Risk-Oriented Approach to Corruption Prevention in Public Procurement: Integrating Monitoring and Preventive Indicators in Ukraine

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Abstract. This article examines the application of a risk-oriented approach to preventing corruption risks in public procurement within the Prozorro electronic system in Ukraine. The purpose of the study is to demonstrate how legal entities can integrate external monitoring indicators and internal preventive indicators into a coherent two-level control framework. The methodological basis includes formal-legal analysis of Ukrainian anti-corruption and procurement legislation and a comparative-legal assessment that contrasts the risk indicator system used by the State Audit Service of Ukraine (SASU) with the preventive mechanisms available to corruption risk assessment working groups established under the Methodology of the National Agency on Corruption Prevention (NACP). The study draws on procurement data from 2024, when more than UAH 841 billion in competitive procedures were conducted, and SASU initiated 10.4 thousand monitoring procedures. The results show that three typical corruption risks identified by internal corruption risk assessment working groups, namely procurement of unnecessary or overpriced goods, overestimation of expected value and procurement of services that are difficult to evaluate, correspond to violations frequently identified through SASU automatic risk indicators. This correlation demonstrates how monitoring data can serve as an empirical foundation for developing preventive indicators and strengthening early detection mechanisms within legal entities. The article's originality lies in proposing that internal corruption risk assessment working groups apply the principles of risk-indicator functioning to identify corruption risks within a legal entity. The practical value of the study lies in legal entities' ability to develop measurable risk criteria, improve early identification of irregularities, and enhance transparency and accountability in public procurement.

Keywords: corruption prevention, National Agency on Corruption Prevention, Prozorro, corruption risk assessment working group, risk indicators.

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INTRODUCTION

The relevance of the issue of combating corruption in the countries of Eastern Europe, including Ukraine, is increasing every year, as corrupt practices remain a systemic threat to the development of statehood, the rule of law, and citizens' trust in public institutions (Organisation for Economic Co-operation and Development, 2015, 2020).

In the field of public procurement, corruption risks are particularly significant, as procurement procedures are among the primary mechanisms for allocating substantial public funds (Zaika, 2018). According to official data, in 2024, the total volume of competitive procurements conducted in Ukraine through the Prozorro system exceeded 841 billion hryvnias (Prozorro, 2024). Despite the implementation of the Prozorro e-procurement system and the development of a national anti-corruption infrastructure, this area remains one of the most vulnerable to corruption and abuse.

The scientific and practical problem highlighted in this article lies in the substantiation and normative institutionalization of a comprehensive preventive model for managing corruption risks in procurement at the level of an individual legal entity – with a clear distinction between monitoring (external control) and preventive (internal) indicators; unification of requirements for the composition and operation of working groups; a methodology for transforming open data into measurable risk criteria; and the development of these criteria by working groups during corruption risk assessments. Solving this problem is expected to enhance transparency and accountability among legal entities in the public procurement sphere.

METHODS

This study employs a combination of formal-legal, comparative-legal, and analytical methods to examine the institutional mechanisms of corruption risk assessment in public procurement and the feasibility of adapting the risk indicators used by the State Audit Service of Ukraine (SASU) to the activities of corruption risk assessment working groups. The formal-legal (dogmatic) method constitutes the core methodological approach. It involves a systematic examination of the provisions of the Law of Ukraine "On Prevention of Corruption" (Law of Ukraine "On Prevention of Corruption", 2014), the Law of Ukraine "On Public Procurement," (Law of Ukraine "On Public Procurement", 2015), the Law "On the Basic Principles of State Financial Control in Ukraine," (Law of Ukraine "On the Basic Principles of State Financial Control in Ukraine", 1993), the NACP Methodology for Corruption Risk Management (National Agency on Corruption Prevention [NACP], 2021), the Methodology for Determining Automatic Risk Indicators (Ministry of Finance of Ukraine, 2024), and relevant subordinate acts. The criteria for selecting these instruments were their normative relevance to corruption risk assessment, their legal force, and their regulatory impact on procurement and monitoring processes. The analysis of these legal acts enabled the interpretation of key concepts, identification of institutional responsibilities, and determination of the procedural framework for detecting and managing corruption risks (Saha & Sen, 2023).

