

Improvement of Accounting of Certain Assets and Provisions in the Conditions of the Global Covid-19 Pandemic Impact: Example of Ukraine

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Abstract: - The global pandemic due to the spread of coronavirus COVID-19 has caused an economic crisis that mankind has not known since the Great Depression of the 1930s. The post-pandemic crisis has affected all areas of socio-economic life in all countries of the world. Under these conditions, it is especially important to study such transformational effects, the source of which should primarily be the data of accounting and financial reporting of business entities. The article is devoted to the study of the transformational impacts of the global COVID-19 pandemic on accounting of certain types of assets and provisions and the development of the directions of its improvement in the conditions of such impacts, focusing on the example of Ukrainian business. The article focuses on the role of the accounting and business disclosure in reporting on the conditions of the global COVID-19 pandemic; the objects of the accounting sensitive to the influence of COVID-19 have been carried out. Possible directions for improving the accounting of inventories, accounts receivable, financial investments (debt instruments), and provisions for future payoffs and payments due to the effects of the global COVID-19 pandemic have been given. The prospects for further research are to improve the proposals and practical recommendations presented in the research, as well as the development and practical testing on their basis of accounting and analytical models for assessing possible future risks of the COVID-19 pandemic for management purposes and to disclose risk assessment in financial reporting.

Key-Words: - Accounting, COVID-19, Pandemic, Financial Reporting, Assets, Provisions, Risks, Economic Crisis, Lockdown

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1 Introduction

1.1 The Impact of the Global COVID-19 Pandemic on the Economy and Business

The modern world is in the process of constant global change caused by economic, social, and climate crises. In March 2020, the World Health Organization (WHO) recognized COVID-19 as a

pandemic. The COVID-19 pandemic has shocked and brought serious new challenges. This applies not only to the health status of the population but also to the economic, social, and political aspects of people's lives (Djajadikerta et al., 2021). As the UN Secretary General Antonio Guterres aptly put it, «in 2020, conflict, climate change, and COVID-19 have created the greatest humanitarian challenge since the Second World War. Together we must continue to

support those at greatest risk in these unprecedented times» (UN, 2020).

The leading world scientists and experts unanimously emphasize the undeniable impact of the global COVID-19 pandemic on the activities of business structures in all sectors of the economy of all countries without exception.

Firstly, in the short run, the outbreak of COVID-19 leads to a decline in labor forces and firm outputs. In the long run, the high infectivity of COVID-19 can change the economic steady-state (long-run equilibrium) through the reduction of healthy human capital and labor participation rate (Deng et al., 2021). Secondly, firms have the incentive to follow stakeholder-value-oriented governance, which would benefit the preservation of their value as well as contribute to societal well-being, especially at times of pandemic outbreaks or other crises of a similar scale in the future (Bose et

al., 2021). Thirdly, Covid-19 has affected all factors of aggregate demand (i.e., consumption, capital spending, and exports) in exceptional decline (Hassan et al., 2021). Finally, the pandemic forces us to analyze how our actions and decisions today can impact future decisions or create long-term costs (Hörisch, 2020).

According to the World Bank, the global COVID-2019 pandemic caused a global recession, in particular, real GDP in the world in 2020 fell by 3.5% compared to 2019 (World Bank, 2021). According to the experts, GDP growth in 2021 is expected at 5.6% only if the pandemic is contained and the economic crisis is resolved.

In particular, the level of GDP decline in 2020 was 3.5% in the USA, 6.6% in the EU, 4.1% in Brazil, and 7.3% in India (fig. 1).

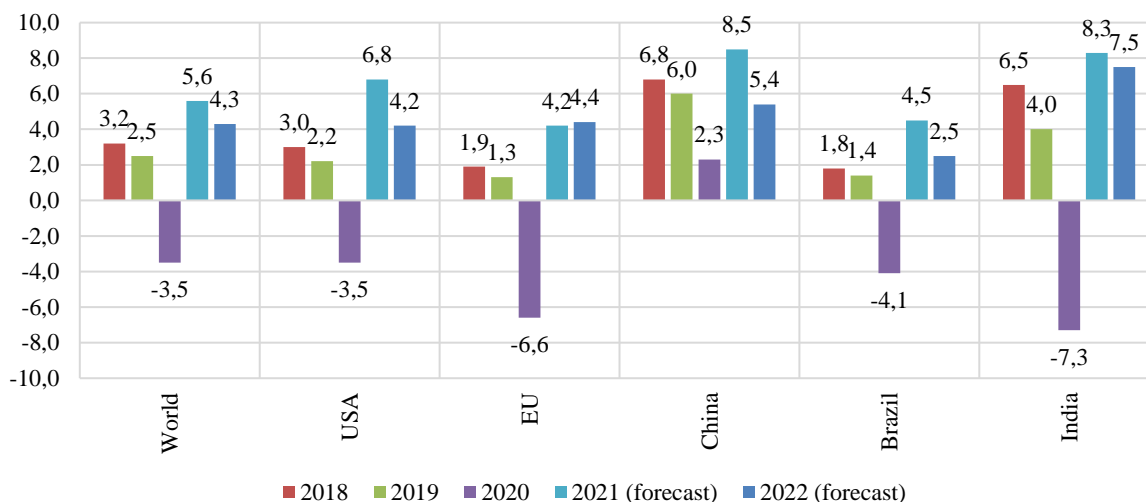


Fig. 1: Rate of change real GDP in the world and some countries, 2018-2022
Source: calculated according to the data (World Bank, 2021)

