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OVERVIEW OF ASSESSMENT OF ENTERPRISE ASSETS ACCORDING TO NATIONAL ACCOUNTING STANDARDS IN THE CONTEXT OF SAFE RISKS

The prerequisites for revising the revaluation of non-current assets of an enterprise and highlighting the methodological aspects of applying individual national accounting standards (regulations) are considered. The object of the study is the assessment of the assets of the enterprise, which is necessary for the reliable display of information about assets in the financial statements, in the presence of security risks. The application of a valuation requires professional judgment to be made about the fair value of the subject matter. At the same time, the concept of fair, market, net realizable value must be divided taking into account the requirements of national accounting standards (regulations) (NAS(R)). In the case that national standards do not provide an answer to certain questions of the methodology for establishing and revising estimates, the norms of international financial reporting standards should be taken into account. Recognition of accounting items at fair value today is widely used in international practice, in contrast to the Ukrainian experience. Valuation and accounting are interrelated concepts, since financial statements must reflect complete, reliable and impartial information about the value of accounting objects.

Today, in Ukrainian accounting, the issue of carrying out the recognition procedure at fair value remains important. This is due to the lack of specific methodological support for this procedure. An analysis of the existing requirements for determining the fair value of certain types of assets makes it possible to make decisions on the basic approach to valuation of assets in the presence of security risks. It was determined that the signs of depreciation of assets under martial law with a high degree of probability is a decrease in the market value of the asset during the reporting period significantly more than expected. This group of signs also includes physical damage to the asset; significant negative changes in the external environment; significant changes in the way the asset is used during the reporting period.

Keywords: fair value, net realizable value, depreciation of assets, security risks, martial law.

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1. Introduction

Taking into account that the war in Ukraine is still ongoing, estimates of the cost of the destruction and reconstruction that will be needed can only be approximate. However, the following groups of accounting objects to be assessed can already be distinguished:

- restoration of infrastructure (ports, railways, wagons, roads, power lines, water pipelines, etc.);
- military expenses (weapons, military vehicles, etc.);
- loss of civil real estate (houses, commercial real estate);
- loss of individuals (compensation for death and injury, relocation costs, income support, etc.);
- current and future income is lost (company income is lost, foreign direct investment is lost, etc.).

Estimates based on this approach range from 500 billion USD to 1,000 billion USD. Assuming destruction

at the level of 40 %, the damage is 440 billion USD [1]. However, a reliable assessment of losses should be based on the accounting valuation of assets, since it will provide a true display of data, since it will be based on the choice of the most appropriate of several possible ones. National accounting standards (regulations) based on international standards contain methodological approaches to accounting for depreciation of assets and determining the fair value of individual assets. However, these provisions require revision in the face of growing security risks, that is, under martial law.

2. The object of research and its technological audit

The object of research is the assessment of the assets of the enterprise, which is necessary for the reliable display of information about assets in the financial statements, in

the presence of security risks. Such an object is important from the point of view of the implementation of several regulatory documents on the assessment and compensation of damage caused to Ukraine as a result of the armed aggression of the Russian Federation, in particular:

- Decree of the President of Ukraine «On the working group for the development and implementation of international legal mechanisms for compensation for damage caused to Ukraine as a result of the armed aggression of the Russian Federation»;
- Law of Ukraine «On Amendments to Clause 1 of Section II «Final and Transitional Provisions»;
- Law of Ukraine «On Amendments to Certain Legislative Acts of Ukraine on Improvement of the Management System and Deregulation in the Sphere of Land Relations»;
- Decree of the Verkhovna Rada of Ukraine «On the adoption as a basis of the draft Law of Ukraine on Amendments to the Law of Ukraine «On Vocational (Vocational) Education» on Certain Aspects of Training Skilled Workers under Martial Law and Economic Recovery»;
- Law of Ukraine «On Amendments to Certain Laws of Ukraine on the Uninterrupted Production and Supply of Agricultural Products during Martial Law»;
- Law of Ukraine «On Amendments to Certain Legislative Acts of Ukraine on the Peculiarities of Regulation of Land Relations under Martial Law»;
- Law of Ukraine «On approval of the Decree of the President of Ukraine «On the decision of the National Security and Defense Council of Ukraine dated May 11, 2022 «On the forced seizure in Ukraine of objects of property rights of the Russian Federation and its residents»»;
- The Law of Ukraine «On Amendments to Certain Laws of Ukraine on Priority Measures for Reforming the Sphere of Urban Development», etc.