The comparative-legal method was used to contrast two institutional approaches to risk identification: SASU's system of automatic risk indicators applied during procurement monitoring and the preventive practices of corruption risk assessment working groups established under the NACP Methodology. The comparative framework included four analytical dimensions: the legal basis of each mechanism, the data sources used, the procurement stages covered by each approach, and the types of risks identified. This comparison enabled the determination of the extent to which automatic monitoring indicators can be transformed into preventive indicators suitable for internal institutional use. The study also compared the types of violations most frequently detected by SASU in 2024 with the three typical corruption risks identified by working groups, establishing conceptual and empirical correlations between them.

The analytical component of the methodology involves the interpretation of procurement data published in the Prozorro electronic system for 2024, a period during which more than UAH 841 billion in competitive procurements were conducted, and 10.4

thousand monitoring procedures were initiated by SASU (Ukrinform, 2025). This empirical base allowed the study to relate theoretical conclusions to real monitoring outcomes and to identify patterns in the manifestation of procurement-related risks. The temporal scope of the research covers the years 2021–2024, a period marked by the introduction of the NACP's updated Methodology and the modernisation of SASU's risk indicator algorithms (State Audit Service of Ukraine, 2025).

The study acknowledges several methodological limitations. First, the automated system for determining SASU risk indicators uses internal algorithms that are not publicly accessible, limiting the ability to fully replicate the state monitoring mechanism. Second, the analysis relies exclusively on open data from Prozorro, state registers, and published monitoring decisions. Third, the study does not aim to assess the effectiveness of individual indicators but rather focuses on the conceptual possibility of their adaptation for preventive use by institutions. Despite these limitations, the combination of formal-legal, comparative, and analytical methods provides a robust basis for understanding how risk-based monitoring practices can be integrated into internal corruption risk assessment mechanisms. It offers a replicable methodological approach for future research.

RESULTS

Legal Framework for Corruption Risk Assessment

The National Agency on Corruption Prevention (NACP) is a central executive body with a special status that ensures the formation and implementation of the state's anti-corruption policy. One of its key areas of activity is the management of corruption risks and the development of relevant methodologies (Skyba, 2023). In particular, the NACP acts as a coordinator of the activities of authorised persons within legal entities who are responsible for developing anti-corruption programs and conducting corruption risk assessments.

The minimisation of corruption among state and local authorities is possible through the proper observance of anti-corruption legislation and the introduction of preventive measures aimed at fostering employees' understanding of the nature of corruption and related offences, awareness of their negative consequences, and the inevitability of accountability (Artyukhov et al., 2024; Kuzior et al., 2024). An anti-corruption program serves as a fundamental, comprehensive document that defines the institution's anti-corruption policy and governs the management of corruption risks in its activities.

Article 19 of the Law of Ukraine "On Prevention of Corruption" obliges certain public authorities, local self-government bodies, and legal entities under public law to develop and approve anti-corruption programs, which are subject to agreement with the NACP (Law of Ukraine "On Prevention of Corruption", 2014). This legal requirement is directly linked to a broader corruption risk management process, which is regarded as an integral component of the state's anti-corruption policy.

According to Anishchenko (2022), state management of corruption risks represents the organisational and executive activity of the state aimed at identifying and assessing corruption risks, as well as developing and implementing measures to minimise their impact during the exercise of public authority (Anishchenko, 2022).

A. M. Mykhnenko defines corruption risks as conditions that facilitate the emergence, development, implementation, and spread of corrupt practices in the official and professional activities of subjects of corruption offences. These conditions arise from the application of procedures established by procedural law and other regulatory acts, including subordinate legislation, ministerial orders, and internal regulatory documents of legal entities, as well as from improper enforcement or neglect of legal provisions in the absence or ineffectiveness of control over the activities of corruption-prone subjects.