The exception was China, which, despite the pandemic, kept real GDP growth at 2.3. The extremely negative impact of the pandemic is particularly evident in the tourism industry, manufacturing industry, and the sphere of services and transport. According to the experts, in some areas of the economy, only 1/3 of the available workplaces will remain stable after global lockdowns, and part of the workforce will work remotely.

Ukraine is trying to take measures to support domestic small businesses and, health care, change approaches to key areas of life, increasing funding for critical infrastructure (Kuznetsov et al., 2019, 2020). However, due to the rapid increase in the number of patients with COVID-19, and the launch

of the vaccination process, which requires additional costs, Ukraine does not have significant economic resources to overcome the consequences of the pandemic crisis (Ulyanchenko & Vasylyshyn, 2021).

Therefore, the further impacts of the global COVID-19 pandemic will inevitably exacerbate the current economic crisis and affect all aspects of the economic life of Ukrainian businesses.

2 Problem Formulation

2.1 The Role of Accounting and Business Disclosure in Reporting on the Conditions of the Global COVID-19 Pandemic

COVID-19 pandemic has forced business organizations, nations, and governments to rethink the predictive analysis of the occurrence of such hazards and their social, economic, and financial implications the world over (Bhattacharya et al., 2021). The initial concerns among key stakeholders confirm their preoccupation with the impact of COVID-19 on economic growth. Reports highlight that the social and economic impacts of COVID-19 are unprecedented, and continue to unveil themselves (Filho et al., 2020).

According to K. Bhaskar, J. Flower and R. Sellers, financial and corporate reporting have never been so fraught with difficulties as companies fail to give guidance about the future in an increasingly uncertain world aided and abetted by the COVID-19 pandemic (Bhaskar et al., 2021). The preparation of the annual financial statements is subject to a series of accounting principles aimed at ensuring proper reporting to provide stakeholders with a clear representation of the companies' economic and financial situation (Tibiletti et al., 2021). In 2021, most European and Ukrainian companies stated in their financial reporting that the spread of coronavirus had a significant negative impact both at the macro level due to declining economic activity in the world, including falling capital markets and sharp declines in commodity prices, and at the company level (Pylypenko et al., 2019). This has certainly increased the level of uncertainty in forecasting future cash flows, primarily in energy, retail trade, entertainment, transport, and other industries due to quarantine and/or the spread of the virus (Babenko et al., 2019, 2020).

The governments of the countries have launched a series of restrictive measures to prevent the spread of the virus, including quarantine during periods of virus spread. The economic environment has changed dramatically, which has inevitably led to a revision of key management judgments, approaches to risk assessment that cannot be ignored when calculating the number of expected credit losses, the creation/revision of provisions value for future payoffs, and payments. Management should assess whether it is appropriate to use approaches and key assumptions to form accounting estimates and whether the data on which the calculations are based are representative. This situation requires appropriate changes in the systems of internal control, analytical provision of the process of preparation, approval, and audit of financial reporting. As a result, accounting also requires appropriate changes and development as a basis for the analytical provision of the processes at the levels of management accounting, preparation of financial

reporting, and at the levels of budgeting, strategic planning, and economic security.

The role of financial and non-financial information generated by the accounting system in a pandemic is extremely important. The analysis revealed the relevance not only of short-term financial information but also of medium scenario analyses. The forecasting analysis became a pivotal instrument to use. The intensity of financial analyses increased due to the need to map and understand the crisis's economic effects with additional analyses that would not have been carried out in a no pandemic situation (Passeti et al., 2021). The role of accounting and information provision is especially growing during the crisis, as accounting information and its analysis of the state of affairs in the branches allows to predict the most realistic scenario (Pravdyuk, 2020). Moreover, according to the leading scientists, the subject of accounting is the nature of accounting and information provision of trust and control in the socio-economic (soon digital) space (Zhuk et al., 2020; Vovk et al., 2020), which was once again proven in the global pandemic. While the pandemic has imposed changes on researchers' work-life, it has also unlocked new opportunities for research into its effects on accounting and research (Molinari & De Villiers, 2021).

The accounting information is even more important in times of great uncertainty and auditing takes on greater importance in providing trust to capital markets (Humphreys & Trotman, 2021). The quality of accounting information and related disclosures in the financial statements is more important for capital markets, and investors in the Covid-19 pandemic period (Cui et al., 2021).

