

ISSN 1895-9911 Print  
ISSN 2543-8204 Online

# PNAP

---

SCIENTIFIC JOURNAL OF POLONIA UNIVERSITY  
PERIODYK NAUKOWY AKADEMII POLONIJNEJ



**59 (2023) nr 4**

**CZESTOCHOWA 2023**

Periodyk Naukowy Akademii Polonijnej, Częstochowa, 2023, 59 (2023) nr 4, s. 264.

## PARTNERZY / PARTNERS



Scientific journal has the scores, is available in the Open Journal Systems database (<http://pnap.ap.edu.pl/index.php/pnap>) and has the DOI prefix.

PNAP – Scientific Journal of Polonia University is admitted to the following international scientific databases:

- DOAJ (Directory of Open Access Journals);
- Polish scientific and professional electronic journals;
- General Impact Factor;
- Punktacjczasopism;
- UlrichsWeb;
- CiteFactor;
- DRJI;
- Nukat;
- Sindexs;
- ROAD;
- IndexCopernicus;
- Crossref;
- WorldCat;
- Universitätsbibliothek Leipzig;
- TIB;
- ESJI;
- PBN;
- Scilit;
- TIB;
- JIFactor.

The paper version of the Journal is the original version. The Journal is available in the electronic form on the website: [www.pnap.ap.edu.pl](http://www.pnap.ap.edu.pl)

ISSN 1895-9911 Print

ISSN 2543-8204 Online

© Copyright by Publishing House of Polonia University „Educator”, Czestochowa 2023



Wydawnictwo Akademii Polonijnej „Educator”  
ul. Gen. Kazimierza Pułaskiego 4/6, 42-226 CZĘSTOCHOWA  
tel: +48 530 137 864, [wydawnictwo@ap.edu.pl](mailto:wydawnictwo@ap.edu.pl), [www.ap.edu.pl](http://www.ap.edu.pl)

**PRZEWODNICZĄCY RADY REDAKCYJNEJ / HEAD OF EDITORIAL COUNCIL**

**Andrzej Kryński**, Prof. PhD, ThDr., Dr h.c. mult., Rector of Polonia University in Czestochowa, Poland, [orcid.org/0000-0001-9635-023X](https://orcid.org/0000-0001-9635-023X)

**REDAKTOR NACZELNY / EDITOR IN CHIEF**

**Maciej Rudnicki**, Prof. Ph.D., Polonia University in Czestochowa, Poland, [orcid.org/0000-0002-0019-3469](https://orcid.org/0000-0002-0019-3469)

**ZASTĘPCA REDAKTORA NACZELNEGO / DEPUTY EDITOR IN CHIEF**

**Oksana Babelyuk**, Doctor of Philology, Professor, Polonia University in Czestochowa, Poland, [orcid.org/0000-0003-4837-1225](https://orcid.org/0000-0003-4837-1225)

**SEKRETARZ / RESPONSIBLE SECRETARY**

**Szymon Polać**, MA, Polonia University in Czestochowa, Poland, [orcid.org/0000-0002-1315-0943](https://orcid.org/0000-0002-1315-0943)

**REDAKTOR TECHNICZNY / TECHNICAL EDITOR**

**Oleg Golovko**, PhD, email: [golovko@helvetica.com.ua](mailto:golovko@helvetica.com.ua)

**RADA NAUKOWA / EDITORIAL BOARD**

**Andrzej Kryński**, Prof. PhD, ThDr., Dr h.c. mult., Polonia University in Czestochowa, Poland, email: [akrynski@ap.edu.pl](mailto:akrynski@ap.edu.pl), [orcid.org/0000-0001-9635-023X](https://orcid.org/0000-0001-9635-023X)

**Iveta Mietule**, Prof. PhD, Rezekne Academy of Technologies, Latvia / Visiting Professor of Polonia University in Czestochowa, Latvia, email: [mietule@inbox.lv](mailto:mietule@inbox.lv), [orcid.org/0000-0001-7662-9866](https://orcid.org/0000-0001-7662-9866)

**Wladyslaw Majkowski**, Prof. PhD, Polonia University in Czestochowa, Poland, email: [majk@wa.onet.pl](mailto:majk@wa.onet.pl), <https://orcid.org/0000-0002-3382-4511>

**Mykola Palinchak**, Prof. PhD, Uzhhorod National University, Ukraine, email: [palinchakmm@gmail.com](mailto:palinchakmm@gmail.com), <http://orcid.org/0000-0002-9990-5314>

**Ricardo Villanueva Lomeli**, Prof. PhD, Universidad de Guadalajara, Mexico, email: [lomeli@cgci.udg.mx](mailto:lomeli@cgci.udg.mx), [orcid.org/0000-0002-7425-3030](https://orcid.org/0000-0002-7425-3030)

**Geert Demuijnck**, Prof. PhD, EDHEC Business School, France, email: [geert.demuijnck@edhec.edu](mailto:geert.demuijnck@edhec.edu), [orcid.org/0000-0002-9475-1897](https://orcid.org/0000-0002-9475-1897)

**Mirosława Skalik**, Prof. PhD, Polonia University in Czestochowa, Poland, email: [mskalik@ap.edu.pl](mailto:mskalik@ap.edu.pl), <https://orcid.org/0000-0002-6259-4794>

**Ioan Horga**, Prof. PhD, The University of Oradea, Romania, email: [ihorga@uoradea.ro](mailto:ihorga@uoradea.ro), [orcid.org/0000-0001-8791-5243](https://orcid.org/0000-0001-8791-5243)

**Andre Kadandji**, Prof. PhD, Saint Jerome Catholic University of Douala, Cameroon, email: [akadandji@univ-catho-sjd.com](mailto:akadandji@univ-catho-sjd.com), [orcid.org/0000-0002-8463-5585](https://orcid.org/0000-0002-8463-5585)