The adopted regulations require a comprehensive approach to the identification, assessment and reimbursement of expenses incurred during the period of martial law.

3. The aim and objectives of research

The aim of research is to improve the procedure for revaluing assets in the presence of increased security risks due to the state of war in Ukraine. Based on the stated goal, the specific objectives of the study are:

1. View signs of asset depreciation.
2. Identification of the features of determining fair value in the absence of an active market.

4. Research of existing solutions to the problem

Certain publications deal with the determination of damages in special cases, for example:

- compensation for losses under trading contracts [2];
- on climate change [3];
- in case of natural disasters [4, 5].

However, the methods proposed in these publications can be partly used to assess compensation for damage in wartime.

Works [6, 7] are partly devoted to the methodology for assessing damage in wartime, the authors of which agree that when assessing losses caused by war, there are always problems in calculating, documenting and assessing losses, especially among the civilian population. In addition, these

publications are sectoral in nature (medicine and air travel) and are focused on specific areas of military operations.

The relevance of the topic raised is confirmed by the discussion at scientific conferences, in particular [8, 9], in which the problem of determining damage is based and the need to coordinate efforts to solve this problem is indicated. These publications contain approaches to assessing environmental, psychological and historical impacts, but there is an urgent need to assess all impacts in a comprehensive manner.

The papers [10, 11] talk about the assessment of assets without taking into account security risks, but the conclusions of which can be revised for the application of certain techniques in modern conditions. However, these publications do not describe the sequence of actions of an accountant in the revaluation of assets and determine the factors that should be taken into account when formulating professional judgment on the valuation.

Thus, the results of the analysis allow concluding that the research topic is important and partially developed in the works of scientists. A more in-depth study requires the adaptation of existing methods to Ukrainian accounting practice in conditions of increased security risks, namely:

- generalization of world experience in accounting and reflection in the reporting of the results of the revaluation of damaged property;
- identification of various methodological approaches to assessing the losses of the civilian population and military property;
- importance of digitalization in fixing damage.

5. Methods of research

The following general scientific and special research methods and techniques were used in the study:

- comparative analysis of scientific literature and information sources based on comparison methods to highlight the problem;
- methods of systematization and grouping to find directions for solving the problem;
- methods of generalizing the results of the analysis and the logical formation of conclusions.

6. Research results

Let's take a look at some preliminary estimates released by companies and the government. Oil and Gas Company Shell estimated post-tax asset impairment losses of between 4 billion USD and 5 billion USD before and after its decision to leave the Russian Federation. At the same time, such losses in the first quarter of 2022 will not affect the company's profit [12]. The joint project of the Kyiv School of Economics, the Office of the President and the Ministry of Economy «Russia will pay» and the Ministry of Digital Transformation are centrally documenting the damage from Russia's military aggression through the «Action» application. Anyone can submit information about the harm caused to Ukraine and its citizens by Russian troops: the destruction of infrastructure, housing, schools, looting, harm to the environment, and much more [13].

