

Analytical Support for the Management of State-Owned Enterprises in Unstable Conditions

Tetiana Iefymenko ¹, Liudmyla Lovinska ², Maria Kucheriava ^{3*}, Vladyslav Hrabovyi ⁴

¹ State Educational-Scientific Establishment “The Academy of Financial Management”, Kyiv, Ukraine.

² Research Financial Institute, State Educational-Scientific Establishment “The Academy of Financial Management”; Department of Tax Management and Financial Monitoring, Kyiv National Economic University named after Vadym Hetman, Kyiv, Ukraine.

³ Center for the Implementation of the Results of Financial and Economic Research, State Educational-Scientific Establishment “The Academy of Financial Management”, Kyiv, Ukraine.

⁴ Department of Tax Management and Financial Monitoring, Kyiv National Economic University named after Vadym Hetman, Kyiv, Ukraine.

*Corresponding author: piven_maria@ukr.net

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Abstract: The article highlights new approaches to understanding the place and role of information sources, particularly accounting, in the management of state-owned enterprises (SOEs) in the context of modern views on the nature and functions of regulatory activity. Accounting is considered a service function in relation to management, where new tasks appear within the framework of the risk-oriented approach in the new reality. *The article aims* to study how information supports the management of SOEs in the face of uncertainty, including that caused by the consequences of emergency events. Based, in particular, on assessing accounting systems under the angle of managerial accounting to ensure resilience in uncertainty, as well as application of analysis, synthesis, using the example of fiscal risks associated with the activities of SOEs, the authors prove that the probability of increasing crisis susceptibility rises due to asymmetry of information, primarily in the accounting and financial reporting field. Increased uncertainty within economic relations is accompanied by threats of disruption of resilience in business activity, imbalances in the interests of counterparties, insufficient or distorted information for management needs, etc. In the context of emergencies, the negative risks are exacerbated, which requires a number of measures aimed at overcoming them and modernising information support for decision-making in the context of uncertainty. The authors propose further improvement of the relevant regulatory and legal support of economic activity with due regard to the norms and provisions of IFRS and the spreading of the practice of using sustainability reporting as a source of substantiation of management decisions at SOEs.

Keywords: resilience, fiscal risks, reporting, sustainable development, SOEs.

Introduction

Over the last few decades, the importance of state-owned enterprises in the world economy has grown. The number of SOEs among the top 500 worldwide firms by sales has nearly quadrupled, from 34 in 2000 to 126 in 2023 [1]. Given their rising significance, it is critical that SOEs maintain good corporate governance standards and contribute to fair and competitive markets, while also operating in the public's best interests.

To guarantee that SOEs support competitiveness, economic resilience, and sustainable development, it is critical to manage them with integrity, accountability, and responsibility via sound corporate governance. Global unpredictability and changing domestic conditions need state-owned enterprises (SOEs) to constantly adapt and develop [2].

SOEs performed an important role before the COVID-19 pandemic and will continue to do so in the post-pandemic period. Over the last two decades, state-owned enterprises have been among the world's largest and fastest growing global corporations [3]. According to an IMF research, SOEs' prominence among the world's top firms has quadrupled in the previous decade: their assets now account for 50% of total global GDP, totalling US\$45 trillion.

Severe issues in state-owned enterprises cause to economic slowdowns or recessions, including the necessity for substantial government bailouts, as seen during the COVID-19 epidemic [4]. Meanwhile, Jiang et al. [5], using data from Chinese listed firms, found that state ownership enhances corporate resilience during the pandemic. According to mechanism testing, state ownership makes it possible for state-owned businesses to get more bank loans and government subsidies, which strengthens their resilience.

One should note also that emergency and crisis events frequently result in unexpected or unbudgeted payments. SOEs must design a crisis response strategy to identify categories of emergency spending and those that should be postponed until after the crisis. These strategies should be adaptable and carried out with managerial and board agreement in a transparent way. Such expenditure or investment reprioritization would allow for emergency payments while reducing cash limitations during a crisis.

The effectiveness of management decisions under uncertainty regarding the maintenance of the resilience potential depends on the reliability, completeness and relevance of the data on which they are based. This statement is true in the normal course of business, but becomes especially relevant in times of shocks caused by military conflicts, pandemics, natural disasters, etc.

The information basis for substantiating management decisions consists of many sources. Its creation involves using several quantitative and qualitative methods to assess the quality and relevance of information. The sources of information include accounting and statistical records, operational information on the state of affairs at the enterprise, regulations governing economic activity, and various standards, including IFRS (International Financial Reporting Standards) and NAS (National Accounting Standards), etc. At the same time, various methods are also used to determine the best or acceptable variant of a management decision based on the available information, such as linear programming, goal and decision tree, statistical methods, etc.

At the same time, when it comes to an enterprise, accounting is the most reliable and comprehensive source of information; its methodology for systematising and summarising information is the most perfect reflection of the enterprise's economic model in numbers and facts.

This article focuses on accounting as a source of information for decision-making under conditions of uncertainty.

According to the modern academic understanding of management, accounting is a function of the infrastructure for ensuring business activity. Planning, organisation, motivation and control are considered to be general management functions, their essence is comprehensively covered in the economic literature. Scientists distinguish between 4 and 6 functions in addition to the listed ones, in particular, coordination and analysis [6].

Since the objective of this article is *to study the information support for the management of state-owned enterprises (SOEs), taking into account uncertainty, including the one caused by the consequences of emergency events*, it is crucial to consider the role of accounting as a source of decision-making, although it is obvious that accounting is also important for other functions of the enterprise.

It should also be noted that accounting for enterprises with different types of economic activity, industry, and ownership differs despite the introduction of IFRS and NAS. The most typical example of this statement is state-owned commercial enterprises. They play an important role in society's life, yet their accounting system is not sufficiently studied to inform management decision-making.