The accounting can be useful to compare and trade-off interventions to income statements balance sheet variables. Accounting could, moreover, be suggestive of alternatives around asset purchases or leases, make or buy, various taxation effects, and off-balance sheet interventions such as guarantees. Accounting will also be needed to define the time horizon over which the COVID-19 -debt will be repaid (Ahrens & Ferry, 2021). Scientists Leonardo Rinaldi, Charles H. Cho, Sumit K. Lodhia, Giovanna Michelon & Carol A. Tilt believe the pandemic effects on modern society will be deep and permanent, and thus they call for in-depth, reflexive interdisciplinary contributions in all areas of accounting, business, finance and related subjects that address the responses to the COVID-19 crisis with a global perspective (Rinaldi et al., 2020).

That is why the impact of the effects of COVID-19 in the context of the transformation of accounting

and reflection of business in financial reporting is undoubtedly a relevant area of research.

The purpose of the research is to establish the transformational effects of the global pandemic COVID-19 on the reflection in the accounting of certain types of assets and provisions, as well as to develop the ways to improve it on the example of Ukrainian business.

2.2 Methodology, Data and Hypotheses

The accounting forum aims to promote a thorough understanding of every aspect of the pandemic, including the economic, social, environmental, ethical, and governance impacts (Rinaldi et al., 2020). Moreover, consideration of the potential consequences of the global pandemic should be cautious, given the massive uncertainties involved (Heald & Hodges, 2020).

Qualitative accounting research also relies on secondary data sources, i.e. data that are generally available. Examples of secondary sources are annual reports, formal press releases, website communications, and all other publicly available documents (Molinari & De Villiers, 2021). With changes in external factors combined with strategic and operational shifts within the organization, budget and forecast information are being significantly revised (Humphreys & Trotman, 2021).

The methodology of the research involves the use of a systematic approach (establishing the role and directions of transformation of accounting and business disclosure in reporting in the context of the global pandemic COVID-19); analysis and synthesis (substantiation of the main objects of accounting sensitive to the impact of COVID-19 and analysis of the results of their impact); sampling method (determining the number of the investigated enterprises and assessing the quality of the population); monographic method (determining the consequences of the COVID-19 pandemic); graphical method (display of individual indicators) and calculation and constructive method (calculations of the variability of valuation indicators of individual assets and provisions).

The research methodology is based on the analysis of financial reporting of 72 Ukrainian companies for 2019 and 2020 (fig. 2). While researching the financial reporting, we dealt with the qualitative characteristics, which were to determine the required size of the sample totality for the representativeness of the sample. Since the calculations have been performed based on alternative characteristics and their share in the

general population is not known, we accept it at the level of 0.5 because at this value of the fraction the variance reaches the maximum value. The advantage of this method is that it allows for determining the size of the sample if there is no data from the previous research and not conducting it. That is, the studied sample is representative, which gives grounds to make certain objective conclusions and use the results for further research.

At the same time, we used the financial reporting of the enterprises with their division by the classification of the Law of Ukraine "On Accounting and Financial Reporting in Ukraine" (The Verkhovna Rada of Ukraine, 1999):

- large enterprises (meet at least two of the following criteria: book value of assets - more than 20 million euros; net income from sales of products (goods, work, services) - more than 40 million euros; the average number of employees - more than 250 people);
- medium-sized enterprises (meet at least two of the following criteria: book value of assets - up to 20 million euros; net income from sales of products (goods, work, services) - up to 40 million euros; the average number of employees - up to 250 people);
- small enterprises (meet at least two of the following criteria: book value of assets - up to 4 million euros; net income from sales of products (goods, work, services) - up to 8 million euros; the average number of employees - up to 50 people);
- micro-enterprises (meet at least two of the following criteria: book value of assets - up to 350 thousand euros; net income from sales of products (goods, work, services) - up to 700 thousand euros; the average number of employees - up to 10 people).

The research on the companies' financial reporting has shown that companies of almost all sizes, namely small, medium, large, and of public interest, in their financial reporting note that the COVID-19 pandemic had an impact on companies' activity and financial indices (tab. 1).

The main hypothesis of the presented research is the statement that overcoming the consequences of the economic crisis caused the global COVID-19 pandemic COVID-19 and improving the risk management of Ukrainian businesses directly depends on accounting and analytical provision, which necessitates improving accounting policies for individual objects, sensitive to the impact of the COVID-19 crisis and will ultimately facilitate reliable business disclosure in reporting.

We draw attention to certain limitations of our research, which may affect its results and conclusions.