- Maciej Rudnicki**, Prof. Ph.D, Polonia University in Czestochowa, Poland, email: kancelaria.rudnicki@poczta.fm, orcid.org/0000-0002-0019-3469
- Waheeda Khan**, PhD, Shree Guru Gobind Singh Tricentenary University, New Delhi, India, email: dean.ir@sgtuniversity.org, orcid.org/000-0002-4384-7047
- George Padikara**, PhD, Sampurna Montfort College, Bangalore, India, email: padikara@hotmail.com
- Bancha Saenghiran**, Prof. PhD, Assumption University of Thailand, Bangkok, Thailand, email: bancha@au.edu
- Shukhrat Jumayevich Teshae**v, Prof. PhD, Bukhara State Medical Institute named after Abu Ali ibn Sino, Bukhara, Uzbekistan, email: bumi\_info@edu.uz, <https://orcid.org/0000-0001-7313-9888>
- Augustin Guy Heff Nyamsi**, PhD, John Paul II International University of Bafang, Cameroon, email: augustineheffa@yahoo.fr, <http://orcid.org/0000-0001-8132-2148>
- Rasa Subačienė**, Prof. PhD, Vilnius University, Lithuania, email: rasa.subaciene@evaf.vu.lt, orcid.org/0000-0001-6559-8478
- Jordan Zjawiony**, Prof. PhD, University of Mississippi, United States, email: jordan@olemiss.edu, orcid.org/0000-0001-5242-2799
- Abdelaziz Benjouad**, PhD, International University of Rabat, Morocco, email: contact@uir.ac.ma, orcid.org/0000-0002-0459-4219
- Goran Stojiljkovic**, Prof. PhD, University of Novi Sad, Serbia, [goran.stojiljkovic@mf.uns.ac.rs](mailto:goran.stojiljkovic@mf.uns.ac.rs), orcid.org/0000-0002-5675-2418
- Piotr Stec**, Assoc. Prof. PhD, University of Opole, Poland, email: pstec@uni.opole.pl, orcid.org/0000-0003-3797-1321
- Bogdan Piotrowski**, Prof. PhD, Universidad de La Sabana, Colombia, email: bogdan.piotrowski@unisabana.edu.co, orcid.org/0000-0003-1124-1179
- Michal Soltes**, doc. Ing. PhD, Technical University in Kosice, Slovakia, email: michal.soltes@tuke.sk, orcid.org/0000-0002-1421-7177
- Jan Mazur**, Prof. PhD, The Pontifical University of John Paul II, Poland, email: jm.osppe@wp.pl, orcid.org/0000-0002-0548-0205
- Jiří Krupka**, Prof. PhD, University of Pardubice, Czech Republic, email: jiri.krupka@upce.cz, orcid.org/0000-0002-3385-2774
- Martin Rusnák**, Prof., MD, CSc, Trnava University, Slovakia, email: martin.rusnak@truni.sk, orcid.org/0000-0003-3321-1042
- Alla Denysova**, Prof. PhD, Odessa National Polytechnic University, Ukraine, email: alladenysova@gmail.com, orcid.org/0000-0002-3906-3960
- Viktória Albert**, PhD, Kodolányi János University of Applied Sciences, Hungary, email: dr.albertviki@gmail.com, orcid.org/0000-0001-7059-3946
- Alla Mykhatska**, PhD, Borys Grinchenko Kyiv University, Kyiv, Ukraine, email: a.mykhatska@kubg.edu.ua, orcid.org/0000-0002-8886-7877

## CONTENTS

### LANGUAGE, CULTURE, COMMUNICATION

<b>Ihor Bohdanovskiy</b> CONCEPTUAL MODEL OF TRAINING BACHELORS OF PHYSICAL CULTURE AND SPORTS FOR COACHING ACTIVITIES IN GAME SPORTS WITH PRESCHOOL CHILDREN .....	9
<b>Yuliya Demyanchuk</b> TERM-COMBINATION IN THE CONTEXT OF CORPUS-APPLIED TRANSLATION STUDIES .....	16
<b>Olena Hurman, Anna Kviatkovska</b> THE IMPACT OF INDUSTRY 4.0 ON THE MODERN WORLD EDUCATIONAL PROCESS AND IN UKRAINE .....	23
<b>Liliya Karmazina</b> HISTORICAL EVOLUTION OF IT TERMINOLOGY AND ITS FURTHER DEVELOPMENT.....	30
<b>Ievgeniia Kyianytsia</b> GUARDIANS OF THE COMMUNICATION PROCESS, THEIR FUNCTIONS IN THE FORMATION OF THE MEDIA LANDSCAPE.....	36
<b>Liu Junyi</b> CROSS-CULTURAL MUSICAL TRANSFORMATION: SHAPING CHINESE TRADITIONS.....	43
<b>Tetiana Marchenko</b> HIGHER EDUCATION DURING THE WAR TIME IN UKRAINE.....	49
<b>Olga Mayevska</b> LA OBRA DE MIGUEL DE UNAMUNO EN EL ESPACIO UCRANIANO: INTERPRETACIÓN Y TRADUCCIÓN.....	58
<b>Kateryna Mikriukova</b> SYSTEMICITY OF THE LEXICAL LAYER OF THE LANGUAGE.....	67
<b>Iryna Nikitina, Tetyana Ishchenko</b> GLOBALIZATION OF EDUCATION: VITAL APPROACHES IN STEM EDUCATION .....	73
<b>Olena Panchenko, Karolina Bilous</b> POETICAL ANALYSIS OF THE IMAGE OF UKRAINE IN O. DOVZHENKO'S FILM STORY "UKRAINE ON FIRE".....	81
<b>Anastasiiia Poliakova, Kateryna Lut</b> NARRATIVE IN VIDEO GAMES' VERBAL MODE.....	87
<b>Jiang Qingchuan</b> A PRAGMATIC ANALYSIS OF REFUSAL SPEECH ACTS IN "FAMILY·SPRING·AUTUMN".....	93
<b>Maryna Ryzhenko, Olena Anisenko</b> THE PROBLEM OF OVERCOMING LANGUAGE BARRIERS BY STUDENTS OF NON-LINGUISTIC SPECIALTIES.....	109
<b>Olena Shcherbakova, Svitlana Nikiforchuk</b> IDENTIFYING MISLEADING INFORMATION AND TYPES OF FAKES.....	114

<b>Svitlana Shumaieva</b> FACTORS OF INCREASING OF SPECIAL EDUCATION OF SELF-EFFICACY BY FUTURE TEACHERS IN THE USA .....	119
<b>Liudmyla Suvorova, Iryna Haidai, Yuliia Herasymchuk, Olga Khorosh</b> ELEMENTS OF GAME TECHNOLOGIES AS A MOTIVATION FACTOR OF AN INCLUSIVE EDUCATIONAL ENVIRONMENT.....	125
<b>Nataliia Tarasiuk</b> MENTAL SIMULATION SELF-REFLECTION TASKS FOR INCREASED LEARNING OF ENGLISH.....	133
<b>Ulviyya Abdullayeva</b> TURKISHNESS AND TURANISM IN THE CREATIVITY OF MUHAMMAD HADI.....	140