Therefore, the object of this study is SOEs, as they perform socially essential functions in the context of economic and military turbulence. This is also confirmed by the fact that, according to OECD experts, SOEs account for 12% of global market capitalisation as of 2023 [1]. For countries with military conflicts (e.g. Ukraine), these business entities constitute an essential element of the economic recovery system. For example, the IMF, in its Fourth (June 2024) and published preliminary draft of the Fifth (September 2024) Reviews of the Extended Arrangement under the Extended Fund Facility, notes the important role of SOEs in supporting Ukraine's economic system, in particular in developing and implementing the privatisation strategy [7].

Literature review

The use of accounting and economic information in decision-making is covered in the works of many scholars. However, almost all works treat accounting as a separate management function. At the same time, management as a process was considered from the standpoint of the cybernetic approach, and its functions were divided into those that provide direct and feedback links between the subject and the object of management. In this context, accounting and control were the feedback functions. This aspect was very efficient, as it allowed the application of a systematic

approach in research and the creation of a scientific basis for the digitalisation of accounting procedures and the creation of automated enterprise management systems.

Given the fact that the activities of economic agents take place in the context of many negative factors provoked by uncertainty of various kinds, it is important to provide the risk management system with high-quality and reliable data. An example is change management as a mainstream of modern administration, which requires strengthening the information component of decision-making, considering external and internal risks that affect business models.

The World Bank experts (Matt Andrews, Jesse McConnell, Alison Wescott) in their work "Development as Leadership-led Change. A report for the global leadership initiative" consider change management as an objective process that accompanies the development of any system, and change as "a transition from the current state to a better equilibrium" [8]. Moreover, accounting data, which now have not only the function of a static reflection of the state of financial and economic activity of enterprises but also the prospective one, acquire the role of a leading source of decision-making.

In this article, accounting is considered as a service function in relation to the management of SOE, and reporting is considered as a tool for "assessing the contribution of enterprises to achieving sustainable development and building a more resilient and competitive economy" [9]. Economic agents, regardless of the activity type, face risks of different extent.

The neoclassical theory of business risks is the scientific basis of the modern theory of risk management. In his work "The General Theory of Employment, Interest and Money", J. M. Keynes cites the following negative risks:

- creditor risk;
- entrepreneurial risk;
- risk of changes in the value of a monetary unit [11].

These risks, which also include fiscal risks, are compounded by systemic problems due to ongoing hybrid conflicts, price wars and other factors that cause political and economic changes on a global scale. In the context of global uncertainty, geopolitical challenges and geo-economic shifts have a significant impact on fundamental transformations of the political and economic world order. As a result of these rapid developments, multilateral institutional regulations of economic relations based on universally recognised norms and rules are being lost and there is a return to the politics of power, which causes risks and challenges on a global scale that have not been seen since the Second World War. Due to the acceleration of such transformations, the challenges entail risks that can create obstacles to the civilised development of humanity [12]. This may primarily apply to European society, and thus to Ukrainian society, which already has the right to consider itself an integral part of this community.

The factors caused by the geopolitical and geo-economic realities of the "new economy" that provoke the emergence of risks include: the latest technological advances and the Internet, trends in the fragmentation of the global economy and institutional changes in competitive relations, restrictions on free trade and international investment, financial instruments, weakening of state regulation in key sectors of the economy, changes in organisational structures as a result of downsizing, reengineering, value chains, growing expectations of consumers of products and services, and the growth in the number and volume of mergers.

The modern theory of risk management studies risks as a phenomenon of economic existence that can have both negative and positive consequences, i.e., it can be considered not only as a threat but also as an opportunity.

It is important to note that the process of standardisation of the risk management system is reflected in the international standard ISO 31000 "Risk Management" [13], according to which risk is *"the effect of uncertainty on objectives"* (clause 3.1 of section 3 of ISO 31000). In turn, note 1 to clause 3.1 of section 3 of ISO 31000 states that *"effect is the deviation of the actual from the expected. Effects can be positive, negative or both positive and negative and, accordingly, can be embodied in the form of opportunities and/or threats"* [14].

Effective risk management is only possible by considering the causes of their occurrence. Therefore, management's response to the increasing complexity of the risks of the "new economy" provoked the birth of its new paradigm [14].

In addition to external risks caused by increased uncertainty from the external environment, a large number of risks arise in the company's internal environment. To overcome external and internal risks, ERP systems (Enterprise Resource Planning) are introduced.

An ERP system, as a corporate automated information system for planning, accounting, controlling and analysing all business processes of an enterprise, is aimed at comprehensive management of value creation processes in order to minimise business risks. ERP integrates enterprise functions into one system and provides them with a single database. It should be noted that accounting, as a component of the ERP system and a service management function, is also changing under these conditions, not only under the influence of automation, but also because the development of risk management requires a reliable information basis for substantiating management decisions, which would allow to identify primarily negative risks, assess them and outline ways to eliminate them [15].

At the same time, it should be noted that an enterprise's accounting system also has its own risks, the so-called risks of unreliable information.

The reasons for the asymmetry of accounting information are covered in depth in scientific publications [16, 17]. They are diverse. One of them is the imperfection of the regulatory and legal support of economic activities of enterprises, which affects the methods and approaches to the assessment of assets, capital and liabilities, as well as the procedure for conducting and recognising several business transactions in accounting. The other is the imperfection of the accounting and financial reporting methodology. While the former can be addressed by amending legislation, the latter is generally recognised as introducing international financial reporting standards. In the context of the latter, it should be noted that there is currently a certain inertia in the accounting methodology: international (ISSB IFRS S1, IFRS S2) and national accounting and reporting standards traditionally do not contain indicators that would reflect the sustainability of companies, including SOEs. Feasibility of including these indicators is explained by the fact that in times of crisis, the economic activity of the public sector is a significant component of the domestic economic environment and plays a key role in overcoming the negative consequences [18].

In particular, in Ukraine, despite the significant number of SOEs (3,400 entities), the issue of their effective management remains problematic, as most of them have been unprofitable for many years even before the crisis (before the coronavirus pandemic and the aggressor's full-scale invasion of the state).