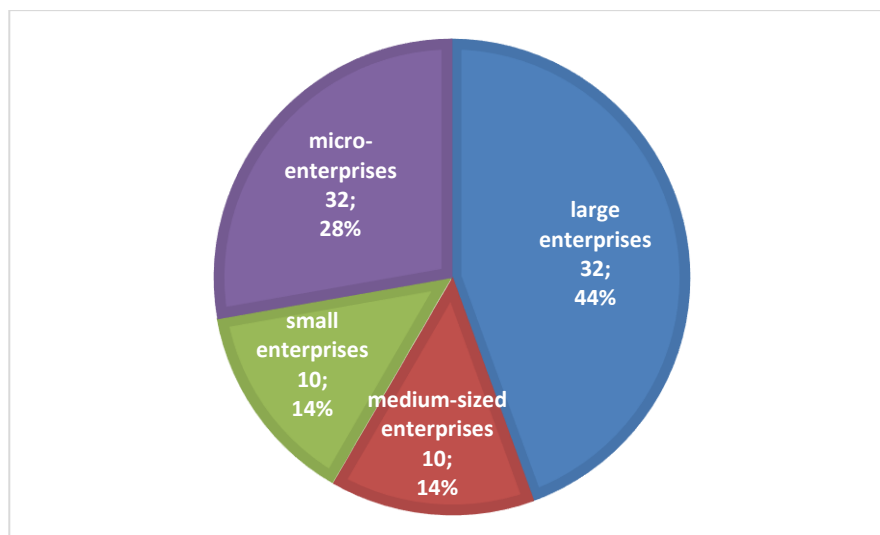


Fig. 2: Respondent enterprises, reporting of which has been analyzed during the research
Source: financial reporting of 72 Ukrainian enterprises

Table 1. Disclosure of information in financial reporting regarding the impact of COVID-19

| Financial reporting section | Composition of information provided |
|--|---|
| Operating environment. Conditions in which the company operates | Almost all companies noted that starting from the first quarter of 2020, Ukraine's economy is shrinking due to declining production of goods, work, services, and the introduction of government measures to prevent the spread of the coronavirus pandemic. |
| Basis of preparation of financial reporting: assumptions about business continuity | Several companies stated that the pandemic was taken into account in the analysis and that due to the COVID-19 outbreak there was no significant uncertainty about activity continuity used for the financial reporting or that the uncertainty associated with COVID-19 is not a key risk factor that could materially affect future cash-flow prognosis. |
| Significant accounting estimates and judgments in applying accounting policies | Several companies noted that changes in accounting estimates and assumptions preceded by changes in the macro-environment, including but not limited to the effects of the pandemic, have been revealed: - signs of economic depreciation of non-current assets; - a significant increase in credit risk on financial assets. As a result of the tests, the depreciation of fixed assets has been recognized. Expected loan loss rates have been revised upwards. |
| Risk assessment and management | Several respondents indicated that the final impact of COVID-19 would depend on future developments, including, among other things, the impact of the government, and other measures to prevent the spread of the virus, develop effective treatments and vaccinations, the duration of the pandemic, and/or quarantine restrictions, and also relevant actions of customers, suppliers, other third parties, the general recovery of economic conditions. In the financial reporting of some companies, the leaders have stated that it continues to monitor developments and efforts to identify, manage and mitigate the consequences of the COVID-19 pandemic on the companies' activity results. |
| Contingent and contractual obligations | There is no detailed information on the impact assessment of COVID-19 |
| Events after reporting date | In the financial reporting for 2019, most of the sampled companies indicated that the outbreak of the pandemic was considered a non-corrective event after the reporting date. |
| Disclosure of information in notes to | There is no information on the numerical assessment of the |

| | |
|---|--------------------|
| certain articles of main forms of reporting (decoding of numerical indicators) | impact of COVID-19 |
|---|--------------------|

Source: developed by the authors

Limitations of the researched enterprises

These researches have been conducted mainly to involve large and medium-sized enterprises (72% of respondents), which report under IFRS and do not use IFRS for small and medium-sized enterprises (Gontareva et al., 2020). This, in turn, results in a greater number and volume of business transactions, management personnel of a certain qualification, and, as a consequence, the need for analytics for management purposes, as well as for the formation of appropriate disclosures in the financial reporting (Perevozova et al., 2019). Considering this, the results and recommendations obtained may not be fully utilized by small enterprises, as well as the enterprises that apply IFRS for small and medium-sized enterprises, or should be applied to these entities only if they are relevant and material.

2. Limitations on the information base

The impact of the COVID-19 pandemic at both macro and certain enterprises' levels during the research period has not yet been fully identified and/or documented. We conducted the research on the data of the respondent companies only for 2019 and 2020, respectively.

By the end of 2020, several vaccines had been successfully developed, and some countries had

begun vaccination. However, the situation with coronavirus remains largely volatile and therefore its further impact is difficult to predict and quantify.

The governments of the countries and the leaders of the companies continue to analyze the potential impact, implement restrictive measures, and take other actions to mitigate the possible negative effects of COVID-19. We continue our research and assume that in the presence of information for more periods, especially after the completion of vaccination and evaluation of the effectiveness over time of other restrictive measures, the conclusions and recommendations can be expanded or adjusted.

3 Results and Discussion

3.1 Identification of Accounting Objects Sensitive to COVID-19 Impact

A detailed analysis of the financial reporting, management reports and management accounting data has made it possible to determine which accounting objects are most sensitive to the impacts of macro- and micro-environmental changes caused by COVID-19 (tab. 2).