The damage assessment draws on the work of the World Bank, which over the past decade has become a global leader in disaster risk management, supporting client countries in assessing risk and coping with disaster risk. The Bank

provides technical and financial support for risk assessment, risk mitigation, disaster preparedness, financial protection, and sustainable recovery and reconstruction. The Global Practice for Disaster Risk, Resilience and Land Management brings together key experts and engages with client countries on disaster risk and resilience. World Bank support to governments includes risk identification through improved data access and risk analysis. In particular, it is about conducting a risk assessment and detailed design of risk reduction solutions for various hazards. At the same time, it is proposed to develop and use new technologies, such as a collection of high-resolution images, the use of images from drones, and the creation of danger maps based on the open source code of the community [14].

In the Ukrainian practice of revaluation of assets, national provisions (accounting standards) are used, dedicated to the accounting of assets (fixed assets, intangible assets, stocks, and others). Revaluation of assets in the conditions of their depreciation is carried out in accordance with the National Accounting Regulation (Standard) of accounting 28 «Decrease in the usefulness of assets» (hereinafter – NAR(S) 28), which determines the methodological basis for the formation in accounting of information on the decrease in the usefulness of assets and its disclosure in the financial statements, National Regulation (Standard) 28 does not apply to inventories, assets arising from construction contracts for the contractor, deferred tax assets, assets arising from employee benefits, financial assets carried at fair value. Thus, NAR(S) 28 mainly concerns such accounting items as land, buildings and equipment, intangible assets, investments in subsidiaries and investments in real estate at historical cost. The standard stipulates that an impairment test should be carried out at least once a year.

Paragraph 6 of the standard contains a list of indications that an asset's usefulness may be impaired. Let's test the existing signs for the likelihood of occurrence during the war period (Table 1).

If there are signs of diminished utility, the amount of the expected recovery of assets is determined separately for each asset. In doing so, it is necessary to determine the net realizable value of the asset, based on active market prices less expected costs to sell. Due to the lack of an active market for hostilities in certain areas, net realizable value is determined by other methods. Since the net realizable value of an asset is the fair value of the asset less the expected costs of its sale, it is necessary to take into account the requirements of other NAR(S) to determine the actual value (Table 2).

Determining fair value in the presence of security risks is complicated by the decline in market activity, which is characterized by significant uncertainties and a wide range of possible values. However, this does not mean that fair value cannot be measured reliably. If the market for an asset has become less liquid, entities should consider observational inputs in accordance with the hierarchy defined in International Financial Reporting Standard (IFRS) 13 Fair Value. Adoption of IFRS 13 with an extended scope certainly affects the interests of both users of financial statements and entities reporting different categories of business entities (banks, financial companies and funds, companies in the real sector, etc.). The purpose of this standard is to provide a unified approach to the interpretation of the fair value category, as well as the theoretical basis for its determination for elements of financial statements subject to this category of measurement. The introduction of such a category as fair value for evaluation, on the one hand, meets the expectations of investors, and on the other, has a significant impact on the quality of financial statements. The main goal of developing the standard was the need to simplify the valuation procedure, as well as unify the methodology for measuring fair value, since many IFRS required the use of such valuation.

It is important to disclose information about the impairment of assets in the notes to the financial statements for 2022, as indicated in the final provisions of NAR(S) 28.

Table 1

Probability of signs of diminished utility of assets

Sign of diminishing utility	Degree of probability of occurrence in the presence of security risks	Note
Decrease in the market value of an asset during the reporting period by a materially greater amount than expected	High	Consequences of martial law
Asset obsolescence	Low	Use of existing assets as a result of the economic impossibility of acquiring new ones
Physical damage to an asset	High	May vary by region
Significant negative changes in the technological, market, economic or legal environment in which the enterprise operates, which took place during the reporting period or are expected in the near future	High	Martial law conditions
An increase during the reporting period in market rates of interest or other market rates of return on investment that could affect the discount rate and materially reduce the asset's expected recovery	High	The National Bank of Ukraine (NBU) raised the discount rate to 25 % after three months of fixing it at 10 %
Excess of the book value of the enterprise's net assets over their market value	Average	Depends on the presence of a combination of factors
Significant changes in the way an asset is used during the reporting period, or expected changes in the next period, that adversely affect the entity's operations	High	Withdrawal (alienation) of assets for military purposes of the Law of Ukraine «On the transfer, expropriation or seizure of property under the legal regime of martial law or state of emergency» dated May 12, 2012 No. 4765-VI