The Ukrainian Ministry of Finance has selected 28 state-owned enterprises with the highest fiscal risks and released a report on the assessment of fiscal risks and their potential impact on the implementation of the state budget in 2022 [19]. The MoF considers both the possibility of SOE fiscal risks materializing (>66%) and their potential effect (>0.5% of GDP) to be high overall. The primary risks are listed: the possibility of financial deterioration; the failure to pay foreign exchange obligations; the failure to repay debts guaranteed by the state; the budget's shortfall in tax and other revenue; and the delay in approving financial plans.

According to S&P Global Ratings, Ukraine's rating has been downgraded to "partially defaulted" [20]. Along with appropriate measures to ensure that Ukraine carries its obligations in full on the part of international organisations, the Cabinet of Ministers decided to temporarily suspend debt service to some creditors. In the long term, the government envisages ways to generate additional sources of budget revenues and, accordingly, to optimise public spending, which will allow for the full repayment of debts. In this aspect, the problem of counteracting negative fiscal risks in the activities of SOEs is becoming extremely important.

Ineffective management of SOEs entails fiscal risks and, in general, poses a threat to the country's economic security. From this point of view, it should be emphasised that Ukraine's banking system has demonstrated a high level of resilience in the face of war [21]. It is the effective financial regulation of this sector of the economy that has become one of the key factors of resilience. It is worth noting that as of 2023, state-owned banks owned 53.6 per cent of net banking assets and managed 64.5 per cent of the funds of the Ukrainian population [22].

Materials and methods

The theoretical and methodological basis of the study included publications devoted to both general economic and accounting problems of SOEs functioning under uncertainty conditions, and specific issues, such as the potential and possibilities of implementing integrated reporting. The methodological basis of the study was compiled of: the concepts of accounting and managerial accounting adopted in economic science. The research toolkit is based, in particular, on the assessment of accounting systems. The paradigm of the study is the dialectical method, which involves considering all phenomena and processes in their universal interconnection and interdependence. General scientific research methods were used (analysis, synthesis, deduction, systematicity, complexity, comparison, abstraction, specification, generalization, formalization).

Results

As is well known, in modern conditions, entropy economics is the basis for understanding the world as it is; its postulates are highly relevant to solving the world's economic problems [23]. The productive activity of enterprises by the principles of self-sufficiency and profitability in this aspect is a lever for the development of the business activity space that is resistant to shocks [24]. Figure 1 shows the directions of strengthening resilience as a process in the corporate sector of the economy that enhances the potential of business structures to quickly reformat key links and resources to achieve dynamic sustainability in response to unpredictable external or internal shocks. Based on the theory of complexity, resilient systems [25] are characterised by adaptive capacity, absorptive capacity, and transformative capacity. They contribute to the fundamental renewal of specific structural formations by further complicating their forms of organisation.

In the economic literature [26], in international sources, derivatives of the physical term "resilience"¹ have become widespread in the context of developing and implementing anti-crisis measures, as well as repelling full-scale Russian aggression in Ukraine and post-war recovery plans.



Figure 1. Conceptual framework of supply chain stress resilience in the corporate sector

Source: developed by authors

UNCTAD researchers consider an organised process of countering destabilisation threats as one of the alternatives to consolidate the capacity of value chains to absorb shocks [27]. It is about the need to focus on policy progress: productivity growth, flexibility, relocation, including diversification of sources of supply, expansion of key

¹ "Resilience" is the ability of a stressed body to restore its size and shape after deformation caused especially by compressive stress. Merriam-Webster dictionary. URL: <https://www.merriam-webster.com/dictionary/resilience>.

resources stocks, etc. Risk management as a function of firms involves the use of certain modern standard tools. These primarily include innovative digital technologies that help avoid asymmetric decisions, ensure transparency and accountability. Flexibility in structural reconfiguration of production activities is also important, taking into account the possibility of using alternative logistics and transportation options. Strategic methods should be used to increase the stress resistance of supply chains and business structures in the corporate sector. Fig. 1 shows conceptual approaches to solving this problem. The ways to address specific issues include a number of components:

- adaptability and flexibility in developing sales markets, building competitiveness, and ensuring transparency in pricing;
- target setting in terms of readiness to withstand external shocks, with an emphasis on forecasting and monitoring resilient activity, resilience, and maximising business investment cycles and capital investment;
- risk management in production processes, where it is extremely important to accumulate production reserves, early detection, prevention of threats, assessment, and forecasting of riskiness [28-30].

Due to likely fluctuations in demand and difficulties with supply, reserve stocks should be maintained at the required level. To minimise the impact of unforeseen disruptions, certain changes to operating models can be made on the basis of forecasting without structural movements of large physical assets [31]. Unified approaches to the structural rebuilding of international production networks, based on increasing human capital efficiency, technological advantages of strategic innovation leaders, etc. are the basis for synergies in accumulating viability and resilience to stress [32].

The information space of business, where all data, including confidential data, circulates, requires high security standards. To overcome the risks of vulnerability to digital threats and cyberattacks, specific measures must be taken to ensure the coherence of communication networks, hardware, etc. [33]. First, this applies to accounting records and indicators for remote work. Therefore, attention should be paid to establishing clear standards for the operation of data centres and ensuring the mobility of engineering staff and skilled labour.

In the context of unpredictable threats, increased uncertainty, and vulnerability to various risks, management flexibility must be ensured throughout the entire production life cycle. Management activities should focus on business continuity, technological processes, and all types of operations. Optimised response and effective decision-making will ultimately enable timely assessment of vulnerabilities and the likelihood of mitigating any disruptions. Transparent cost flow mechanisms and secure information exchange with governments and regulators are essential to strengthening institutions of trust. In particular, when implementing long-term projects and making investments, mutually beneficial adaptation to overcome unexpected system-wide shocks should be a mandatory component of management decisions.

The tasks of improving corporate governance include maintaining a high level of sustainability and resilience to unforeseen crises in the business sector. Modern management technologies should be introduced into the processes of expanded reproduction of human capital and all components of value chains. In addition, the performance of companies will be affected by the possibilities of corporate disclosure, proper exercise of shareholder rights and responsibilities of boards of directors. Therefore, timely forecasting and monitoring of all aspects of ESG, is essential, as well as new complex risks, including climate risks. Expanding access to market financing and public capital for businesses, along with the use of innovative technologies, will strengthen the economy's long-term stability.

