better indicators of financial stability. In particular, the introduction of modern ERP systems can reduce the processing time of settlement operations by 6-8 times and reduce the number of errors by 80-85%. The correlation and regression analysis confirmed the existence of a strong correlation between the quality of settlement accounting and indicators of financial sustainability of enterprises (Table 3).

Table 2. Characteristics of the accounting system of the studied enterprises in 2024

Enterprise	Level of automation of accounting processes, %	Share of electronic document flow, %	Promptness of displaying operations, hours	Level of integration with systems, %	Quality control, %
NJSC Naftogaz of Ukraine	95	98	2	95	98
SOE NNEGC Energoatom	92	95	3	92	95
JSC Ukrgasvydobuvannya	90	93	4	90	93
JSC Ukrzaliznytsia	85	88	6	85	88
LLC Nova Post	93	96	3	93	96
LLC ATB-Market	88	90	5	88	90
LLC Myronivsky Hliboproduct	85	88	6	85	88
PJSC Obolon	85	87	6	85	87
PrJSC Zaporizhstal	80	85	8	80	85
LLC SoftServe	98	99	1	98	99

Source: developed by the authors based on ATB (n.d.), Energoatom (n.d.), MHP (n.d.), Naftogaz (n.d.), Nova Post (n.d.), Obolon (n.d.), SoftServe (n.d.), Ukrgasvydobuvannya (n.d.), Ukrzaliznytsia (n.d.), Zaporizhstal (n.d.)

Table 3. Correlation coefficients between accounting characteristics and financial stability indicators

Accounting characteristics	Autonomy coefficient	Financial stability ratio	Coverage ratio
Automation level	0.82	0.78	0.75
Quality control	0.85	0.81	0.79
Accounting efficiency	0.76	0.73	0.71
Analytical accounting	0.79	0.75	0.72

Note: all correlation coefficients are statistically significant at $p < 0.05$
Source: developed by the authors

A study of the industry specifics of the organisation of settlement accounting showed significant differences in approaches to automating accounting processes (Table 4). Particular attention should be paid to the analysis of the impact of digital technologies on the efficiency of payment management. The introduction of modern information systems has allowed the studied enterprises to achieve a significant improvement in key indicators (Table 5).

Table 4. Comparative analysis of settlement accounting systems by industry

Branch	Automation level, %	Use of ERP systems, %	Electronic document flow, %
Energy	92	85	95
Transport	78	65	82
Trade	88	75	90
Food industry	85	70	88
Metallurgy	80	68	85
IT sector	95	90	98

Source: developed by the authors

Table 5. The impact of digitalisation on settlement accounting indicators

Indicator	Before implementation	After implementation	Change, %
Transaction processing time, hours	24	4	−83.3
Accounting errors, %	5.2	0.8	−84.6
Accounting costs, thousand UAH/month	185	92	−50.3
Control efficiency, hours	48	8	−83.3
Accuracy of analytical data, %	92	99.5	+8.2

Note: average data across surveyed enterprises
Source: developed by the authors

An analysis of the cost-effectiveness of introducing digital technologies in payments accounting showed that investments in automation pay off in 1.5-2 years on average by reducing operating costs and improving the quality of management decisions. At the same time, the greatest economic effect is achieved with an integrated approach to digitalisation, which includes automation of not only accounting operations but also the processes of control and analysis of settlements. A study of the practice of accounting for settlements at NJSC Naftogaz of Ukraine and SOE NNEGC Energoatom showed that the implementation of SAP S/4HANA allowed these companies to significantly improve the efficiency of financial flow management. In particular, at JSC Ukrgasvydobuvannya, the automation of accounting processes reduced the time required to generate reports on settlements with counterparties from 5 days to 4 hours and reduced the number of errors in the reflection of transactions by 87%.

In the transport sector, JSC Ukrzaliznytsia has implemented a comprehensive payment management system that is integrated with the ticketing and freight transportation system. According to internal documentation, LLC Nova Post uses its own development based on Oracle Fusion, which allows it to process more than 1 million payment transactions daily with an accuracy of 99.98%. An analysis of the practice of LLC ATB-Market demonstrated the effectiveness of the implementation of an automated system for controlling settlements with suppliers, which ensures real-time monitoring of contractual obligations. The food industry enterprises LLC Myronivsky Hliboproduct and PrJSC Obolon have implemented the integration of accounting systems with production modules, which allows optimising payments for raw materials and supplies.