Note: based on [15]

Table 2

Fair value of different types of assets according to NAR(S)

Type of asset	Determination of fair value	NAR(S)
Securities	The current market price in the stock market. In the absence of such an assessment – expert assessment	NAR(S) 12 «Financial investments»
Accounts receivable	The present (discounted) amount receivable, determined at the applicable current interest rate, less the allowance for doubtful debts and the costs of collecting receivables as necessary. Discounting is not carried out for short-term debt if the difference between the nominal amount of receivables and the discounted amount is insignificant (less than 5 % of the nominal amount)	NAR(S) 10 «Accounts receivable»
Finished products and goods	Selling price minus selling costs and the amount of markup (profit) based on the markup (profit) for similar finished products and goods	NAR(S) 9 «Reserves»
Unfinished production	Selling price of finished products minus the costs of completion, implementation and allowances (profit), calculated on the basis of profits of similar finished products	NAR(S) 9 «Reserves»
Materials	Replacement cost (modern cost of acquisition)	NAR(S) 9 «Reserves»
Land and buildings	Market price	NAR(S) 7 «Fixed assets»
Cars and equipment	Market price. In the absence of data on market value – the replacement cost (modern cost of acquisition) minus the amount of depreciation at the valuation date	NAR(S) 7 «Fixed assets»
Other fixed assets	Replacement cost (present cost of acquisition) minus the amount of depreciation at the valuation date	NAR(S) 7 «Fixed assets»
Intangible assets	Current market value. In the absence of such a value, the estimated amount that the entity would pay for the asset in a transaction between knowledgeable, interested, and independent parties, based on available information	NAR(S) 8 «Intangible assets»
Net assets or liabilities for pension plans with contingent benefits	The present (discounted) amount of pension payments due less the fair value of any pension plan assets	NAR(S) 19 «Combination of enterprises»
Tax assets and liabilities	The amount of tax benefits or taxes payable arising from a business combination	NAR(S) 19 «Combination of enterprises»

Note: built on the basis of [16–21]

7. SWOT analysis of research results

Strengths. It is found that the assessment of the state of the asset should contain the following conclusions:

- 1) partial repair;
- 2) replacement parts;
- 3) asset write-off.

If a decision is made on the need for repairs, it is necessary to determine the need to capitalize expenses or write off expenses to expenses of the period. The assessment of the useful life of an asset should contain conclusions about the possibilities to use this asset for its functional purpose. Estimating the value of an asset requires examining the answers to the questions:

- 1) whether there is an impairment of the asset;
- 2) whether there is a decrease in the value of the asset;
- 3) how the damage affected the carrying amount of the asset.

Weaknesses. Clarification of the concepts of «lost profit», «actual damage», «potential damage», «material damage», «damaged property», «damaged assets» that require definition. Some results cannot be used due to the lack of a methodology for assessing a group of damaged assets and individual objects of this group, as well as a methodology for assessing the restoration of damaged property by volunteers (free of charge).

Opportunities. The accounting system, where the initial information is formed for making business decisions, faces the following challenges due to a reliable assessment of the damage caused:

- 1) determination of the composition of direct and indirect losses of property;

- 2) modernization of inventory methods in order to confirm the condition of damaged (destroyed) property;
- 3) development of methodological recommendations for recording the results of the inventory;
- 4) development of guidelines for reporting the results of the inventory;
- 5) determining the impact of industry specifics on asset valuation;
- 6) development of a unified document on fixing losses;
- 7) guidelines for choosing a methodology for estimating losses, depending on the ultimate goal of calculating such losses.