The sustainability of business activities is determined by a number of its qualitative and functional characteristics (see Figure 1). Natural disasters and extreme weather events have a negative impact on all infrastructure materials and equipment components. In general, their sustainability is related to the specifics of their geographical location, and their reliability is related to their resistance to stress, wear-and-tear, and ageing. In order to counteract fluctuations in demand and the political situation, further attention should be paid to the deployment of productive forces, particularly the redundancy of their main structural elements. For example, reservation activities in telecommunications and power grids will help to increase throughput and prevent outages.

It is advisable to emphasise the programmatic nature of goal setting, risk forecasting and prevention measures, and a high level of productivity in dealing with the consequences of disruptions for the fastest possible recovery. The international community is constantly making evolutionary changes to the relevant supranational standards to improve and adequately assess the institutional prerequisites for governance in corporate structures to support the

dynamics of recovery and financial sustainability. In particular, in 2022, the need for a significant reformatting of the OECD Corporate Governance Principles [1, 33] with the inclusion of the Sustainability and Resilience section was identified.

Sustainable development issues should also be considered when formulating a global vision of further countering risks. In addition, when developing and improving strategic directions for countering military and geopolitical challenges, it is necessary to consider the specifics of a group of states that show signs of imbalance (fragility) regarding threats to national security, low resilience and conflictogenity. The risks of many trends of uncertainty in development are enhanced by the mutual influence of instability and conflict, which has a rather complex and contradictory effect on their components.

The role of dynamic chaos is particularly relevant in martial law. Taking into account "chaotic" (chance, probability, etc.) and dynamic concepts (predictability of immediate consequences, forecasting horizon, etc.), it is necessary to maintain a certain balance between the goals and objectives of development, primarily by ensuring a balance between the turbulence (speed and magnitude of variability) of the external environment and the ability of the management to respond to these changes. That is, for each level of environmental turbulence, a combination (vector) of elements can be selected that optimises successful results. In systemic, structural crises, the condition for achieving sustainable long-term results is complexity and innovation at all levels of regulation of economic relations. At the same time, unsystematic modernisation efforts are usually associated with the lack of new methods and ways to adequately respond to the challenges of destabilisation. As a result, there is a need to reconsider the role of the content and mechanisms of management: to move from the principle of "object-subject of management" to the regulation of its interaction with self-organisation and self-development.

In times of systemic shocks, strategic management should be based on the principle of complementarity in the activities of state non-financial and financial corporations, taking into account the modern theory and practice of crisis management, international experience, etc. Society's cohesion around counteracting the challenges and threats facing the country and its financial and economic system should accompany the implementation of this concept through consistent institutional changes within the framework of national peculiarities.

Thus, the post-war recovery plan in Ukraine should include institutionalising national indices, standards with global indicators, and international norms for collecting and sharing information. Informatisation technologies are now becoming an independent resource, along with management activities aimed at forming a resilient basis for the sustainability of national social economic systems. Their functioning should focus on the protection of property rights, as well as adherence to the principles of integrity, accountability, and prevention of possible violations of established norms and rules. This means preventing distortion of financial results in investment, depreciation, insurance and other operational areas, including those that cause illegal understatement of profits or deliberate overstatement of price components in contractual relations that regulate the turnover of all types of assets. This is especially true for SOEs as one of the key drivers of the state's socially essential functions in special circumstances.

Therefore, let us consider the activities of SOEs in Ukraine, where the consequences of any emergency circumstances have a negative synergistic effect due to martial law. In this country, the business activity of SOEs is regulated by national legislation common to all business entities and separate legislation intended for public sector entities.

Companies keep their accounting records in accordance with the Law of Ukraine "On Accounting and Financial Reporting in Ukraine" (the Law) [34]. The Law stipulates that public interest entities shall prepare financial statements and consolidated financial statements in accordance with international standards (Article 12-1, paragraph 2 of the Law). Such enterprises, in particular, include large enterprises, i.e. enterprises whose indicators as of the date of preparation of the annual financial statements for the year preceding the reporting year meet at least two of the following criteria: the book value of their assets is more than EUR 20 million; net income from the sale of products (goods, works, services) is more than EUR 40 million; the average number of employees is more than 250 people (Article 2 of the Law).

Accounting, as a service function of enterprise management, provides information to support management decisions. IFRS are a generally recognised methodological basis for producing reliable information in the current environment. Their implementation contributes to the formation of high-quality financial statements that provide important information to stakeholders – owners, potential investors, banks, and company personnel, and characterise resilience, fiscal risks, profitability, investment attractiveness, competitiveness, and economic potential. In this context, it should be noted that in 2022, the International Sustainability Standards Board presented draft standards to

the professional community: IFRS S1 "General Requirements for Disclosure Sustainability-related Financial Information"; IFRS S2 "Climate-Related Disclosures". In June 2023, after preliminary discussion, these standards were adopted by the Board. The application of these standards is part of the development of the infrastructure for companies' sustainability reporting.

The importance of improving the accounting infrastructure of enterprises based on IFRS, including IFRS S1 and IFRS S2, is greatly enhanced by two factors:

- national economic security (in Ukraine, this means restoring economic potential and maintaining economic resilience) associated with the sustainable growth of the real sector of the economy. The assessment of the state of economic development and the effectiveness of reforms depends on the degree of objectivity and transparency of the reporting data of economic agents;
- the role of SOEs in the national economy, which is determined by the fact that their activities are not only aimed at making a profit, but mainly serve to strengthen the national security of the country (defence industry, critical infrastructure, transport, communications, etc.), or are aimed at providing those socially necessary services, works, or products that are not economically interesting or possible to be performed or produced by private sector entities.
- In the context of the latter, it should be noted that SOEs are becoming an increasingly large part of the global corporate landscape, a trend that OECD experts believe is likely to continue, especially given the uncertainty. The importance of SOEs in the context of sustainable development is significant because of the scale of their operations, their involvement in high-performance sectors of the economy, and because SOEs allow the state to set the "tone at the top" in the business sector [33].