### INNOVATION, WORK, SOCIETY

<b>Oleksandr Durniev, Oksana Nekhaienko</b> INTERNET AS AN IDEOLOGICAL STATE APPARATUS .....	146
<b>Yurii Kuksa</b> COMPARATIVE STUDY OF INTERPERSONAL INTERACTION OF MALE AND FEMALE TECHNICAL PROFILE STUDENTS .....	155
<b>Dmytro Ljudvenko, Sergey Khomovyi, Nadiia Tomilova-Yaremchuk, Vitalii Vakulenko, Mykhailo Khomovyi</b> MANAGEMENT ACCOUNTING TOOLS TRANSFORMATION FOR THE NEEDS OF ENTERPRISE MANAGERS UNDER MARTIAL LAW IN UKRAINE .....	164
<b>Tetyana Peresyphkina, Valentina Nesterenko</b> THE ROLE OF PUBLIC POLICY IN ENSURING PUBLIC HEALTH.....	176
<b>Olena Tupakhina, Iryna Sikorska</b> COVID-19 PANDEMICS IMPACT ON UKRAINIAN STUDENTS' PERCEPTION OF THE EU, EUROPEAN INTEGRATION AND SOLIDARITY.....	183
<b>Anna Vakhnyanyn</b> THE THIRD WORLD CONGRESS OF FREE UKRAINIANS AS A COMPONENT OF STRUGGLE FOR THE RIGHTS OF THE UKRAINIAN NATION .....	191

### HEALTH, ENVIRONMENT, DEVELOPMENT

<b>Valentyna Chorna, Valentyna Makhniuk</b> HYGIENIC ASPECTS OF ARCHITECTURAL AND PLANNING SOLUTIONS FOR THE CONSTRUCTION OF MENTAL HEALTH FACILITIES.....	202
<b>Natalia Hnida, Ihor Hnidoi</b> DIETARY FIBER IN REDUCING OF ELEVATED BLOOD LEAD CONCENTRATION IN CHILDREN.....	213
<b>Iryna Klymas</b> ULTRASOUND DIAGNOSTICS OF THE LIVER AS AN EFFECTIVE METHOD OF CONTROLLING NON-ALCOHOLIC FATTY LIVER DISEASE THERAPY IN RHEUMATOID ARTHRITIS PATIENTS.....	221

**Olena Kolesnikova, Anastasiia Radchenko, Olga Zaprovalna, Nataliya Emelyanova, Hanna Strashnenko**  
IMPACT OF STRESS FACTORS ON UKRAINIAN WAR VICTIMS  
IN THE COUNTRY AND ABROAD.....229

**Tatiana Rebrikova**  
THE IMPACT OF BALLROOM DANCING ON THE LEVEL  
OF PHYSICAL HEALTH OF THE INDIVIDUAL..... 243

**TECHNOLOGY, CREATIVITY, IMPLEMENTATION**

**Dmytro Bespalov**  
EFFICIENCY EVALUATION OF INTERSECTIONS AND INTERCHANGES  
OF THE URBAN STREET NETWORK IN UKRAINE  
USING TRANSPORT MODELING .....250

**MANAGEMENT ACCOUNTING TOOLS TRANSFORMATION  
FOR THE NEEDS OF ENTERPRISE MANAGERS  
UNDER MARTIAL LAW IN UKRAINE**

**Dmytro Ljudvenko**

Doctor of Economic Sciences, Associate Professor, Senior Research Officer  
at the Department of Economics of Regional Development and Forecasting,  
National Scientific Center “Institute of Agrarian Economics”, Ukraine  
e-mail: buttercup@ukr.net, orcid.org/0000-0002-7908-5718

**Sergey Khomovyi**

Ph.D. (Economics), Associate Professor, Head of the Department of Accounting and Taxation,  
Bila Tserkva National Agrarian University, Ukraine  
e-mail: 2serik2@ukr.net, orcid.org/0000-0001-7483-7426

**Nadiia Tomilova-Yaremchuk**

Ph.D. (Economics), Associate Professor, Associate Professor at the Department  
of Accounting and Taxation, Bila Tserkva National Agrarian University, Ukraine  
e-mail: ntomilova1984@gmail.com, orcid.org/0000-0001-6409-7487

**Vitalii Vakulenko**

Ph.D. (Economics), Associate Professor at the Department of Management named  
after Professor Josyp S. Zavadskyi, Head of the Department of Postgraduate Studies,  
National University of Life and Environmental Sciences of Ukraine, Ukraine  
e-mail: vakulenko@nubip.edu.ua, orcid.org/0000-0001-7019-1832

**Mykhailo Khomovyi**

Ph.D. (Agricultural Sciences), Associate Professor at the Department of Agriculture,  
Soil Science and Plant Protection, Head of the Educational Laboratory “Botanic Garden”,  
Podillia State University, Ukraine  
e-mail: mhomoviy@ukr.net, orcid.org/0000-0002-7964-7733

**Summary**

The main purpose of this article is to analyze and research the main tools of management accounting functioning, identify trends of their future development and optimize processes improving its information content for managers based on the changes that are taking place in the current conditions of martial law in Ukraine.

The analysis of the features of economic processes was carried out using the principles of dialectics, which allowed to classify the effects of the crisis processes of the Ukrainian economy. The classification of the effects of the crisis processes of the Ukrainian economy associated with the introduction of martial law is carried out and their impact on the development of management accounting tools was shown. The main functions of management accounting, which characterize the depressive phenomena of the economy and have a direct impact on its functioning, are highlighted. Based on the highlighted functions, we have adjusted the objects and tasks facing management accounting during martial law. The conceptual anti-crisis model



of management accounting was formed, its functional variability determines the set of objects of management accounting, which is mainly associated with the need to manage the parameters of strategic anti-crisis development of the economic entity, as well as monitoring and control of its detailed microenvironment under martial law.

The results of the study have important practical value for managers of enterprises that are affected by crisis phenomena caused by rapid negative changes in the external environment.

**Key words:** management accounting, management decisions, crisis processes, objects of management accounting, martial law, information support of enterprise management, anti-crisis model of management accounting.

DOI <https://doi.org/10.23856/5922>

## 1. Introduction

Effective management of enterprises in conditions of business risk is based on the use of relevant information, the main supplier of which is management accounting. The procedure for the formation and systematization of information in management accounting, especially today during the period of martial law in Ukraine, is primarily associated with a large number of new challenges for enterprises, which correlate not only with the methodology of management accounting, but also with the definition of its substantive content. This state of affairs causes the revision of the system of organization and methodology of formation, transfer and use of accounting information of management accounting for users.