Threats. Risks affect the condition of assets and their ability to bring economic benefits in the future, which is a necessary condition for the recognition of an asset. The threat to the implementation of the results obtained is the impossibility of conducting an inventory in the occupied territories and the loss of primary documentation.

8. Conclusions

1. As a result of the revision of signs of depreciation of the value of assets, it is shown that the Accounting valuation of assets can be used to determine the oriented amounts for economic recovery, since the principles of its application allow avoiding bias in the valuation. A feature of the revaluation of assets in Ukraine under martial law is that it can be carried out only after the onset of a real event (for example, the bombing of real estate). The difficulty also lies in the fact that the costs of the enterprise for relocation (transportation, wages, social contributions)

should also be assessed. The results obtained influence the choice of approaches and methodology for fixing, establishing the volume and assessing the damage caused, which is decisive in filing claims against the aggressor state. Inaccurate presentation of information in such a case may adversely affect the decision of international courts. In the future, the results of the study can be used by professional appraisers in accordance with the legislation on property valuation.

2. In the course of identifying the features of determining fair value in the absence of an active market, the study proposes a solution for developing methodological approaches to reassessing the valuation of an enterprise's assets in terms of security risks. An assessment was made of the degree of probability of occurrence of signs of impairment of the value of assets under NAR(S) 28, and the features of determining fair value in the absence of an active market were identified. When security risks occur, the financial report may include such material information as:

- 1) volume of damaged (destroyed) assets;
- 2) volume of impaired assets;
- 3) methodology for evaluating volunteer work to restore assets;
- 4) received grants, state aid, subsidies;
- 5) overtime expenses for the use of labor resources.