Table 2. Accounting entities that are most sensitive to COVID-19 impact

| Accounting entities | Factors and results of impact |
|---|--|
| Fixed assets | Signs of economic depreciation of fixed assets due to significant changes in supply, reduction of business and economic activity, and shrinking markets/sales segments. As a result of the revision of sales forecasts for the medium and terminal periods, there were facts when the present number of net cash flows were higher than the net book value of fixed assets. Therefore, impairment losses were recognized in the financial reporting. |
| Inventories values, including goods / finished products for sale | As a result of declining market demand, and reducing production volumes, there is a decrease in the turnover of inventories, as well as their deterioration. The decrease in demand also led to a decrease in market prices, as a result of which the value of balances in the warehouses of the companies was higher than the market ones. All this indicated that the value of inventories is higher than the net selling price, and therefore the corresponding depreciation had to be recognized. |
| Accounts receivable, Financial investments (debt instruments) carried at amortized cost | Deteriorating economic conditions in the market, the introduction of specific government measures (for example, the right of consumers to defer payment of utilities without the right of suppliers to apply penalties) inevitably led to deterioration in payments and reduced turnover of receivables. |
| Ensuring future payoffs and payments | The general negative trends in the impact of COVID-19 caused several events, as a result of which individual contracts showed signs of aggravating. As a result of the increase in the level of credit risk, there is a need for an additional assessment of the fair value of the guarantees provided by IFRS 9. Also, some companies became parties to legal claims as a defendant as a result of non-compliance with the terms of contracts, which was caused, inter alia, by the impact of quarantine restrictions and the introduction of lockdown. |

Source: developed by the authors

Thus, given the significant and sometimes comprehensive impact of COVID-19 on the financial reporting of economic entities, identification and accounting of related costs are becoming increasingly important. Accumulation and systematization of information are appropriate at the level of management accounting for further risk assessment, budgeting, factor analysis of costs, as well as for the formation of the disclosure of certain elements in the financial reporting. In turn, the calculation of the value of individual items of financial reporting for their true disclosure may require changes or modifications for individual entities based on the principles of materiality.

3.2 Improvement of Inventory Accounting

By IAS 2 “Inventories”, inventories, including goods/finished products for sale at the date of financial reporting are valued at the lower of the following two values: cost and net realizable value (IFRS Foundation, 2021). Inventories are usually written off to net realizable value on an individual basis (based on the accounting of batches of individual nomenclatures of goods). If appropriate,

inventories can be combined into separate groups for this purpose. Preliminary estimates of net realizable value are based on the most reliable facts that existed at the time of preliminary estimates of the expected number of inventories sold. These preliminary estimates take into account price or cost fluctuations directly related to events that occur after the end of the period, to the extent that such events confirm the conditions that existed at the end of the period.

In practice, the most common methods of determining the net realizable value are the analysis of the market value of this nomenclature (commodity position) of inventories within the individual approach to significant balances, as well as the depreciation of inventories based on the analysis of their turnover by group approach for insignificant positions or in the case when it is impossible or impractical to use an individual approach (tab. 3).

The amount of any partial write-off (depreciation) of inventories to their net realizable value and all inventory losses should be recognized as an expense in the period in which such depreciation occurs.

Table 3. Basic approaches to inventory assessment

| Approach to assessment | Description | Terms of use |
|--|---|--|
| Individual approach to determining the value | Determining the net sales price of a particular nomenclature/batch | For significant balances of inventories for which there are market/contract prices. For completely depreciated positions. |
| Estimation of cost depending on the turnover of stocks or standard terms of storage. | Decrease in value (depreciation) of both a particular batch and groups of inventories in case of a decrease in turnover or significant shelf life | For multi-item stocks, the determination of individual values of which is impossible or impractical |

Source: systematized using IAS 2 (IFRS Foundation, 2021)

The amount of any cancellation of any partial write-off of inventories arising from an increase in net sale value shall be recognized as a decrease in the amount of inventories recognized as an expense in the period in which the cancellation occurs. Judgments may be needed to determine the influence of COVID-19 on the depreciation of inventories, but the following approach may be suggested for analysis. For example, the company manufactures products whose main raw material is material "A", as well as materials of nomenclature groups "B" and "C". To provide the production plan and order, about 10000 units of material "A" were purchased for 120 USD for one, which was part of inventories in the balance sheet as of 31.12.2019. However, as a result of the introduction of

quarantine restrictions in March before the date of approval of the reporting before the issue, the market price fell to 100 USD due to declining demand and tends to decrease. The fall in the price of materials indicates that the cost price of finished products will be higher than the net realizable value. During the normal operating cycle, the materials of Groups "B" and "C" were not stored in warehouses for more than 40 days. For nomenclature Groups "B" and "C" the Company uses the method of accrual of depreciation by the terms of storage: (storage more than 20-40 days - the amount of depreciation 10% of value, from 41 - 60 days - 20% of value, 61 - 90 days - 30 % of value, etc.). Also in the process of inventory taking the inventories were found that had been damaged due to improper storage for 10,000 USD (tab. 4).