In the researching process of the theoretical and organizational-methodological foundations of management accounting, the works were analyzed of such foreign scientists as: Barton L. (1993), Drury, C. (2018), Edward W. (2020), Johnson, H. (2012) and others. Korinko M. (*Korinko, M.D. & Gutkevich S.O., 2022*), Matyukha M. (2022), Onyshchenko V. (2020), Pugachenko O. (*Puhachenko, O. & Zarudna, N., 2021*) and others worked on solving the problems of improving the informativeness of the theory and methodology of management accounting and its main tools. However, despite a significant number of developments in management accounting, there is no information on the conduct of its instruments during martial law.

The main goal is to analyze and research the main tools of management accounting functioning, identify trends in their future development and optimize processes to improve its information content for managers based on changes that occur in the current economic conditions of Ukraine.

## 2. Methods

The method of theoretical generalization was used to identify the properties that affect the organization of the management accounting system. The State Statistics Service of Ukraine data, analytical publications and expert assessments of specialists in this field became the information base of the study.

The analysis of the features of economic processes is carried out using the principles of dialectics, which will allow to classify the effects of the crisis processes of the Ukrainian economy. In addition, while researching the systems of methods were used such as: monographic – in the formulation of the purpose of the study, the results of which are reflected in the article. The method of theoretical generalization of foreign and local works of scientists, used

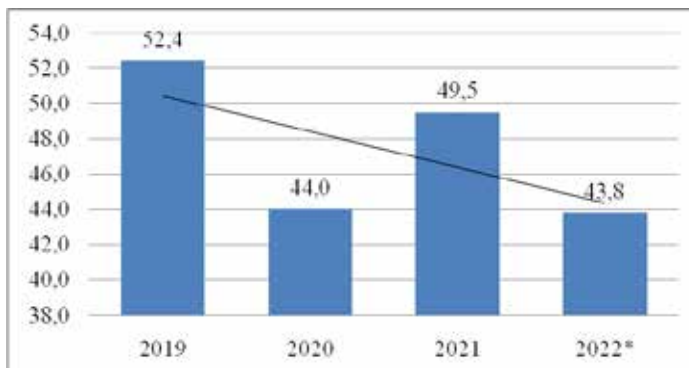
in the selection of properties that directly affect the organization of the management accounting system at the enterprise. General scientific methods of cognition, such as analysis and synthesis, induction and deduction, systematic integrated approach were used for summarizing the conclusions.

### 3. Results

#### 3.1 Prerequisites for adjustment of management tools

Russia's aggression against Ukrainian territories led to the adjustment of the processes of our country's economy, economic, social and humanitarian crisis in Ukraine, new challenges, risks and problems: at least 12 million people have left their homes, 8 million internally displaced persons, 3.5 million refugees and the introduction of martial law.

Increased intensity of hostilities, disruption of production and logistics routes, destruction of assets and infrastructure, high energy prices and reduced demand delay the recovery of economic activity in all sectors of our economy. In the survey of Ukrainian enterprises (Figure 1) among which 45.5 % are industrial companies, 28.1 % are service sector companies, 21.4 % are trade companies, 5.0 % are construction companies, 32.4 % of respondents are large enterprises, 31.7 % are medium-sized companies, 36.0 % are small-sized companies, 34.8 % of surveyed enterprises carry out export and import operations, 9.8 % only export operations, 14.5 % only import operations, 41.0 % do not carry out foreign economic operations, the index of business activity expectations in 2022 is projected to reach 43.8 based on the analysis of expert estimates and will further depend on the duration of martial law (2).



**Fig. 1. Index of business activity of Ukrainian enterprises in 2019–2022**

Source: the official data of the National Bank of Ukraine

Analysis of similar processes that occurred in Ukraine in 2014 (*Kucherova, H., 2019*) and in other countries of the world in different periods of time has shown that such a situation encourages many enterprises to make changes in their usual economic processes, and in most cases it is characterized by inevitable crisis phenomena both in the economy of country and in enterprises in particular.

#### 3.2 Analysis of the differentiation of the newly created environment

We consider it appropriate to analyze the legislative provisions and scientific views on these phenomena of prominent scientists for a more detailed understanding of the essence of the concept of “economic crisis” and “martial law” (Table 1).

Table 1

**Interpretation of the concepts of “economic crisis” and “martial law”  
by different scientific sources**

№	Source	Essence
1	L. Barton (1993)	An economic crisis is a large-scale unpredictable event that leads to potentially negative results and can cause serious damage to the entire enterprise.
2	John M. Keynes (Edward, W., 2020)	An economic crisis is as a rule a sudden and drastic change in a growing downward trend, while in the reverse process such a sharp turn often does not happen.
3	Economic Dictionary (6)	Economic crisis is an imbalance between supply and demand for goods and services, which causes a depressive process in the economic situation. It is manifested by a decline in production, rising unemployment, increasing number of bankruptcies, as well as a tendency to deepen the crisis.
4	K. Hermann (Forgue, B., 1996)	A crisis is an unpredictable, unexpected situation that threatens the priority goals of the organization with limited time for making management decisions.
5	Law of Ukraine (2015)	Martial law is a special legal regime imposed on this.Ukraine or in separate houses in the event of armed aggression or threat of attack, the danger of state independence of Ukraine, its territorial integrity and the granting of appropriate State authorities, military commanders and bodies the local self-government of the authority needed to be frank The threat and security of national security, as well as temporary, concerning the threat, limitations of constitutional rights and human rights and citizen and rights and legal interests of legal persons with set the action string of these constraints.
6	Y. Shemshuchenko (2004)	Martial law is a special state, a procedure of governance, which is introduced on the entire territory of the state or in some of its areas in case of declaration of war, armed aggression or threat of military attack.
7	E. Killam (1989)	Martial law implies the temporary replacement of civilian authorities by military ones and is usually applied in times of war, rebellion or natural disaster.

Analyzing Table 1, we note that each of the above statements on the definition of the essence of the concept of “economic crisis” and “martial law”, which in our opinion in the Ukrainian realities are intertwined in a single process, are extremely important for the economy and proves the fact that they are quite complex phenomena, have different elements of formation and in each country lead to different specific consequences.

### 3.3 Identification of classification features of accounting and analytical tools

That is why we tried to classify the effects of the crisis processes of the Ukrainian economy associated with the introduction of martial law and show their impact on the development of management accounting tools (Table 2).