Ukrainian anti-corruption legislation stipulates that authorised anti-corruption officers must not conduct corruption risk assessments independently. In accordance with the Methodology for Corruption Risk Management, approved by the NACP Order No. 830/21 of December 28, 2021 (hereinafter – the Methodology), each institution must establish a Working Group for Corruption Risk Assessment.

As a rule, such a working group includes the authorised anti-corruption officer, representatives of key structural divisions, financial experts, the authorised procurement officer, legal professionals, and, where possible, representatives of civil society or independent experts. The working group serves as the main collegial mechanism for collecting and analysing information on the institution's activities, identifying factors that may contribute to corruption, and developing proposals to eliminate or mitigate them. While the authorised procurement officer coordinates the process, the final results depend on the group's collective work (Serikov, 2019).

According to Section 3 of the Methodology, to identify corruption risks, the working group examines the institutional environment and determines the scope of the risk assessment. The group studies the institution's structure, compiles a detailed list of its functions and assets of significant economic value, and gathers and analyses information on internal and external factors that influence corruption risk exposure.

This analysis involves identifying stakeholders, both internal and external, examining the nature of their relationships (e.g., subordination, control, accountability, coordination, contractual relations), and reviewing normative acts and administrative documents that regulate institutional activities (Sysiuk, 2020). At this stage, potential corruption risks or their sources may already be detected.

Identification of Corruption Risks in Public Procurement

One of the key areas subject to mandatory examination in corruption risk assessment is public procurement, as it is among the most corruption-prone processes within institutional activity (OECD, 2009) (Figure 1).