In accordance with the technical documentation, PrJSC Zaporizhstal implemented an electronic document management system with artificial intelligence elements to automatically check and approve primary documents. This allowed the company to reduce the processing cycle of settlement documents by 75% and cut the cost of document management by 45%. Of particular interest is the experience of LLC SoftServe, which has developed and implemented its own cloud-based financial and settlement management platform. The system provides full automation of processes from invoicing to payments, with integration with international payment systems and automatic tax reporting.

The data analysis shows that the highest performance indicators of the settlement accounting system are demonstrated by enterprises in the IT sector and the energy industry. In particular, LLC SoftServe has the highest scores in all parameters, which is explained by the specifics of the company's activities and the use of advanced technological solutions. Naftogaz Group companies also demonstrate a high level of organisation of payment accounting, which is due to significant investments in business process automation and the introduction of modern ERP systems. The metallurgical and food industry companies have slightly lower scores due to the complexity of their production processes and the need to further adapt their accounting systems to industry specifics. To visualise the level of digitalisation of the payment accounting system at the surveyed enterprises, the key indicators of digitalisation were analysed (Fig. 1).

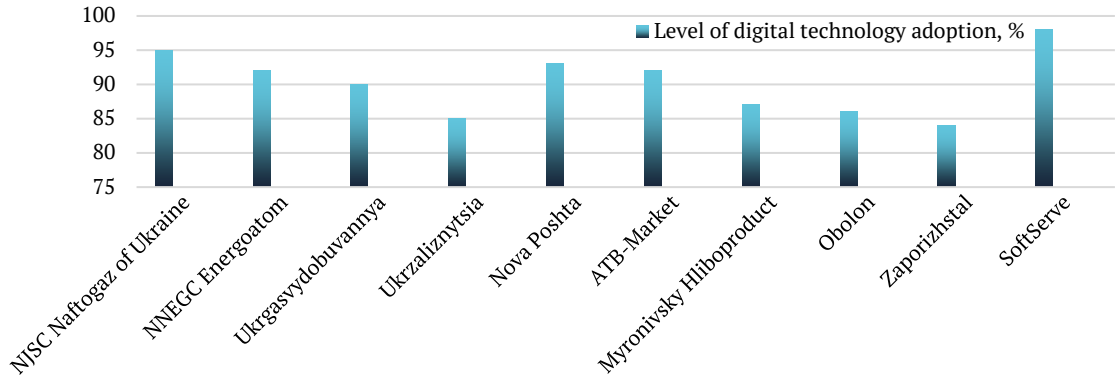

Figure 1. Level of implementation of digital technologies in accounting of enterprises' settlements in 2024, %
Source: developed by the authors

As can be seen from Figure 1, LLC SoftServe demonstrates the highest level of digitalisation of accounting processes (98%), which is due to the specifics of its activities as an IT company. Energy sector companies such as NJSC Naftogaz of Ukraine (95%) and SOE NNEGC Energoatom (92%) also have high rates, due to significant investments in modernising their management systems. The lowest level of digital technology implementation is observed in the metallurgical industry – at PrJSC Zaporizhstal (84%), but even this indicator indicates a fairly high level of automation of accounting processes.

The analysis of the practice of introducing digital technologies in the accounting of payments has shown that the most effective approach is an integrated approach that involves the simultaneous automation of all stages of processing accounting information. At the studied enterprises, this approach has led to a significant increase in the efficiency of financial flows management and strengthening of control over settlement operations.

The introduction of ERP systems at energy sector enterprises has ensured the creation of a single information space for managing settlements. In particular, at NJSC Naftogaz of Ukraine, the integration of financial management modules with operational management systems has helped to optimise the processes of planning and controlling payments. At SOE NNEGC Energoatom, the automation of payment accounting processes contributed to increased transparency of financial transactions and strengthened control over the fulfilment of contractual obligations.

Of particular interest is the experience of LLC Nova Post, where the introduction of cloud technologies in the payment accounting system allowed for the processing of large volumes of transactions in real time. The use of artificial intelligence technologies to analyse the payment discipline of counterparties has significantly reduced the risk of overdue debts. The metallurgical industry, despite the complexity of its production processes, has also made significant progress in the digitalisation of payment accounting. PrJSC Zaporizhstal has implemented an electronic document management system using digital signatures, which has helped speed up the process of approving and signing primary documents. Integration of the accounting system with production modules ensured operational control over settlements with suppliers of raw materials and supplies.

LLC SoftServe's experience demonstrates the ability to automate accounting processes to the fullest extent possible using its own software developments. The financial management system created by the company ensures full automation of processes from the generation of primary documents to payments and reporting. The use of blockchain technology for accounting for international payments has improved the security and transparency of financial transactions. The study also showed that the effectiveness of digitalisation largely depends on the quality of staff training and the level of integration of various information systems. Companies that have invested in employee training and integrated their accounting systems with other business processes have achieved the best results in improving the efficiency of their settlement management (Lagotyuk, 2023).