The presented classification in Table 2 shows the heterogeneity of the impact of economic crisis processes on the development of management accounting tools. Crisis processes have a negative impact on most aspects of the formation of management accounting methodology, but there are also those on which this impact is positive. in Table 2 shows the heterogeneity of the impact of economic crisis processes on the development of management accounting tools. Crisis processes have a negative impact on most aspects of the formation of management accounting methodology, but there are also those on which this impact is positive.

Table 2

**Classification of the impact of crisis processes in the economy on accounting and analytical tools for management decision-making**

Negative aspects	Positive aspects
<b>Conceptual</b>	
<p>1. Reforms in the direction of accounting reporting led to reformatting the minds of users, which ultimately often led to untimely, incomplete or distorted analysis of events.</p> <p>2. Strengthening the effect of control of accounting processes on crisis phenomena almost always has a negative impact on management. This leads to the leveling of special factors inherent in each enterprise in the application of internal accounting.</p> <p>3. From the side of users, any changes at their initial stage always meet resistance, which is dictated by human psychology.</p> <p>4. When reforming, accounting regulators often focus on the analysis of past events, and only in few cases are they oriented towards the future.</p> <p>5. Crisis processes of the enterprise necessarily require rethinking the situation in terms of pricing, production, financial and other policies.</p> <p>6. As a result of the crisis situation, the economy leads to a reduction in large-scale research in the direction of management accounting, focusing on minor refinements.</p>	<p>1. The crisis indicates the inefficiency of the application of tools, techniques and methods used in the formation of information for management decisions. It forces to revise theoretical approaches in management, accounting, control, analysis.</p> <p>2. The crisis strengthens the role of accounting infrastructure (new laws, concepts, programs are introduced, specialized professional organizations are formed etc.), which is intended to improve the relationship between accounting processes and management system. New or revised standards in the field of accounting and reporting, principles, rules of conducting those areas of accounting, which contain processes that can lead to aggravation of crisis phenomena are introduced.</p>
<b>Methodological</b>	
<p>1. Desiring to improve the situation by standardizing business procedures and rethinking the accounting instruments themselves may lead to further problems and contradictions in conceptual accounting at higher levels.</p> <p>2. The destructive nature of the economy brings natural evolutionary changes in the tools in accordance with the requirements of the economy, eliminating those enterprises that are not able to adapt to them.</p>	<p>1. Crises focus the attention of managers on external processes of the economic entity, i.e. expand the range of objects of management accounting.</p>

Source: made by the authors.

### **3.4 The impact of crisis processes on the organization of the management accounting system**

In the conditions of martial law in the economy, management accounting should contribute to the production of such information that would contribute to ensuring sustainable functioning, despite external and internal transformations in order to implement effective management decisions and anti-crisis financial strategy (*Khomovyi, S.M., Tomilova-Yaremchuk, N.O., Khomovyi, M.M. & Makarchuk O.G., 2019*). In this context, crisis processes in the economy have the following properties that directly affect the organization of the management accounting system:

- depending on the scale and nature of the crisis phenomenon, it can have a heterogeneous impact on various business processes of an economic entity, affecting the efficiency of functioning of a particular object of management accounting in different ways (*Puhachenko, O. & Zarudna, N., 2021*);

- the configuration of the facts of economic life is largely determined by the periodicity (cyclicality) of a particular stage (phase, stage) of the crisis phenomenon (*Johnson H., 2012; Amosha O., Pidorycheva I. & Zemliankin A., 2021*);

- the intensity of the use of management accounting tools to develop the most important management decisions is also determined by the dynamism of changes in economic parameters, both of the economic entity itself and the socio-economic system in which it operates (*Matiykha, M., 2022*);

- any crisis situation, and especially under martial law, is destructive by nature, and carries a set of destructive phenomena and problems that require prompt resolution (*Drury Colin, 2018*). This feature of the crisis situation indicates the need to organize an effective system of collecting and summarizing internal and external information in the management accounting system for effective decision-making. As a result of the analysis of the highlighted features and accounting – analytical work of the management accounting subsystem at such enterprises of Ukraine as LLC “Bilotserkivkhiboprodukt”, LLC “Kolos”, LLC “Dan Farm Ukraine”, PE “Rosava Agro”, FG “Agro Land” and others, functioning in the conditions prevailing in our country during the last time, information on the main parameters of the functioning of the internal and external environment of the economic entity should be produced in the form of management reports, analytical references and databases, cases of model solutions, strategic and operational plans etc.

### **3.5 Characterization of functions and tasks of management accounting in the context of changes in the external environment**

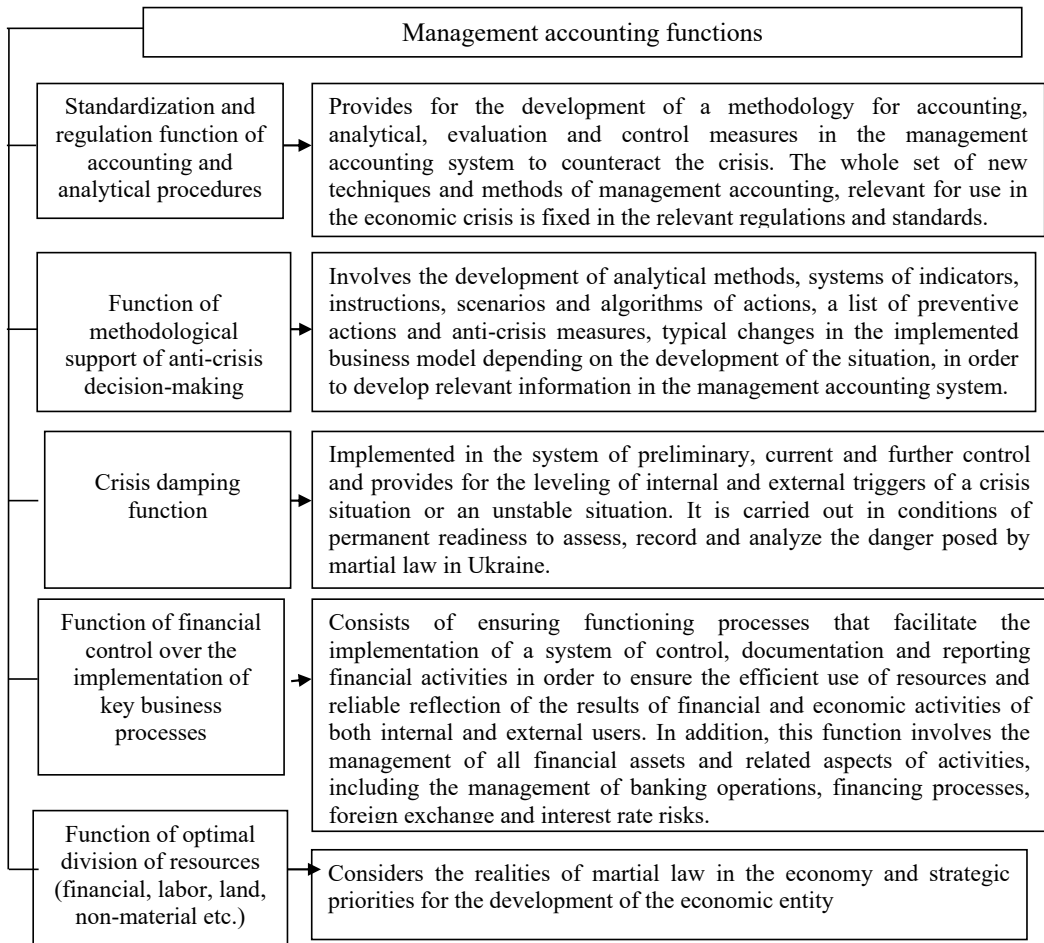
We believe that the functional variability of management accounting in martial law should be much wider than in periods of economic growth, which also does not contradict the basic models of sustainable development of Ukrainian enterprises in the post-war period (*Alrowwad, A. M., Alhasanat, K. A., 2022*). In this context, we have identified the main functions of management accounting that characterize the depressive phenomena of the economy and have a direct impact on the functioning of management accounting (Figure 2).