Table 4. Distribution of losses due to depreciation of inventories by impact factors, thsd. UAH

| Material | Initial value | Depreciation of inventories recognized earlier | Net price of sales | Additional depreciation | Impact of COVID-19 | Other influencing factors |
|--|------------------|--|--------------------|-------------------------|--------------------|---------------------------|
| A («Raw materials») | 1 200 000 | 0 | 1 000 000 | 200 000 | 200 000 | |
| Group "B" («Other materials») including | | | | | | |
| shelf life up to 20 days | 550 000 | 0 | 550 000 | 0 | | |
| shelf life up to 40 days -10% | 450 000 | 0 | 405 000 | - 45 000 | | 45 000 |
| shelf life up to 60 days -20% | 150 000 | - 15 000 | 120 000 | - 15 000 | 15 000 | |
| Group "C" «Goods» including | | | | | | |
| shelf life up to 20 days | 250 000 | 0 | 250 000 | 0 | | |
| shelf life up to 40 days -10% | 200 000 | 0 | 180 000 | - 20 000 | | 20 000 |
| shelf life up to 60 days -20% | 150 000 | -15 000 | 120 000 | - 15 000 | 15 000 | |
| spoiled inventories with a shelf life of up to 60 days | 10 000 | -1 000 | 0 | - 9 000 | | 9 000 |
| In general: | 2 960 000 | -31 000 | 2 625 000 | 304 000 | 230 000 | 74 000 |

Source calculated by the authors

In our opinion, to ensure the accumulation of information on the impact of COVID-19 on the depreciation of inventories, it is advisable to open appropriate sub-accounts in the company's chart of accounts in terms of appropriate relevant groups of materials for analysis and formation of appropriate disclosures, for example:

"Accrual / Reversal of depreciation of inventories (Raw materials) - the impact of COVID-19";

"Accrual / Reversal of depreciation of inventories (Other materials) - the impact of COVID-19";

"Accrual / Reversal of depreciation of inventories (Goods) - the impact of COVID-19";

"Accrual / Reversal of depreciation of inventories (Raw materials) - Other factors";

"Accrual / Reversal of depreciation of inventories (Other materials) - Other factors";

"Accrual / Reversal of depreciation of inventories (Goods) - Other factors".

3.3 Improvement of Accounting of Receivables and Financial Investments (Debt Instruments), which are Accounted for at an Amortized Value

In the current COVID-19 pandemic, the problem of non-payment in Ukraine, and their uncontrolled growth as trade debt is becoming common. Settlements with debtors and creditors at domestic enterprises are not entirely favorable, as there are significant amounts of debt and long maturities (Haiduchok et al., 2020). According to the research,

the management of the companies inevitably faces the problem of reviewing the assessment of expected credit losses (ECL). After all, the general deterioration of the economic situation leads to a deterioration in the turnover of working capital of the companies and, as a consequence, there is a tendency to increase receivables. In some cases, there is a default on payments or bankruptcy of the debtor.

The key assumptions and accounting estimates to be revised as a result of the pandemic impact are given in tab. 5.

For example, a company uses a payment history for certain groups of financial assets to determine which percentage of receivables with a certain period of delay is not repaid (the receivables are considered bad).

Despite the practical complexity of the calculation and the need to apply a large number of judgments, we still consider it appropriate to determine separately the impact of COVID-19 on the change in the amount of expected credit losses. It will also make it possible to determine the share of the pandemic factor in the overall effect of the increase in the reserve as a result of changes in key accounting estimates and judgments. To accumulate information and ensure analytical accounting, it is advisable to open appropriate sub-accounts by type of financial assets:

"Accrual / Reversal of the provisions for expected credit losses (by type of financial assets) - the impact of COVID-19".

Table 5. Key assumptions and accounting estimates

| Assumptions | Significant relevant changes |
|---|--|
| Grouping of financial assets (receivables with the same class of credit risk) | Identification of new groups of financial assets (creation of new or separation from existing ones). Transfer of counterparties from one group to another. |
| Revision of credit risk rates for certain groups of financial assets | Given the general negative conditions of the economic environment, there is a need to use a more cautious approach when calculating rates. For example, the introduction of additional adjustment factors which take into account the risks of the country of presence, industry risks, default status of the group of companies to which the debtor belongs, and so on. |
| Review of individual credit risk rates for individual counterparties | Recalculation of rates taking into account deterioration of payments. Transition from a group approach to an individual one with assessment a payment history of particular clients. |
| Identification of counterparties and groups of counterparties for which default has occurred or is highly probable | Additional analysis of counterparties for default. Review of the company's accounting policy for default criteria in a more prudent approach. |
| Introduction of additional metric parameters, in the particular probability of occurrence of several scenarios, into the methodology of calculation of ECL rates for separate groups of financial assets or separate significant financial instruments. | Improving the calculation method by introducing more objective assessments, in particular the determination of credit risk rates for several scenarios, followed by the determination of the weighted average rate given the probability of a particular scenario, taking into account the time factor. |
| Implementation of measures to increase the accuracy of forecasts | Involvement of independent experts to obtain external indicators. Wider use of indices and rates of rating agencies, and external financial / information resources. |

Source: developed by the authors

3.4 Improvement of Provisions of Future Payoffs and Payments in Conditions of Uncertainty due to COVID-19 Impact

One striking example of the impact of COVID-19 is the recognition of individual contracts by or dance with IFRS 37. This is especially true in cases where any adverse circumstances arising from the effects of COVID-19 or appropriate precautionary measures had no legal basis to be considered force majeure.