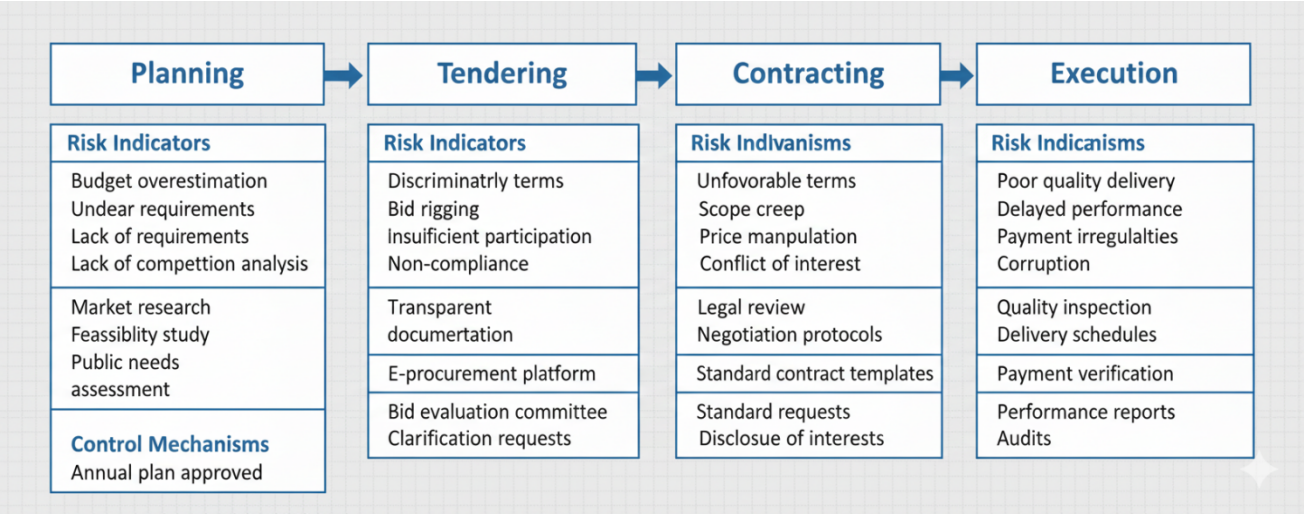

Figure 1. Procurement Cycle with Risk Control Points

The vulnerability of procurement as a major focus of corruption risk assessment is confirmed by academic research. According to Faizov (2020), corruption in public procurement leads to enormous financial losses because it is directly linked to violations of public expenditure (Faizov, 2020). It should be noted that manipulations during procurement procedures do not necessarily amount to corruption, but they often exhibit patterns and actions that likely lead to corrupt outcomes. A corruption risk in public procurement can be understood as "the likelihood of an event involving a corrupt act that negatively affects the achievement of the defined goals and objectives of public procurement".

Pursuant to paragraph 9, Section 3 of the Methodology, when collecting and analyzing information about other environmental factors and identifying functions and processes vulnerable to corruption, the working group examines data contained in open information systems, registers, and databases, as well as information from the media, social networks, and other public sources regarding potential corrupt or related offenses committed by employees of

the institution or similar entities performing comparable functions.

Thus, in assessing corruption risks, the working group analyses the institution's procurement activities, utilising, among other sources, data published in the Prozorro system. The study of Prozorro procurement data provides an initial understanding of possible irregularities. Therefore, it is advisable to combine these data with specialised anti-corruption resources, in particular, analytical tools offered by the SASU and the NACP (Harbinska-Rudenko et al., 2024).

In 2021, the NACP launched an Anti-Corruption Portal for authorised anti-corruption units and officers. One of its key components is the Catalogue of Corruption Risks, a structured registry of potential corruption sources within specific institutions. The catalogue includes a list and detailed descriptions of typical corruption risks. It assists institutions in identifying those most relevant to their operations, thereby facilitating the design of preventive measures for inclusion in their anti-corruption programs.

For a detailed analysis and the practical application of the catalogue of corruption risks and the methods for detecting and preventing corruption within legal entities, it is necessary to examine several examples in greater detail.

Among the corruption risks in the field of public procurement listed in the catalogue of corruption risks, the following three should be highlighted:

1) The possibility of procuring unnecessary or more expensive (compared to other similar goods) goods for personal use.
2) Overstatement of the expected value of the procurement;
3) The possibility of procuring services whose performance is difficult to evaluate (Table 1).

Table 1. Typical Corruption Risks in Public Procurement and Corresponding Preventive Measures

Corruption Risk	Sources of Risk	Manifestations / Typical Situations	Preventive Measures (Normative and Procedural)	Possible Indicators for Internal Working Groups
1. The possibility of procuring unnecessary or more expensive (compared to other similar) goods for personal use	- Discretion in preparing technical specifications; - Absence or weakness of internal control; - Insufficient segregation of duties; - Limited external oversight during martial law.	- Artificial creation of need; - Procurement of luxury or unjustifiably expensive goods; - Collusion between officials and a specific supplier.	- Adoption of an internal procurement policy defining responsibilities and multi-level control; - Mandatory justification of need by the initiator; - Monitoring of the procurement plan and audit of actual use; - Creation of a public register of tangible assets.	- 100% of procurements contain documented justification; - Procurement audits conducted; - Asset registry established and regularly updated; - No repeated procurement of identical items without proper justification.
2.Overstatement of the expected value of the procurement	- Discretion in choosing the method for determining expected value; - Lack of market price analysis;	- Inclusion of inflated expected value in the procurement plan; - Significant deviation from market prices; - Mismatched procurement	- Clear internal rules for determining expected value; - Regular market price monitoring; - Involvement of the financial unit; - Use of open analytical tools	- Market justification available for 100% of procurements; - Absence of deviations beyond defined thresholds;