Based on the highlighted functions, we believe that the management accounting subsystem used under martial law should be focused on the following tasks :

- assessment of the external environment for the formation of key documents in the strategic management system (mission, strategy, vision, business model, key performance indicators (KPI) etc.) Formation of a system of indicators for assessing the performance of responsibility centers, business processes, managers, production and management employees in order to level the impact of crisis processes in the economy on the functioning of the economic entity;

- planning the costs of the economic entity, identification and further reduction of inefficient costs, in order to invest the released value in innovations that can increase the sustainability of the economic entity;

- reporting formation of sustainable development, including the disclosure of information about the implemented business model for external users. It should be noted that the business model is the basis of any organization, and the management accounting system should be the basis of each business model. In this regard, in management accounting it is necessary to develop recommendations for the development of economic entities that link the business model and the management accounting system by identifying data on the state of the business model, as well as diagnosing dangerous situations and potentially promising activities;



**Fig. 2. Management accounting functions that characterize depressive economic phenomena and have a direct impact on the functioning of management accounting**

Source: made by the authors

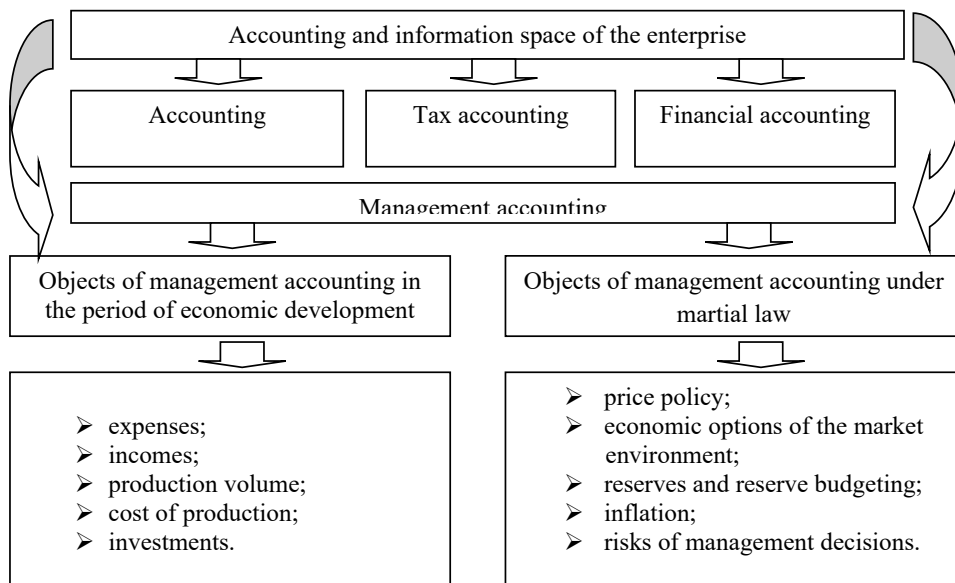
– management of risks determined by both internal factors and the environment in order to implement the business model and strategic priorities of the economic entity;

– assessment of the degree of macroeconomic negative phenomena influence on the further functioning of the economic entity (inflation, fall in total demand, crisis of the banking system, increase in the key rate, stagnation processes in certain industries, unemployment, high volatility in the stock markets, bankruptcy of key partners and counterparties, deformation of payment relations with major stakeholders, etc.) At the same time, management accounting should ensure the compatibility of data with the indicators of the base period in the conditions of changes in external factors of the economic entity's functioning (*Shirov, A., 2022*), as well as accounting policies and legislation.

#### 4. Discussion

In fact, we have formulated a hypothesis about the need to allocate an anti-crisis model of management accounting with a specific set, functions, tasks and tools in the course of substantiating the scientific independence and expanding the functionality of management accounting during martial law.

This model (subsystem) is allocated by us for the purpose of more effective management of the microenvironment of the economic entity, forecasting the impact of changes in the external environment on its financial state and making management decisions that increase the stability and balance of the enterprise development. Its allocation is caused by the impact of the war on the tools of management accounting and as a result of changes in information requests of the main categories of users, which determines the identification of its objects (Figure 3).



**Fig. 3. Definition of management accounting objects under normal conditions of economic functioning and under martial law**

Source: made by the authors

The lack of instrumental methodological system of management accounting for use under martial law in Ukraine requires the development of a whole range of methods and techniques (Onyshchenko, V., 2020), in particular:

1. Formation of methodological recommendations for the preparation of strategic documents of an economic entity in crisis conditions (strategy, mission, policy and others) etc;
2. Methods of improving the system of accounting and analytical support in the formation of reserves that negate the crisis processes;
3. Development of budgeting method in the conditions of crisis processes in the economy (methodological process support of forming non-financial budgets, including budgets for environmental, human and social development);



4. System development of indicators for operational diagnostics of crisis processes under the influence of endogenous and exogenous triggers (CRI);

5. Development of a methodological approach regarding the impact assessment of external factors on the functioning of the enterprise;

6. Development of recommendations and regulations for the construction and further functioning of a new responsibility center for the management accounting system – anti-crisis (or crisis damping center), which is responsible for the permanent monitoring of the system for the emergence of a crisis situation;

7. Formation of a system of management reports, including reports on sustainable (balanced) development;

8. Improvement of traditional and perspective calculation systems in the conditions of crisis processes in the economy.

In our opinion, a certain set of tools must correspond to each selected object of the system of management accounting under martial law in the economy, the totality of which determines the procedural and methodological support of the functions of the manager (*Korinko, M.D. & Gutkevich S.O., 2022*) and ultimately the goals of the entire enterprise in such a period of time (Table 3).