References

1. Beker, T., Aikhenhrin, B., Aikhenhrin, B., Horodnichenko, Yu., Horodnichenko, Yu., Huriiev, S. et. al. (2022). *Narys pro vidbudovu Ukrainy*. CEPR Press. Available at: https://cepr.org/sites/default/files/news/BlueprintReconstructionUkraine_ukr.pdf
2. Goldberg, V. P. (2018). Reckoning Contract Damages: Valuation of the Contract as an Asset. *Washington and Lee law review*, 75 (1), 301–366. doi: <http://doi.org/10.2139/ssrn.2754267>
3. Merz, B., Kreibich, H., Schwarze, R., Thielen, A. (2010). Review article «Assessment of economic flood damage». *Natural Hazards and Earth System Sciences*, 10 (8), 1697–1724. doi: <http://doi.org/10.5194/nhess-10-1697-2010>
4. Sisti, R., Di Ludovico, M., Borri, A., Prota, A. (2018). Damage assessment and the effectiveness of prevention: The response of ordinary unreinforced masonry buildings in Norcia during the Central Italy 2016–2017 seismic sequence. *Bulletin of earthquake engineering*, 17 (10), 5609–5629. doi: <http://doi.org/10.1007/s10518-018-0448-z>
5. Greenwood, F., Nelson, E. L., Greenough, P. G. (2020). Flying into the hurricane: A case study of UAV use in damage assessment during the 2017 hurricanes in Texas and Florida. *PloS one*, 15 (2), e0227808. doi: <http://doi.org/10.1371/journal.pone.0227808>
6. Gesesew, H., Berhane, K., Siraj, E. S., Siraj, D., Gebregziabher, M., Gebre, Y. G. et. al. (2021). The impact of war on the health system of the Tigray region in Ethiopia: an assessment. *BMJ Global Health*, 6 (11), e007328. doi: <http://doi.org/10.1136/bmjgh-2021-007328>
7. Zhang, X. N., Yang, J. F., Du, S. L., Zhi, J. (2013). Damage Assessment of the Attacked Airports Based on Image Analysis. *Applied Mechanics and Materials*, 321-324, 1168–1171. doi: <http://doi.org/10.4028/www.scientific.net/amm.321-324.1168>
8. Kirin, R. S. (2022). Problemy pravovoho zabezpechennia otsinky militarneho vplyvu na dovkillia: teoriia, metodolohiia ta praktyka. *Multidisciplinary academic notes. theory, methodology and practice*. Tokyo, 347–357.
9. Marynenko, N., Kramar, I. (2022). The cost of war: economic dimensions and preliminary estimates. *Voenni konflikty ta tekhnohenni katastrofy: istorychni ta psykholohichni naslidky*, 84–87.
10. Chyzhevska, L. V., Osipchuk, D. S. (2020). Statutory regulation of state aid accounting: international (IFRS) and national approach. *Problems of Theory and Methodology of Accounting, Control and Analysis*, 2 (46), 61–69. doi: [http://doi.org/10.26642/pbo-2020-2\(46\)-61-69](http://doi.org/10.26642/pbo-2020-2(46)-61-69)
11. Bezverkhyyi, K., Bochulia, T. (2014). Metodichni rekomendatsii z otsinky aktyviv i zobov'язan dlia formuvannia oblikovoi zvitnosti. *Bukhhalterskyi oblik i audyt*, 9, 15–26.
12. Pavlyshyn, O. (2022). *Shell spyshe aktyvy u Rosii na 5 miliardiv dolariv*. *Ekonomichna pravda*. Available at: <https://www.epravda.com.ua/news/2022/04/7/685358/>
13. Hordiichuk, D. (2022). Zbytky vid viiny dlia Ukrainy za tyzhen zrosly na 3,5 miliarda dolariv – KShE. *Ekonomichna pravda*. Available at: <https://www.epravda.com.ua/news/2022/03/25/684665/>
14. *Disaster Risk Management*. Available at: <https://www.worldbank.org/en/topic/disasterriskmanagement/overview#2>
15. *Natsionalne polozhennia (standart) bukhhalterskoho obliku 28 «Zmenschennia korysnosti aktyviv»* (2005). Nakaz Ministerstva finansiv Ukrainy No. 817. 13.01.2005. Available at: <https://zakon.rada.gov.ua/laws/show/z0035-05#Text>
16. *Natsionalne polozhennia (standart) bukhhalterskoho obliku 7 «Osnojni zasoby»* (2000). Nakaz Ministerstva finansiv Ukrainy No. 92. 27.04.2000. Available at: <https://zakon.rada.gov.ua/laws/show/z0288-00#Text>
17. *Natsionalne polozhennia (standart) bukhhalterskoho obliku 8 «Nematerialni aktyvy»* (1999). Nakaz Ministerstva finansiv Ukrainy No. 242. 18.10.1999. Available at: <https://zakon.rada.gov.ua/laws/show/z0750-99#Text>
18. *Natsionalne polozhennia (standart) bukhhalterskoho obliku 9 «Zapasy»* (1999). Nakaz Ministerstva finansiv Ukrainy No. 246. 20.10.1999. Available at: <https://zakon.rada.gov.ua/laws/show/z0751-99#Text>
19. *Natsionalne polozhennia (standart) bukhhalterskoho obliku 10 «Debitoraska zaborhovanist»* (1999). Nakaz Ministerstva finansiv Ukrainy No. 237. 08.10.1999. Available at: <https://zakon.rada.gov.ua/laws/show/z0725-99#Text>
20. *Natsionalne polozhennia (standart) bukhhalterskoho obliku 12 «Finansovi investytsii»* (2000). Nakaz Ministerstva finansiv Ukrainy No. 91. 26.04.2000. Available at: <https://zakon.rada.gov.ua/laws/show/z0284-00#Text>
21. *Natsionalne polozhennia (standart) bukhhalterskoho obliku 19 «Ob'iednannia pizhpriemstv»* (1999). Nakaz Ministerstva finansiv Ukrainy No. 163. 07.07.1999. Available at: <https://zakon.rada.gov.ua/laws/show/z0499-99#Text>

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