	- Concentration of functions in a single official; - Possible collusion with suppliers.	volumes relative to actual needs.	(bi.prozorro.org, Clarity Project, acm-ua.org); - Conduct of preliminary market consultations.	- Documented results of market consultations; - Monitoring of changes to expected value.
3. The possibility of procuring services whose performance is difficult to evaluate.	- Discretion in forming institutional needs; - Formal or absent justification of necessity; - Impossibility of objectively verifying service delivery; - Potential affiliation between officials and suppliers	- Procurement of consulting or event services that could be provided internally; - Absence of measurable results; - Transfer of funds to affiliated entities.	- Clear and measurable quality and performance criteria in tender documentation and contracts; - Internal and external audits of contract performance; - Preliminary market consultations; - Involvement of relevant specialists to assess actual need; - Requirement of detailed acceptance certificates.	- Presence of measurable criteria in contracts; - 100% verification of service delivery; - Audit reports available; - Documented market consultations; - No repeated procurement of similar vague services without justification.

Source: Authors' Design (2025)

The first risk: the possibility of procuring unnecessary or more expensive (compared to other items of the same type) goods for their use for private needs concerns situations in which legal entities purchase goods, works, or services for which there is in fact no objective need, or procure excessively expensive or luxury items that do not correspond to the real needs of the legal entity (NACP, 2023).

The essence of the problem is that, even at the procurement planning stage, officials may embed inflated requirements in the tender documentation, select a method for determining the expected value that permits price manipulation, or collude with potential suppliers. As a result, budget funds are spent inefficiently, and the legal entity effectively fails to obtain the benefits from the purchased goods or services (Malyniak, 2024).

The source of the risk lies in the absence of effective internal control mechanisms, insufficient segregation of duties, and the concentration of powers in a narrow circle of persons. This creates opportunities for decision-making in favour of personal or corporate interests rather than the legal entity's genuine needs (Derevianko et al., 2023).

To reduce this risk, the NACP proposes developing an internal procurement policy that will detail the rights and obligations of responsible persons, establish a multi-level control system, and provide for the involvement of the authorised anti-corruption officer at all stages of the procurement process. It is important to ensure proper justification of each procurement by the initiator, ongoing monitoring of procurement plans by the finance and economics unit, and subsequent auditing of results (Banerjee et al., 2022). An effective tool is also the creation of a public register of tangible assets on the institution's balance sheet, which helps avoid duplication and unnecessary purchases.

The second risk: inflating the expected value of a procurement, concerns the artificial overestimation of the procurement object's expected value at the planning stage (NACP, 2023). This refers to situations in which officials of a legal entity, including the authorised procurement officer, enjoy broad discretion in selecting the methodology for calculating the

expected value. If there is prior collusion with potential suppliers, this may lead to intentional price inflation for goods, works, or services to obtain an undue advantage (Jiménez et al., 2022).

Essentially, the risk is that the contracting authority deliberately embeds an inflated planned value into the procurement to create an opportunity for the misappropriation of budget funds. Frequently, the absence of market-value analysis systems allows such actions to be concealed (Basdevant et al., 2022). An additional factor is the concentration of functions in a single official, particularly the authorised procurement officer, without appropriate segregation of powers and internal control.

To mitigate this risk, the NACP also proposes introducing an internal procurement policy that clearly defines the rights and obligations of responsible persons and establishes a system of segregation of functions to prevent the concentration of powers in a single official. It is necessary for the structural unit initiating the procurement to conduct systematic market-price monitoring, with the results reflected in the annual plan. It is advisable to actively use public analytical tools (bi.prozorro.org, clarity-project.info, acm-ua.org), as well as the Model Methodology for Determining the Expected Value of the Procurement Object, approved by Order of the Ministry for Economic Development dated 18.02.2020 No. 275 (Namesnik et al., 2022). An important procedural safeguard is conducting pre-tender market consultations to obtain recommendations from market participants and up-to-date price data.

The third risk: the procurement of services whose performance is difficult to evaluate concerns the procurement of intangible or hard-to-measure services, the results of which are practically impossible to assess objectively (NACP, 2023). This refers to situations in which a legal entity artificially creates a need for certain services (for example, hosting events or providing consultations), even though, in reality, such services are not needed or could be provided using internal resources by engaging its own staff.