Table 3

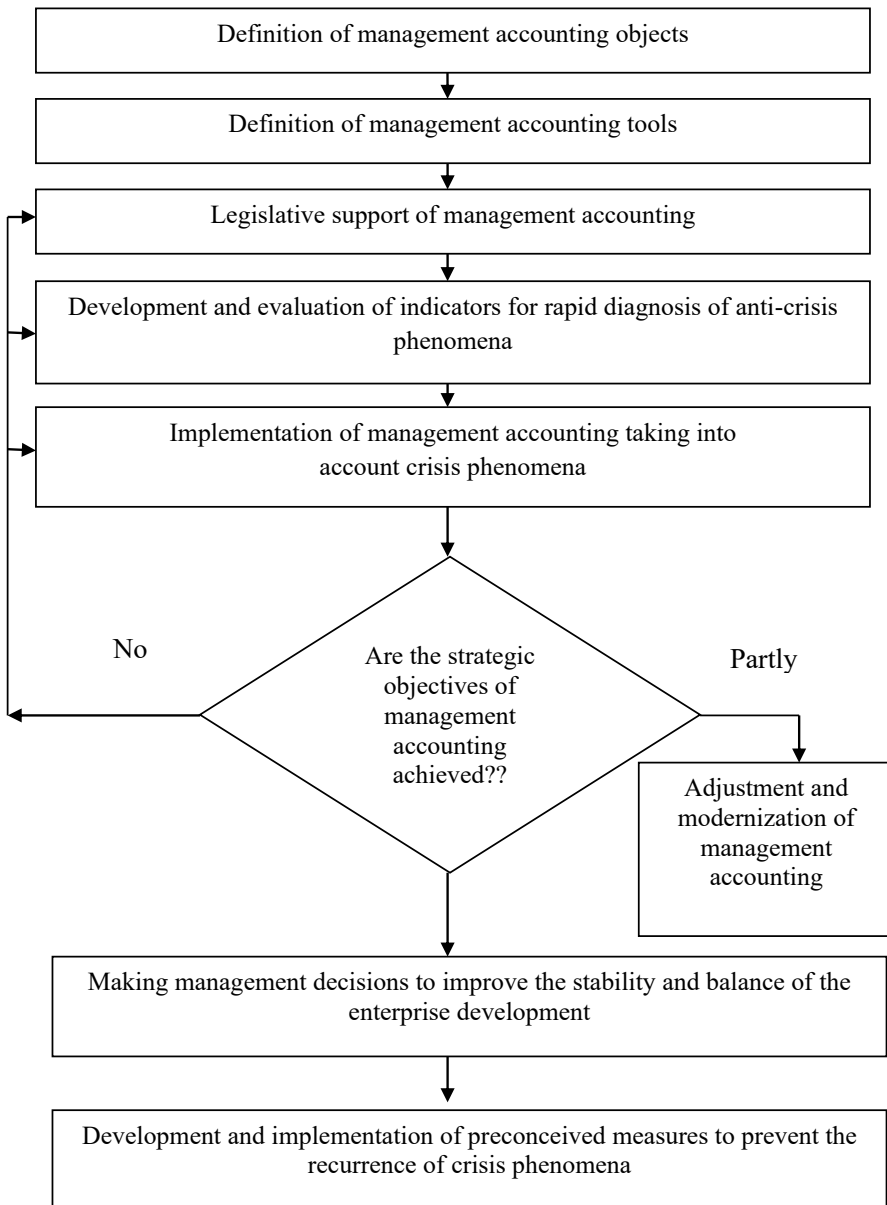
**Analysis of tools and objects of management accounting under martial law and head's of the enterprise functions**

<b>№</b>	<b>Function</b>	<b>Object of accounting</b>	<b>Management accounting tools</b>
1	Accounting (information support and cost optimization)	Price policy	Information support of expenses by detailing the options of management accounting; implementation of accounting functions of the process of “inflationary adjustments”; methodological recommendations for the formation of a special reserve for changes in the value of assets.
2	Organization (optimization of the enterprise structure)	Economic options of the market environment	Methodology of reserve formation for doubtful debts; organization of the reserve system of the economic entity; making changes in the job descriptions of employees.
3	Planning (forecast of future events)	Reserves and reserve budgeting	General and operating budgets. Organization of inflation-corrective measures; creation of a system of accounts, sub-accounts and journals of correspondent entries within the framework of reserves.
4	Control (optimization of external information flows)	Inflation	Methodology of CVP-analysis in conditions of hyperinflation; methodology of formation of reserves for depreciation of financial investments.
5	Decision-making (formation of diagnostic points of all external and internal processes of the enterprise)	Risks of management decisions	Adjusted test system of internal assessment by qualitative options (CRISIS-analysis), quantitative internal assessment of the impact of crisis phenomena (CRISIS-analysis), SWOT-analysis of the effectiveness of the external system of the economic entity.

Source: made by the authors



It should be noted that the functional variability of such a system determines the set of objects of management accounting, which is mainly associated with the need to manage the options of the strategic anti-crisis development of the economic entity, as well as monitoring and control of its detailed microenvironment under martial law. Reasoning of strategic directions of anti-crisis development of the enterprise requires a conceptual approach (Figure 4).



**Fig. 4. Conceptual anti-crisis model of management accounting**

Source: made by the authors

Thus, management accounting is the anti-crisis model of management accounting provides for the neutralization of crisis phenomena through prompt response to management decisions, as well as prevention of their occurrence through the internal economic mechanism.

## 5. Conclusions

Thus, management accounting is as an important information system of any enterprise under martial law requires adjustment of its functions, objects and a set of effective tools that are formed by the current crisis phenomena of the economy of our country.