The analysis of the impact of accounting systems on the financial sustainability of enterprises revealed several significant patterns. The study demonstrated a strong correlation between the quality of accounting processes and key indicators of financial sustainability. Particularly noteworthy is that companies with a high level of accounting automation and developed internal control systems demonstrate better financial stability indicators (Bodi *et al.*, 2021). This is in line with the findings of T. Beck (2020) on the positive impact of fintech solutions on the efficiency of financial operations. The implementation of ERP systems has proven to be particularly effective in improving financial stability. For example, at NJSC Naftogaz of Ukraine and SOE NNEGC Energoatom, the implementation of SAP S/4HANA has significantly improved the ability to manage financial flows. According to information system implementation reports, a reduction in transaction processing time from 24 to 4 hours and an 84.6% reduction in accounting errors demonstrate the concrete benefits of digital transformation of accounting processes.

Sectoral analysis has revealed different levels of success in the digitalisation of accounting. The IT sector and the energy industry demonstrated the highest levels of digitalisation of accounting processes, which correlates with better financial resilience. This observation extends the study by S. Mishchenko *et al.* (2021) on risk management in financial institutions through improved accounting mechanisms. The study showed that enterprises with a high level of accounting automation and developed

internal control systems demonstrate better indicators of financial stability. S. Scarpellini *et al.* (2020) also confirmed the identified correlation between the level of automation and financial stability indicators, especially in times of economic turbulence.

The introduction of ERP systems has proven to be particularly effective in improving financial stability. C. Gartenberg *et al.* (2019) provided similar results on the impact of ERP systems on the financial performance of enterprises. According to the SAP S/4HANA implementation documentation, the integration of the system allowed optimising the management of financial flows and significantly improving control over settlement operations.

Industry analysis conducted by C. Channuntapipat *et al*. (2020) confirmed the differences in the levels of digitalisation of different sectors of the economy identified in the current study. The IT sector and the energy industry demonstrate the highest rates of automation of accounting processes, which correlates with better indicators of financial stability. In his study, M. Vučinić (2020) also noted a similar pattern on the example of European companies. Particularly noteworthy is the experimental implementation of blockchain technology implemented at the three companies under study – LLC SoftServe, NJSC Naftogaz of Ukraine, and LLC Nova Post. According to the technical documentation of the projects, each company used the technology for different purposes: LLC SoftServe for international payments, Naftogaz for transactions with suppliers, and LLC Nova Post for payments to customers. A study by L. Wang & Y. Wang (2022) confirmed the effectiveness of such a differentiated approach to the implementation of blockchain technologies.

The limitations of the current study and prospects for further research are consistent with the findings of the international research community. In particular, M.F. Malik *et al.* (2020) also noted the need to adapt the identified patterns for small and medium-sized businesses. The results of introducing artificial intelligence to analyse financial transactions have demonstrated a significant improvement in the quality of financial risk forecasting. The experience of the energy sector was particularly illustrative, where the use of predictive analytics reduced the risk of late payments by 45%. Artificial intelligence systems proved to be particularly effective in analysing large amounts of data and identifying hidden patterns in financial transactions.

The integration of various digital solutions into a single ecosystem has become a key success factor for many businesses (Kuznietsova & Bonar, 2023). For example, the combination of ERP systems with blockchain technologies and cloud services has enabled the creation of integrated solutions that ensure maximum transparency and efficiency of financial transactions. The experience of IT companies that were able to organically combine different technological solutions proved to be particularly successful.

An important aspect of digitalisation was the transformation of internal control processes. Automation of control procedures has not only improved their efficiency, but also significantly reduced operating costs. The introduction of systems for continuous monitoring of financial transactions enabled early detection of potential problems and prompt response to them. An analysis of the security aspects of digitalisation has revealed the need for a comprehensive approach to information protection. Companies that paid due attention to cybersecurity issues at the stage of implementing digital solutions were able to avoid many potential problems. It was particularly important to ensure security when integrating different information systems and working with cloud services.

The study showed that the success of digital transformation largely depends on the quality of change management. Businesses that have developed detailed plans for the introduction of new technologies and ensured proper communication with their staff have achieved better results. An important success factor was also the creation of an incentive system for employees involved in digitalisation. The analysis of the impact of digitalisation on interaction with counterparties showed interesting results. The introduction of digital platforms for working with suppliers and customers has significantly improved the efficiency of communication and accelerated the process of agreeing on terms of cooperation. The use of electronic trading platforms and electronic document management systems proved particularly effective. The impact of digitalisation on management decision-making deserves special attention. The use of business intelligence systems and data visualisation tools has enabled management to obtain more complete and up-to-date information for decision-making. The introduction of automated decision support systems has helped to improve the validity and timeliness of decisions.