Most often, such procurements are carried out for the benefit of related or affiliated persons, enabling the transfer of budget funds without adequate confirmation of the usefulness or quality of the work performed. The absence of clear criteria for verifying the quality of such services creates room for corruption and abuse, since it is very difficult to evaluate the actual result (for example, a "consultation," an "expert opinion," or the "organisation of an event").

In essence, this risk describes procurements of "fictitious" or overly vague services, where it is difficult to prove they were actually provided or beneficial, making such operations a convenient instrument for corrupt abuse (Woźniak, 2023).

To mitigate this risk, it is necessary to establish clear, measurable quality and performance criteria for services in the tender documentation and contracts. It is advisable to enshrine in the internal procurement policy the obligation to conduct systematic internal audits and periodic external audits of contract performance, thereby enabling control over the reality and scope of services provided. Proper justification of the procurement need by the initiator, with the involvement of specialists from the relevant unit, is important. An effective tool is also the conduct of preliminary market consultations, provided for in Part Four of Article 4 of the Law of Ukraine "On Public Procurement," which help determine the real value and appropriateness of such services.

Overall, the three examples of risks cited above indicate that, for the purpose of carrying out corruption risk assessment, which presupposes the identification and prevention of risks in the procurement sphere, the corruption risk assessment working group must analyse the documentation required by legal entities for conducting procurements, including information published in the Prozorro system.

Mechanisms of the State Audit Service Monitoring System

It should be noted that the Law of Ukraine "On Public Procurement" (2015) and the Law of Ukraine "On the Basic Principles of State Financial Control in Ukraine" (1993) provide that control over compliance with procurement legislation is carried out through procurement monitoring, conducted by the central executive body that implements state policy in the field of state financial control and its interregional territorial bodies namely, the State Audit Service

of Ukraine (SASU) and its territorial offices (Denysovets, 2025).

Pursuant to subparagraph 1 of paragraph 2 of Article 8 of the Law of Ukraine "On Public Procurement," (2015) the decision to initiate monitoring of a procurement procedure is made by the head of the state financial control body or his/her deputy (or a person authorized by the head) where, inter alia, data from automatic risk indicators are present.

According to the Methodology for Determining Automatic Risk Indicators, approved by Order of the Ministry of Finance of Ukraine dated 27.09.2024 No. 476, a mechanism is established for identifying automatic risk indicators based on data from the electronic procurement system, unified state registers, databases accessible to SASU, and other open sources of information.

The risk indicators applied by SASU constitute grounds for conducting procurement monitoring. The calculation of such indicators is performed by a risk system using software that operates according to defined algorithms. The algorithm enables the analysis of information from various sources, both within a single procurement procedure and across several procurements conducted by the same contracting authority over a given period. The calculation of risk indicators covers all stages of procurement: conducting the procedure, concluding the contract, introducing amendments to it, and related events recorded in the electronic procurement system that may signal the need for a response (Ferwerda et al., 2017).

To this end, the risk system uses information contained in and published through the Prozorro system, state registers, and other databases open to SASU.

According to Article 10 of the Law of Ukraine "On Public Procurement," (2015) the contracting authority independently and free of charge publishes in the Prozorro system information about the procurement, namely: announcements on conducting competitive and simplified procedures, tender documentation and the draft procurement contract, amendments to the tender documentation, the qualification-selection protocol, the protocol for considering tender proposals, the procurement contract and all its annexes, notices on amendments to the procurement contract and/or on prices of material resources, and the report on the procurement contract.

In fact, the automated system for calculating risk indicators can play a significant role in detecting potential corruption offences, as it enables, based on data published in the Prozorro system, the identification of suspicious signs at all stages of the procurement process (Buha, 2022).