Thus, according to the OECD, the share of SOEs in the global economy has increased significantly in recent decades. In particular, the TOP 500 largest global companies (by revenue) in 2000 included 34 SOEs, while in 2023 – 126 [1]. Therefore, it is important, given the growing importance of SOEs in the global and national economies, to ensure proper management of these entities since, according to the IMF, SOEs represent a potentially significant source of fiscal risks, as they are often inefficient from an economic perspective and require financial support [35].

For SOEs, the issue of resilience is defined more broadly than in the private sector. Private investors may define sustainability as the risk-weighted return on their asset portfolios. In turn, the ultimate beneficiary of SOEs is the population as a whole. In this sense, SOEs supervision should ensure that financial and non-financial dispositions of the state's share in these enterprises serve not only the long-term maximisation of profits but also the fulfilment of strategic objectives of the state policy (including security issues: national, military, economic, social) [33].

SOEs include enterprises with a state monopoly and receiving monopoly profits, which are an important source of the state budget. Such SOEs have the exclusive right to be engaged in certain economic activities (e.g., manufacturing/printing money, manufacturing and export of military weapons and ammunition, amber mining, protection of specific particularly important state property, mining of rare metals, circulation of permitted narcotic drugs, psychotropic substances and precursors) or to produce and sell certain types of consumer goods and are covered.

In 2018, the Government of Ukraine approved the Basic Principles for the Implementation of the Ownership Policy for Public Sector Entities, which, in particular, establish the General Principles for the Management of Public Sector Entities. This document is the basis not only for the organisation of the management process by the state and the heads of these enterprises but can also serve to determine the information needs of management entities and, accordingly, the requirements for financial reporting of SOEs. Its analysis has led to the conclusion that the accounting and financial reporting system of SOEs should be built with due regard for the following factors [36]:

- parity in the regulation of SOEs and private companies, except for activities related to the achievement of non-commercial goals;
- availability of commercial and non-commercial (social) goals of the SOE's activities, determined by the state through authorised management bodies;
- separation of the state's functions as owner and regulator.

The first factor of the above determines the application of the same commercial rules and competitive conditions for them, which is what the implementation of IFRS in SOEs provides for. The second requires grouping of accounting

and reporting information so that activities related to achieving commercial and non-commercial goals are separately reflected in the management reports of the entity, which will ensure transparency and reduce corruption risks in the management of SOEs and their social responsibility. The third principle stipulates that the state exercises management and control without interfering with the business entity's operations. At the same time, aspects of non-commercial activities should be regulated in the legal framework, including accounting and financial reporting.

It should be noted that financial statements prepared in accordance with IFRS are general purpose financial statements and, accordingly, provide general financial information about the reporting entity. In other words, its usefulness is aimed at meeting the information needs of, first and foremost, actual and potential investors and other external users, i.e. those who do not have access to the company's accounting information. Currently, the challenge in the area of application of IFRS by SOEs is the need to implement the standards for financial disclosures on sustainability aspects, in particular IFRS S1 and IFRS S2, approved by the International Accounting Standards Board (IASB) in July 2023.

The Conceptual Framework for Financial Reporting [37], revised and endorsed by the IASB in 2018, provides certain caveats regarding using such financial statements. In particular, it is noted that an entity's management (financial management and the governing board) can rely on something other than general-purpose financial statements, as the necessary financial information to support decisions can be obtained from internal sources. Regarding regulators, it is emphasised that general-purpose financial statements are not directly aimed at their information needs, although they may be helpful to them. Therefore, general purpose financial statements do not fully meet the needs of users who determine the strategic directions of companies, make current management decisions or supervise the activities of enterprises.

Thus, according to the interpretation of the Conceptual Framework on the scope of application of general purpose reporting prepared in accordance with IFRS, despite its usefulness, it has certain limitations in substantiating management decisions for SOEs, and current accounting aimed at obtaining such reporting as a service function in accordance with the modern management concept does not fully fulfil its tasks.

These circumstances have led to several obstacles to the implementation of IFRS by SOEs due to imperfections in the current legislation. A comparative analysis of IFRS and the Ukrainian legislation under which the standards are applied has revealed such discrepancies. Here are examples of some transactions for which there are contradictory approaches in IFRS and regulations. These include:

- calculation of the provision for doubtful debts of current receivables;
- write-off of state-owned property, which includes construction in progress, tangible assets that are recognised as fixed assets (property, plant and equipment) and other non-current tangible assets in accordance with the law;
- formation of expenses that are included in the financial plan of the company and reflected in the accounting of operating activities in accordance with IFRS (capital investments, allocations to the provision for doubtful debts, etc.).

It should be noted that in a number of cases, the discrepancy between IFRS requirements and the commercial legislation governing the activities of SOEs in Ukraine requires mandatory regulation, as it is caused by outdated terminology and approaches of the latter. However, most of the reasons for the differences are related to the specifics of the public sector economy and the nature of SOEs' activities.

At the same time, the IFRS accounting methodology has a significant impact on some financial mechanisms enshrined in law [36, p. 84]. This impact can be both positive and negative. There are cases when the application of the accounting methodology negates the purpose of adopting a particular law or the effect of a particular provision of the law, and creates conditions for manipulating the law in its application.

For example, the application of the IFRS cost accounting methodology in regulating prices and tariffs for certain groups of goods and services produced by SOEs allows for an arbitrary determination of the cost structure and no limitations on their amount.

The issues of cost composition and measurement are extremely relevant in the context of financial management. IFRS are focused on this. Their application in this aspect is to optimise costs and financial results. At the same time, the regulation of prices and tariffs for public services should take into account social factors that influence the composition and amount of costs in the opposite direction.

The amount of the company's expenses is regulated in accordance with IFRS through:

- determining the cost criterion for classifying assets as non-current;
- selection of the method of depreciation of non-current assets;
- determining the methodology for the valuation of inventories and intangible assets upon recognition;
- selection of the inventory valuation method;
- determining the procedure for creating a provision for doubtful debts;
- selecting a method for writing off low-value and wear-and-tear items, etc.