Paragraphs 10, 68 of IASB 37 define an onerous contract as the contract under which the unavoidable costs of meeting the contractual obligations outweigh the economic benefits expected to flow from the contract. Inevitable contract costs reflect the lowest net termination costs that are less than the two estimates: the cost of performing the contract or any compensation or penalties for non-performance.

These requirements should be considered in conjunction with the prohibition in IASB 37 on securing future operating losses (IFRS Foundation, 2021). The main differences are that future operating losses do not depend on the future actions of the entity and do not arise from liabilities arising from a past event. However, the difference is not always clear and judgment may be required. For example, a company has a contract to sell goods at a

fixed price to a buyer. Due to quarantine restrictions, the company is not able to supply goods on these terms due to the downtime of its supplier. At the date of preparation of the financial reporting, the management, for example, is considering options for the following actions: either to pay a pinafore of 15,500 USD for long-term withdrawal from the contract or change a supplier.

In addition, delivery on these terms will increase costs by exceeding the company's margin from resale by 15,500 USD within 14 months before the expiration of the contract. Changing the terms of delivery will reduce the amount of damages but will lead to an additional fine of 1,500 USD. Thus, the smallest amount should be the number penalties (15,500 USD), for which provisions should be created. However, in our view, first, in determining the number of provisions, it is necessary to assess the present value of unavoidable costs less the expected benefits of the contract.

This net approach is not explicitly stated in IASB 37, but is on system with the definition of unavoidable costs. Secondly, guided by the precautionary principle, the probability should be taken into account in the presence of several scenarios of events in the presence of their reliable assessment (tab. 6).

Table 6. Variability of accounting estimates of provisions, thsd. UAH

| num. | Scenario A | Scenario B | Discount rate | Scenario A | Scenario B |
|---|--|---|---------------|------------------|------------------|
| | Additional losses in accordance with the sales budget and cost price | Additional losses when changing the terms of delivery (including the fine in the first month) | | Given cash flows | Given cash flows |
| | Probability 40% | Probability 60% | | | |
| 1 | 1000 | 2300 | 1,00 | 1000 | 2300 |
| 2 | 1100 | 1110 | 0,99 | 1086 | 1096 |
| 3 | 1200 | 1200 | 0,97 | 1169 | 1169 |
| 4 | 1200 | 1100 | 0,96 | 1154 | 1058 |
| 5 | 1000 | 900 | 0,95 | 949 | 854 |
| 6 | 1300 | 1250 | 0,94 | 1218 | 1171 |
| 7 | 1400 | 1490 | 0,92 | 1294 | 1378 |
| 8 | 1200 | 1100 | 0,91 | 1095 | 1004 |
| 9 | 1200 | 1100 | 0,90 | 1081 | 991 |
| 10 | 1200 | 1100 | 0,89 | 1067 | 978 |
| 11 | 1100 | 900 | 0,88 | 965 | 790 |
| 12 | 1000 | 850 | 0,87 | 866 | 736 |
| 13 | 1000 | 850 | 0,85 | 855 | 726 |
| 14 | 800 | 750 | 0,84 | 675 | 633 |
| x | 15700 | 16000 | x | 14473 | 14882 |
| Average capital for the relevant period (relatively) | | | 17% | | |
| Min amount of costs ((14472,56*0,4) + (14881,80*0,6)) | | | 14718 | | |

Source calculated by the authors

Thus, the number of provisions created should be 14718 USD.

According to the survey of respondents, a significant part of them noted that the impact of COVID-19 was including an increase in lawsuits from both suppliers and customers. The subject of lawsuits, as a rule, was the recovery of debts due to late payment or penalties for late delivery of goods, work, and services.

Accordingly, companies had to create additional legal risk provisions by estimating the number of additional liabilities and future litigation expenses. Estimates of results and financial impact are determined based on the judgment of the management of the entity and are supplemented by the experience of such operations, and in some cases, the conclusions of independent experts. The generalized register of legal risks with a probability assessment can have the following form (tab. 7).

Table 7. Proposed structure of Register of legal risks with probability assessment, thsd. UAH

| Lawsuit | Amount of the suit | Amount of already recognized liabilities in the balance sheet | Estimated amount of court costs | Forecast of negative court decision % | Provisions sum (probability >50%) | Impact of COVID-19 |
|--------------|--------------------|---|---------------------------------|---------------------------------------|-----------------------------------|--------------------|
| 1 | 10000 | 10000 | 1000 | 40% | 0 | X |
| 2 | 15000 | 12000 | 2500 | 60% | 5500 | X |
| 3 | 25000 | | 3000 | 90% | 28000 | X |
| Total | 50 000 | 22 000 | 6 500 | x | 33 500 | x |

Source calculated by the authors

This example shows that provisions for legal risks should be recognized in the balance sheet for 33,500 USD, and the amount of the estimated court

costs of claim №1 should be disclosed in the notes to the financial reporting as contingent liabilities. Also, to ensure the accumulation of information and the necessary analytics on the impact of COVID-19

on the formation of security for future expenses and payments, it is proposed to open appropriate sub-accounts in the work plan of the company's accounts in terms of relevant provisions

“Accrual / Reversal of provisions under onerous contracts of COVID-19 impact”;

“Accrual / Reversal of provisions under onerous contracts of other factors”;

“Accrual / Reversal of provisions under legal risks under COVID-19 impact”;

“Accrual / Reversal of provisions under legal risks of other factors”.