During 2024, SASU conducted 10.4 thousand procurement monitoring procedures, establishing violations in almost 6 thousand procurements with an aggregate value of UAH 89.9 billion. Overall, auditors prevented violations in the public procurement sphere totalling UAH 22.4 billion (Ukrinform, 2025). It should be noted that in 2024, more than 377,000 successful competitive procurements were conducted on Prozorro. Therefore, given the number of procurements published in Prozorro, SASU monitored only 3% of all competitive procurements in 2024 (Figure 2).

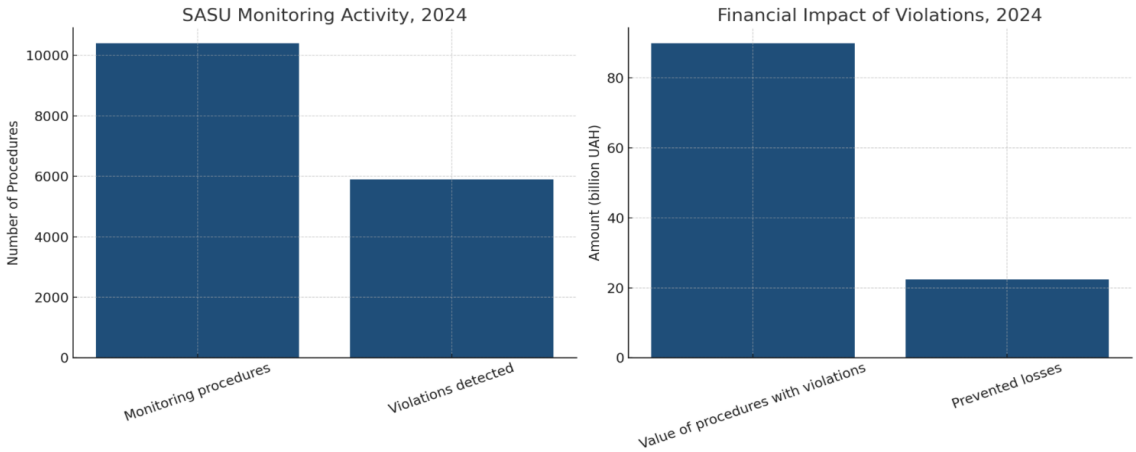

Figure 2. SASU Procurement Monitoring Outcomes in 2024

According to SASU, a mechanism of automatic selection based on risk indicators enables more rapid responses to potential violations and reduces the risk of abuse by tender participants.

Decisions to initiate and the results of SASU monitoring procedures are published in the Prozorro system, whereas the automated system for calculating risk indicators itself is closed and internal, which in no way assists the working groups within legal entities in detecting and preventing corruption risks.

Adaptation of SASU Risk Indicators for Internal Working Groups

Although the automated risk indicator system is closed and inaccessible to institutions, working groups can adopt its underlying logic to strengthen internal control (Gnaldi & Del Sarto, 2024). The correspondence between the three corruption risks identified by working groups and the violations frequently detected by SASU shows that external monitoring highlights the same vulnerabilities visible at the institutional level.

This alignment provides a basis for transforming SASU monitoring patterns into preventive indicators tailored for internal use. Such preventive indicators would not trigger state financial control but would signal the need for internal analysis, documentation, and corrective measures (Table 2).

Table 2. Comparison of SASU Automatic Risk Indicators and Corruption Risks Identified by the Corruption Risk Assessment Working Group