Our proposed model of management accounting which is supplemented by important specific objects that have been formed under martial law will allow generating relevant information for managers of enterprises and making effective management decisions to stabilize the economic situation at the enterprise throughout the crisis period. Prospects for further research in this area are further coverage of theoretical knowledge on the development of institutional foundations of the theory of management accounting and the expansion of its tasks in different conditions of a market economy and as for practical it is the implementation in the organizational activities of enterprises in the process of reforming their management mechanism.

## References

1. Storonyanska, I., Nowakowska, A., Benovska, L. & Dub, A. (2022). *Dysproportsiyi ta ryzyky rehional'noho rozvytku ekonomiky Ukrayiny v umovakh nestabil'nosti [Imbalances and risks of the regional development of Ukraine's economy under conditions of instability]*. *Agricultural and Resource Economics*, 8(3), 81-97. <https://doi.org/10.51599/are.2022.08.03.05>. [in Ukrainian].
2. *Data from the National Bank of Ukraine*. Available at: <https://bank.gov.ua/ua/news/all/biznes-adaptuyetsya-do-novih-umov-odnak-zberigaye-negativni-ochikuvannya-schodo--dilovoyi-aktivnosti--dani-opituvannya-pidpriyemstv-u-lipni>.
3. Kucherova, H. (2019). *Analiz tendentsiy pokazav sotsial'no-ekonomichnyy rozvytok Ukrayiny v svidomosti nebezpeky, shcho zminyuye vektor polityky bezpeky [Trend analysis shown social and economic development of Ukraine in the minds of non-security that zmini vector security policies]*. *Actual problems of economiics*, 3(213), 116-125. Available at: <https://eco-science.net/downloads/> [in Ukrainian].
4. Barton, L. (1993). *Crisis in organizations: Managing and Communicating in the Heat of Chaos*. Cincinnati, Ohio: South-Western, P.2. [in English].
5. Edward, W. (2020). *Keynes Called Himself a Socialist. He Was Right / Mises Wire*. Available at: <https://mises.org/wire/keynes-called-himself-socialist-he-was-right?+Institute+Subscriptions> [in English].
6. *Encyclopedia of modern Ukraine*. Available at: [https://esu.com.ua/search\\_articles.php?id=18776](https://esu.com.ua/search_articles.php?id=18776).
7. Forgue, B. (1996). *Nouvelles approches de la gestion des crises*. *Rev francaise de gestion*, Paris, 108, 72-73.
8. *About the legal regime of martial law (2015)*. *Law of Ukraine 389-VIII*. *Bulletin of the Verkhovna Rada*, 28 (with changes and additions). Available at: <https://zakon.rada.gov.ua/laws/show/389-19#Text>.

9. Shemshuchenko, Yu. (2004). *Martial law. Legal encyclopedia. (6th ed.). Ukrainian encyclopedia named after M.P. Bazhana.*
10. Killam, E.W. (1989). *Law and Order. An official website of the United States government, Department of Justice, 37(9), 44-47.*
11. Khomovyi, S.M., Tomilova-Yaremchuk, N.O., Khomovyi, M.M. & Makarchuk O.G. (2019). *Formuvannya efektyvnoyi oblikovoyi informatsiyi dlya pryynyattya upravlins'kykh rishen' na sil's'kohospodars'komu pidpryemstvi [The formation of effective accounting information for managerial decision-making in agricultural enterprises]. Financial and credit activity: problems of theory and practice, 4(31), 230-238. <https://doi.org/10.18371/fcaptop.v4i31.190886>. [in Ukrainian].*
12. Puhachenko, O. & Zarudna, N. (2021). *Osnovni, spetsyfichni, hlobal'ni pryntsyypy upravlins'koho obliku: sklad i kil'kist' [Basic, specific, global principles of management accounting: composition and quantity]. Economic scope, 172, 73-80. <https://doi.org/10.32782/2224-6282/172-13> [in Ukrainian].*
13. Johnson, H. (2012). *Lean Dilemma: Choose System Principles or Management Accounting Controls-Not Both. <https://doi.org/10.1002/9781119196808.ch1>.*
14. Amosha O., Pidorycheva I. & Zemliankin A. (2021). *Klyuchovi tendentsiyi rozvytku svitovoyi ekonomiky: novi vyklyky ta perspektyvy [Key trends in the world economy development: new challenges and prospects]. Science and Innovation, 17(1), 3-17. <https://doi.org/10.15407/scine17.01.003> [in Ukrainian].*
15. Matiykha, M. (2022). *Postanovka upravlins'koho obliku na umovakh aut-sorsynhu [State-ment of management accounting in outsourcing conditions]. Taurida Scientific Herald. Series: Economics, (11), 102-107. <https://doi.org/10.32851/2708-0366/2022.11.14> [in Ukrainian].*
16. Drury, Colin (2018). *Management and Cost Accounting, (10th ed.). 866 p. Available at: [http://116.206.63.139:8080/xmlui/bitstream/handle/123456789/1303/cl18\\_Drury\\_MgtCost-Acc10e-wm.pdf?sequence=1&isAllowed=y](http://116.206.63.139:8080/xmlui/bitstream/handle/123456789/1303/cl18_Drury_MgtCost-Acc10e-wm.pdf?sequence=1&isAllowed=y).*
17. Alrowwad, A. M., Alhasanat, K. A., Sokil, O., Halko, S. & Kucherikova S. (2022). *Stala transformatsiya bukhholders'koho obliku v sil's'komu hospodarstvi [Sustainable transformation of accounting in agriculture]. Agricultural and Resource Economics, 8(2), 5-29. <https://doi.org/10.51599/are.2022.08.02.01>. [in Ukrainian].*
18. Shirov, A. (2022). *Makrostrukturnyy analiz i prohnouzuvannya v suchasnykh umovakh rozvytku ekonomiky [Macrostructural Analysis and Forecasting in Modern Conditions of Economic Develop]. Studies on Russian Economic Development, 5(194), 43-57. Available at: <https://ecfor.ru/publication/makrostrukturnye-issledovaniya-ekonomiki-shirov-a-a/>. [in Ukrainian].*
19. Onyshchenko, V. (2020). *Upravlins'kyy oblik na pidpryemstvi [Management accounting at the enterprise]. Available at: <https://www.golobbukh.ua/article/8506-upravlnskiy-oblk-na-pd-primstv>. [in Ukrainian].*
20. Korinko, M.D. & Gutkevich S.O. (2022). *Rozmezhuvannya vidpovidal'nosti ta nadannya prav v systemi upravlins'koho obliku [Delineation of responsibility and assignment of rights in the management accounting system]. Intelligence XXI, 1, 51-55. <https://doi.org/10.32782/2415-8801/2022-1.8>. [in Ukrainian].*