Companies can arbitrarily determine their composition and value by manipulating the abovementioned approaches to determining expenses. This may result in reallocating expenses between reporting periods and changes in the amount of financial results.

Therefore, despite all its positive aspects, the introduction of IFRS in the accounting of SOEs and their application in the financial mechanisms of state regulation is accompanied by a number of negative risks, namely: distortion of financial results, aggressive tax planning, negative socio-economic consequences, etc.

In the context of the above arguments, in order to determine the financial result of a SOE, it is necessary to establish rules that would regulate the composition and amount of expenses. It is important to take into account the fact that while under IFRS, expenses are a decrease in assets or an increase in liabilities that results in a decrease in equity, except as a result of the distribution of equity claims to holders, for a public sector entity this definition should be clarified given the mission, functions and tasks of the SOE in the national economy and society.

At the same time, there is a problem of preventing aggressive tax planning in the context of approximating domestic tax legislation to the system of international legislation and initiatives in this area (OECD BEPS Action Plan, transfer pricing, control over controlled transactions, etc.).

In addition to the above, other fundamental issues need to be addressed for SOEs to successfully apply IFRS. For example, the following issues have not been fully clarified for SOEs: interpretation of economic benefits in the context of asset usefulness; economic nature of risks for critical infrastructure and defence industry enterprises in the context of creating provisions² as a separate accounting item; economic principles of asset revaluation, the essence of fair and current value of assets in the absence of a market for such assets within the country and abroad, etc. [36, p. 84].

The preceding reveals the problems of practical application of IFRS in the accounting of SOEs, which, on the one hand, create obstacles to the introduction of IFRS and, on the other hand, contribute to the emergence of fiscal risks from their introduction. At the same time, fiscal risks are caused by the asymmetry of financial reporting information, i.e., insufficient information from the point of view of management needs or its distortion.

However, the study has one more critical aspect regarding information support for SOE management. It is related to the assessment of the current financial planning system since the manager proves the tasks and performance indicators to be achieved by the SOE through the financial plan.

Let us consider the financial planning of SOEs in Ukraine, regulated by the Commercial Code of Ukraine (CCU) [38]. According to Article 75 "Specific aspects of economic activity of state-owned commercial enterprises", of the Commercial Code, SOEs are obliged to accept and execute state orders, take them into account when forming the production programme, and draw up and execute an annual and quarterly financial plan for each subsequent year, according to which enterprises receive income and make expenditures, determine the amount and direction of funds to perform their functions during the year in accordance with their constituent documents.

Financial planning is directly regulated by the Procedure for Preparation, Approval and Control of the Financial Plan of a Public Sector Entity, approved by Order of the Ministry of Economic Development and Trade of Ukraine No. 205 dated 02.03.2015 [39]. This document provides the form of the financial plan, which contains core financial indicators, calculation of the financial result, taxes and payments to the budget, cash flow, capital investments,

² Note (in accordance with IAS 37 "Provisions, Contingent Liabilities and Contingent Assets"): a provision is a liability of uncertain duration or amount. https://mof.gov.ua/storage/files/IAS-37_ukr_2016.pdf.

coefficient analysis, and other information. The procedure requires the SOE to provide an explanatory note comparing the planned year's results with those of the current and previous years along with the draft financial plan.

The financial plan/report on the implementation of the company's financial plan (Annexes 1 and 3 to the Procedure) is prepared on the methodological basis determined by the NAS, IFRS and the relevant accounting policies, according to which the company prepares its financial statements. Financial information that is not a part of the financial statements is formed on the methodological basis applied by the company in accordance with the legislation, tax and statistical reporting.

An important positive aspect of the regulation of planning and reporting on the implementation of the SOE plan is that the legislation provides for an approach that forms planning and reporting information based on the methodology of national standards and IFRS, which ensures the comparability of the goals set and the tasks achieved.

In this context, it should be noted that the system of technical and economic indicators, which was created for planning the activities of enterprises in the Soviet period, has its positive aspects related to the creation of a comprehensive database on the characteristics of production and economic activities in the planned period. However, the analysis of the actual achievement of these indicators does not answer the questions of what risks the enterprise faces, the level of sustainability of the enterprise's development, how likely are negative trends in the dynamics of its financial condition, etc. These indicators, typical of the planned economy, didn't meet the objectives of assessing business entities' development prospects and sustainability, thereby limiting the range of decision-making.

The use of IFRS in the planning and accounting of SOEs allows for the obtaining of a certain amount of information, which makes it possible to use modern tools of economic analysis, which helps to strengthen the reasonableness of management decisions. For example, the financial plan indicators of a SOE include EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortisation), which reflects the financial result of the enterprise, offsetting the impact of the capital structure effect (i.e. interest paid on borrowed financial resources), financial rates and depreciation policy. The advantages of EBITDA are that it allows the analysis of the company's operating activities, return on investment and compares the performance of companies in the same industry with different capital structures.

When assessing the Methodology of planning SOEs' activities and its regulation, it is also necessary to take into account that currently, when preparing a financial plan, SOEs must comply with the expenditure restrictions set out in the Resolution of the Cabinet of Ministers of Ukraine of 29 November 2006 No. 1673 "On the state of financial and budgetary discipline, measures to strengthen the fight against corruption and control over the use of state property and financial resources" (Resolution 1673) [40].

In determining the maximum level of expenses, the provisions of paragraph 13 of the resolution should be followed, which states:

"a) the maximum amount of ... expenses is calculated based on the results of the previous reporting year, by:

- payment for consulting services at a level not exceeding 1.5 per cent of net profit;
- insurance (except for expenses for state social insurance, compulsory insurance and insurance by international agreements) at the level of no more than 1.5 per cent of net profit, as well as limiting the maximum insurance tariff;
- representational events and advertising at a level not exceeding 0.5 per cent of net profit;

b) limiting the costs of purchasing and maintaining passenger cars, in particular, taking into account that their use should be carried out only for travel related to the working activities of officials of business entities;

c) the amount of expenses for charitable, sponsorship and other assistance of business entities with a state share in the statutory capital of which exceeds 50 per cent, in the amount of not more than 1 per cent of the net profit (based on the results of the previous reporting year)".