4 Conclusion

The global pandemic caused by the spread of the COVID-19 coronavirus has affected the economies of all countries without exception and has posed new challenges to the governments, businesses, and the social sphere, and changed the way things are in general.

Therefore, the COVID-19 pandemic has had significant consequences that will have long-term effects. Among them, are the economic crisis and falling GDP, stock market crashes, disparities in individual countries' participation in the world economy, cessation of a significant amount of business, rising unemployment, increased e-commerce, rupture of traditional logistics chains, socio-economic transformations, and so on.

Modern Ukraine is an integral part of global geopolitical processes and world trade. Ukraine takes 1st place in Europe by territory, the 35th one in terms of population in the world, and has significant natural resources, and high economic and intellectual potential, which will continue to grow.

Thanks to favorable natural and climatic conditions, Ukraine can provide food for 600 million people and is now one of the largest producers and exporters of grain in the world. This gives grounds to assert the important role of Ukraine in ensuring food security in the world. Ukraine's modern European integration vector stimulates the development of the national economy and accelerate by integration into the world economy.

As a result of our research, it has been found out Ukrainian companies in various sectors of the economy, regardless of their size and volume of activity have been significantly affected by the coronavirus COVID-19, as noted in their financial reporting. As a rule, companies disclosed this fact by describing the conditions in which the company operates, as well as assumptions about business continuity. Almost all respondents noted that the fact of the coronavirus pandemic and its

consequences had a significant impact on key accounting judgments, with companies having significant practical difficulties in determining the factor impact of COVID-19. The results of the research also identified the objects of accounting that are most sensitive to the pandemic factor.

We have offered practical proposals for improving accounting, management accounting for some of its objects, which are most sensitive to the impact of COVID-19. Regarding the accounting of inventory, a model of factor analysis of losses from their depreciation has been proposed, which provides an opportunity to allocate from the total amount of additional costs of the period caused by individual factors, including a pandemic. It is also recommended to open appropriate sub-accounts for analytical accounting of losses from depreciation of inventories as a result of impact to coronavirus. The article provides practical guidance on reviewing key accounting judgments and assumptions in determining the amount of expected credit loss (ECL) on financial assets, which should simplify the factor analysis of the impact of individual factors, including COVID-19. To accumulate and systematize information on impairment losses on financial assets due to the impact of coronavirus, it is proposed to open separate sub-accounts of expenses by type of financial assets. The paper presents a detailed analysis of the impact of coronavirus on the provisions of future payoffs and payments, in particular on the provisions for onerous contracts and legal risks. The suggestions for improving the calculation of the size of the reserve in conditions of significant uncertainty, high risk and the possibility of implementing several scenarios have been given. In turn, it has been proposed to open separate sub-accounts of costs for the systematization of information by impact factors, including COVID-19, by type of provisions.

These proposals improve the accounting and analytical accounting of inventories, financial assets, provisions for future expenses and payments, strengthening the accounting function for analytical support of management decisions and financial reporting. The proposed model of factor losses analysis against inventories depreciation allows determining the impact of factors, in particular COVID-19, on the amount of costs, and accordingly helps to develop the measures to minimize the negative impact of these factors on financial condition and activity of a company. Practical recommendations for reviewing the amount of credit risk of financial assets, as well as for calculating the amount of provisions for future payoffs and payments in conditions of significant uncertainty

and risk, strengthen the methodological basis for more prudent and balanced accounting estimates, which ultimately leads to more accurate disclosure and quality of financial reporting of companies. The proposed new analytical sub-accounts will improve the work plan of the accounts of the enterprises whose activities are significantly affected by COVID-19.

The research results improve the quality and transparency of financial and non-financial reporting of businesses affected by the effects by the global COVID-19 pandemic, meeting the information needs of stakeholders at various levels. Approbation of the proposed approaches in Ukrainian business will allow achieving the mission of the Institute of Accounting in the context of achieving trust, understanding and control in the society.

Depending on the research questions being sought, there are (will be) challenges for some accounting research to isolate the broader contextual effects associated with the COVID-19 crisis (Troshani, 2020). Covid-19 has brought challenges, but also opportunities for future qualitative accounting research, both in terms of research settings and questions, and in terms of new methods and practices (Molinari & De Villiers, 2021). The prospects for further research are to improve the proposed models and practical recommendations, as well as the development and practical testing on their basis of accounting and analytical models for assessing possible future risks of the COVID-19 pandemic for management purposes and to disclose risk assessment in financial reporting. It is also planned to develop separate accounting registers to calculate the amount of impairment of inventories, expected credit losses, and provisions for future payoffs and payments according to impact factors.

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