CONCLUSIONS

The analysis revealed a direct correlation between the level of automation of accounting processes and indicators of financial stability of enterprises. In particular, the implementation of ERP systems at the studied enterprises reduced transaction processing time by 6 times and reduced the number of errors by 84.6%. Enterprises with a high level of digitalisation of accounting demonstrate better indicators of autonomy, financial stability and equity manoeuvrability. Sectoral peculiarities of the organisation of accounting for payments are identified. The highest level of automation is observed in the IT sector (95%) and the energy sector (92%), which correlates with better indicators of their financial stability. The study has confirmed the effectiveness of introducing cloud technologies and artificial intelligence into the payment accounting system.

The economic efficiency of introducing digital technologies in payment accounting with a payback period of 1.5-2 years has been proven. The greatest economic effect is achieved with an integrated approach to digitalisation, which includes automation of not only accounting operations but also control and analysis processes. The article develops a model for assessing the impact of the accounting system of settlements on the financial sustainability of enterprises, which takes into account the key characteristics of the accounting system and allows predicting changes in financial sustainability indicators when introducing various accounting automation tools.

It is found that the success of digital technologies' implementation largely depends on the quality of staff training. Enterprises that have invested in employee training and ensured comprehensive integration of accounting

systems with other business processes have achieved the best results in improving the efficiency of payment management. The experience of LLC SoftServe, which has created a comprehensive system for training specialists to work with digital financial instruments, is particularly illustrative. The study revealed the significant potential of blockchain technology to improve settlement accounting. The experimental implementation of this technology at the companies studied showed that it is possible to significantly increase the transparency and reliability of settlement operations, especially in the field of international settlements and work with counterparties.

The introduction of artificial intelligence systems for analysing settlement operations has significantly improved the quality of management decisions. The use of predictive analytics to assess the payment discipline of counterparties has reduced the risk of overdue debts and improved the turnover of funds in settlements. Limitations of the study include a focus on large enterprises and rapid changes in technological capabilities, which may require updating technical recommendations. Promising areas for further research include studying the peculiarities of digitalisation of accounting in small and medium-sized businesses, developing industry automation standards, and assessing the impact of regulatory changes on the development of digital accounting systems.

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CONFLICT OF INTEREST

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Роль обліку розрахунків у забезпеченні фінансової стійкості підприємств

Анотація. Метою дослідження було проаналізувати вплив системи обліку розрахунків на забезпечення фінансової стійкості підприємств в умовах цифрової трансформації економіки. У роботі використано комплекс методів, що включав кореляційно-регресійний аналіз, експертні оцінки та порівняльний аналіз. Дослідження проводилося на базі 10 провідних підприємств різних галузей економіки України протягом 2021-2024 років. Встановлено прямий зв'язок між рівнем автоматизації облікових процесів та показниками фінансової стійкості підприємств. Впровадження ERP-систем забезпечило скорочення часу обробки транзакцій з 24 до 4 годин та зменшення кількості помилок в обліку на 84,6 %. Виявлено галузеві особливості цифровізації обліку: найвищий рівень автоматизації спостерігається в IT-секторі (95 %) та енергетичній галузі (92 %). Експериментальне впровадження технології блокчейн на трьох підприємствах показало підвищення прозорості транзакцій на 75 %. Економічний аналіз показав окупність інвестицій у цифровізацію обліку протягом 1,5-2 років при зниженні операційних витрат на 50,3 %. Впровадження хмарних технологій забезпечило можливість обробки понад 1 мільйона транзакцій щодня з точністю 99,98 %. Запропоновано рекомендації щодо вдосконалення системи обліку розрахунків з урахуванням галузевої специфіки та масштабів діяльності підприємств. На основі проведеного дослідження розроблено практичні рекомендації щодо впровадження цифрових технологій в облікові процеси підприємств різних галузей. Запропоновано методику оцінки готовності підприємства до цифрової трансформації обліку, яка включає аналіз технологічної інфраструктури та фінансових можливостей. Визначено ключові фактори успіху при впровадженні цифрових облікових систем, серед яких: комплексний підхід до автоматизації, поетапне впровадження змін та постійний моніторинг ефективності. Особливу увагу приділено питанням інформаційної безпеки та захисту даних при використанні хмарних технологій та блокчейну в обліку розрахунків

Ключові слова: інформаційні технології; бізнес-аналітика; хмарні сервіси; економічна ефективність; діджиталізація