A comparative analysis of the above restrictions on SOEs' expenses and IFRS norms that affect the amount of expenses and are subject to professional judgment showed no overlap between them. This indicates that the legislation allows SOEs to manipulate expenses. The most recent changes to the expenditure restrictions were introduced in the Resolution 1673 in 2015. At the same time, the abovementioned Law was amended in 2017 by

provisions on IFRS application by public interest entities, which include large SOEs. Therefore, it is time to revise the approaches in the above Resolution, develop a SOE cost management concept, and introduce appropriate legislation amendments.

The above indicates that SOEs are a significant source of fiscal risks. According to Article 2 of the Budget Code of Ukraine, *"fiscal risks are factors ... that may lead to a decrease in budget revenues and/or require additional budget expenditures, respectively, and cause an increase in the budget deficit and state (local) debt compared to the planned budget indicators"*. Obviously, the above definition does not specify the factors influencing revenues to the state or local budgets, including those caused by the quality of information support for management decisions embodied in the indicators of the SOE's financial plans or approved on the basis of the SOE's accounting or financial statements.

It should be noted that the study, which substantiates the existence of an impact on fiscal risks of the quality of planning and accounting information, does not prove the need to amend the budget legislation, but it does allow us to conclude that it is necessary to create a concept of improving the planning and accounting system of enterprises as the basis for information support for the management of fiscal risks of SOEs.

It is essential to analyse the risks of economic activity of enterprises in a broader perspective and to answer the question of what accounting information is needed to justify decisions in risk management, in particular, fiscal risks of SOEs.

Applying IFRS S 1 and IFRS S 2 is an element of building the infrastructure for companies' sustainability reporting. It should be noted that IFRS S 1 and IFRS S 2 do not provide for a unified list of indicators, so one of the likely ways to implement them is to use existing frameworks for disclosing information on sustainable development (for example, based on the list of indicators identified in the UNCTAD ISAR document "Guidance on Core Indicators for Reporting on Sustainable Development and SDG Impacts" (revised 2022)³ as a way to implement SOE standards, especially in emergencies), which is consistent with the "benefit-cost" ratio principle, i.e., does not entail additional costs.

An important source of information for assessing and developing ways to counteract the negative effects of fiscal risks is the reporting of SOEs, the quality of which directly affects the reliability of the results of the relevant assessment. According to established long-term practice, such reporting includes general-purpose financial statements prepared in accordance with NAS or IFRS. At the same time, based on the best international practices, in particular those of the IMF and the OECD, in terms of taking into account current challenges of various kinds (natural, man-made) and the impact of emergencies, including military conflicts, in assessing fiscal risks, including those caused by SOEs, it is advisable to further search for relevant sources of information, one of which may be a sustainability report.

Thus, there is a need for further improvement and standardisation of unified methodological approaches to forming and assessing information support for fiscal risk management, both at the national and international levels. For example, in Ukraine, amendments to the provisions of the Methodology for Assessing Fiscal Risks Associated with the Activities of Public Sector Entities [41] have been proposed in the following part:

- expanding the list of fiscal risk factors defined by the Methodology by including the factor of the quality of information support for assessing fiscal risks caused by SOEs [42];
- expanding the Group 4 risks defined by the Methodology to include "other risks that may lead to financial and other losses or liquidity problems of the business entity, which entail the expenditure of centralised funds of the public finance" by environmental risks, social risks and other risks caused by extraordinary events (war) that lead to financial losses of the state budget of Ukraine [43].

In the context of the above, it is advisable to improve international documents further, particularly the UNCTAD document «Tackling the Sustainability Reporting Challenge. A policy Guide» [44], in terms of strengthening data quality management in the area related to the use of sustainability reporting as a source of risk assessment (including fiscal) for private enterprises and general government entities.

Bertinetti and Gardinal [45] examine the benefits of enterprise risk management (ERM) and integrated reporting. They contend that these two methods must merge to establish the "integrated thinking" approach, as both advocate

³ The authors of this document contributed to the development of this paper.

for a new long-termism in managerial decisions. Risk management aims to protect firm value, assuring the business's long-term viability; hence, risk issues should be properly examined in the integrated report, and the company providing the integrated report should require the presence of an ERM. In line with the requirements of the IR framework, Manes-Rossi et al. [22] examine the new phenomenon of integrated reporting (IR) in the context of state-owned enterprises (SOEs) and suggest a longitudinal analysis of the amount of IR disclosure (IRD) supplied by a sample of European SOEs from 2013 to 2017. The study also provides an analysis of the possible explanatory factors that affect the level of IRD. The influence of public ownership on the quality of IRD provided by SOEs is the main topic of the study. The findings show that the level of disclosure increased throughout the course of the study, highlighting the significance of IR as a tool for accountability and transparency in the context of SOEs.

An integrated report examines the organization's unique risks and opportunities, including those pertaining to the organization's impact on the short-, medium-, and long-term availability, quality, and cost of pertinent capitals. Integrated reporting seeks to promote integrated thinking, decision-making, and activities that centre on the generation of value via organizational resilience and necessitates a new type of disclosure in order to present a comprehensive perspective of the business. Empirical research for SOEs confirms that integrated reporting has improved integrated thinking between strategy and the organization's risks and opportunities [46]. In turn, Zennaro et al.'s [47] meta-regression results confirm that integrated reporting quality (IRQ) positively influences firms' market valuation and financial performance while discouraging opportunistic managerial behaviour by improving corporate transparency, mitigating information asymmetry, and increasing accountability. Thus, introducing of IR for SOEs in Ukraine, at least as a quasi-mandatory reporting requirement, can contribute to better risk management and resilience, thanks to expanding and improving information base for decision-making, shaping this base in more systematised manner, helping the enterprise to build integrated risk management system.

Discussion

In the context of uncertainty caused, in particular, by military conflicts, enterprises' (including SOEs') activities are affected by many external (destruction of production facilities, unstable mega- and macroeconomic situation at the global and national levels) and internal (the need to introduce an effective change management system and strengthen adaptability) factors.

One of the significant consequences of the war in Ukraine is the inflationary impact, the assessment of which, as provided in the National Bank of Ukraine's inflation reports, allows for a vision of "the current and future state of the economy, which is the basis for monetary policy decisions" [48]. According to the IMF experts' assessment expressed in the Fourth and preliminary draft of the Fifth Reviews of the Extended Arrangement under the Extended Fund Facility [21], inflation is expected to accelerate moderately by the end of 2024, while the fiscal deficit will remain significant. The risks of a deterioration in the macroeconomic situation in Ukraine are primarily associated with hostilities and a high probability of incurring potential costs. As noted above, the role and importance of establishing effective SOE governance in an uncertain environment is the subject of activities and research by many intergovernmental institutions.

The World Bank's study *Extending SOE governance* [9] confirms the view of the importance and role of SOEs in the state's anti-crisis regulation. In particular, the publication states that the importance of SOEs has almost doubled over the past decade following successive global and regional crises. This is confirmed by the fact that the balance sheet assets of SOEs amount to USD 45 trillion, which is equivalent to 50% of global GDP (as of 2023) [9]. Many governments worldwide involve SOEs in overcoming crises, as the functions and tasks of these entities are mostly of public importance, which in the Ukrainian war realities can serve as a powerful tool to support and restore the economy.

An important aspect of effective management of SOEs is also information support for decision-making at the national level. It is worth noting that this refers to the formation of methodological foundations for aggregating SOE reporting and including it in the consolidated financial statements of the general government sector [4]. An essential step in implementing this task is harmonising national legislation regulating economic activity with international standards. In particular, in March 2024, the Law on Improving Corporate Governance— came into force in Ukraine to meet the requirements of the IMF programme and further implement the relevant EU regulations, as well as OECD standards – in accordance with the requirements of wartime. The introduction of these legislative changes is the first step in reforming the corporate governance of SOEs. And the process of further development of the national regulatory framework is currently underway through the adoption of a number of important bylaws [11].

Turning to the micro level, it should be noted that a decrease in the company's solvency due to disruption of established cooperation systems with counterparties and a decline in profitability requires the development of measures aimed at minimising the consequences of the negative impact of these risks. The measures should be aimed at levelling the supply process, establishing a payment system and concluding additional agreements on refinancing loans and other types of debt, clarifying job descriptions and functional responsibilities of enterprise units; developing a healthcare policy for employees, especially in the context of the spread of infectious diseases; developing a plan for crisis management of the enterprise, including relations with counterparties, designing a plan to cover current liabilities; engaging additional funding (state support, credits, etc.).

These risks result in additional costs associated with the implementation of countermeasures aimed at preparing enterprises:

- *to carry out operating activities* in remote access of employees to workplaces (interruptions in the supply of resources necessary for the production of goods, provision of services, etc.) and threats of relocation of production facilities due to destruction in emergencies, including martial law. Expenditures in this case are spent on finding appropriate resources, developing a plan of organisational measures to carry out core activities, managing supply chains, etc;
- *to the continuity of the company's operating activities* and interaction between the company's divisions. In this case, the company may incur additional costs to eliminate business interruptions.

The above indicates an objective need to create provisions for expenses.

Thus, as an information basis for management, the SOE accounting system should adapt to the new management needs in the regulatory context at both the macro and micro levels. On the one hand, it should provide sufficient information to justify decisions at the state level on possible revision of financial plans and provision of financial support to enterprises in the face of uncertainty, to ensure the development and implementation of appropriate measures within the enterprise.

The difficulties of implementing IFRS at state-owned businesses were the subject of an open lecture given by PwC Academy in Ukraine in 2018. During a conversation, the following important issues were formulated: Are state-owned businesses prepared to use IFRS for reporting? What knowledge and abilities are necessary for IFRS professionals? What factors may ensure that the switch to IFRS is successful? These questions should really become a basis for improvement of information support for SOEs management in the landscape of uncertainty.

Conclusion

Continuous innovative, intelligent, efficient, safe, sustainable, and reliable national development is contingent on our ability to counteract the threats of turbulence. A key part of this is the elimination of systemic vulnerabilities throughout all business cycles. This will enable us to perform activities which are smarter, more adaptive, timely, and dynamic in responding to risks and unexpected problems.

Accounting plays a vital role in risk management as one of the essential components of information support, as a service function, and as a source of data for management decisions. As the authors have studied, SOEs are a potential source of many risks, including fiscal risks, at the macroeconomic level in view of possible losses to the state budget due to the lack of objective information about the financial results of their activities and, thus, shortfalls in payments to the budget. The economic consequences of uncertainty increase the importance of improving information support for management decisions. Asymmetry of data in this context may lead to additional potential expenditures of public funds [49, 50].

The application of IFRS to SOEs should help improve the quality of accounting and financial reporting. At the same time, the national regulatory framework for their economic activity in countries such as Ukraine, on the one hand, does not facilitate their implementation or use of the benefits of their application, and on the other hand, in some business situations or aspects of information preparation (e.g., determining the cost of public services, setting tariffs), IFRS do not take into account the requirements of public sector management. As a result, the accounting and financial reporting system does not fully fulfil the tasks set by SOE management, including in terms of fiscal risks.

This also applies to planning the activities of SOEs. By applying the IFRS methodology in setting targets, regulatory acts often do not take into account the specifics of such enterprises' economies and thus increase the risks associated with their activities.

The reliability of the assessment results of the risks, which result from SOE's business activity, is heavily dependent on the quality of information support, particularly general-purpose financial statements. Current trends in the assessment of various factors' impact on the fiscal stability of the state suggest that economic, social, and environmental performance indicators should all be considered. This underscores the need to expand the information base of the risk management process, including fiscal risks, at the state level. Sustainability reports from SOEs can serve as a valuable source of data. These insights align with the current understanding of information support for SOE management developed by international organisations (OECD, IMF) and highlight the pressing need for further regulation at both national and international levels.

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