Characteristic	Automatic Risk Indicators of the State Audit Service of Ukraine (SASU)	Corruption Risks Identified by the Corruption Risk Assessment Working Group
Normative basis	Methodology for Determining Automatic Risk Indicators approved by the Order of the Ministry of Finance of Ukraine dated 27 September 2024 No. 476	Methodology for Corruption Risk Management approved by the Order of the National Agency on Corruption Prevention dated 28 December 2021 No. 830/21
Main purpose	To identify indications of possible violations of public procurement legislation for the subsequent initiation of SASU monitoring	To identify corruption risks in the activities of a legal entity for the purpose of preventing them and incorporating mitigation measures into the anti-corruption programme
‘’Type of indicator / risk	Automatically calculated indicators signalling potential violations of procurement procedures	Descriptive corruption risks reflecting the probability of occurrence and potential consequences of corrupt practices
Object of analysis	Information in Prozorro related to procurement procedures, their stages, and associated events in the electronic procurement system	Functions, processes, subprocesses, and internal procedures of the legal entity
Data sources for analysis	Electronic procurement system; unified state registers; databases accessible to SASU; other open sources	Internal documentation; normative legal acts; interviews and surveys; information from open sources; Prozorro data as an additional tool
Primary role in the control system	Monitoring function –automatic identification of procurements with signs of violations to form grounds for state financial control	Preventive function – prevention of corruption through analysis of causes, conditions, and vulnerabilities within the organisation
Risk levels	High, medium, low (as established by the Methodology for Automatic	Critical, high, medium, low (determined by the working group

	Risk Indicators)	based on probability and impact)
Interrelationship	Automatic indicators reveal procurement anomalies that may correspond to internal corruption risks	Monitoring results from SASU may be used by working groups to analyse root causes and develop preventive measures
Institutional actor	State Audit Service of Ukraine	Corruption Risk Assessment Working Group of the legal entity

Source: Authors' Design (2025)

Adopting SASU's risk-based approach can significantly enhance institutional integrity, improve early detection of procurement irregularities, and increase transparency. For this purpose, NACP could develop a unified methodology for preventive indicators to be used by working groups. Incorporating this approach into the NACP Methodology would institutionalise preventive risk detection and create a coherent two-level control system combining external monitoring and internal prevention (Denysovets, 2022).

DISCUSSION

The research results confirm that applying a risk-oriented approach in public procurement through corruption risk assessment working groups can serve as an effective instrument for preventing corruption at the level of legal entities. A comparison with previous scientific studies demonstrates that various approaches to assessing and taking into account corruption risks have developed in Ukraine; however, the issue of applying the risk-based methodology for selecting audit objects developed by the State Audit Service of Ukraine (SASU) within the activities of corruption risk assessment working groups has not yet been examined.

In the work of Anishchenko (2022), the theoretical and methodological foundations of corruption-risk management were defined, and the absence of clear legal definitions of the concepts of "corruption risk" and "public management of corruption risks" in current legislation was emphasised. These conclusions provide a conceptual basis for the development of applied models, particularly the preventive risk indicators proposed in this study. Unlike Anishchenko's general theoretical approach, the model presented in this article focuses on a specific process – public procurement – and demonstrates the possibility of transforming open data from the Prozorro system into a set of formalised criteria for assessing the likelihood of corruption.

In turn, the article by Shyshkova and Shyshkova (2024) emphasises risk-based selection of audit objects to enhance the efficiency of managing settlements with counterparties (Shyshkova & Shyshkova, 2024). The algorithms they proposed for quantitative risk assessment and the construction of risk information maps may be adapted for internal anti-corruption controls in public procurement. However, while their study primarily focuses on the corporate-financial dimension of control, the present article considers the risk-oriented approach through the prism of public-law prevention, which requires a normative delineation of the functions of monitoring bodies (SASU) and preventive units (the National Agency on Corruption Prevention – NACP – and corruption risk assessment working groups).

Thus, the conducted research develops existing scientific approaches by proposing an institutional differentiation of risk indicators into monitoring and preventive types. Such a division allows the formation of a two-tiered control system: the external level is ensured by the State Audit Service through automated risk indicators. In contrast, the internal level is represented by working groups of legal entities that can employ preventive indicators to identify potential violations early.

The results also confirm that combining data from the Prozorro system, the State Audit Service's procurement monitoring decisions, and open state registers enables working groups to develop their own risk-assessment algorithms. The introduction of such a practice is consistent with European principles of open governance, increases the transparency of the procurement process, and strengthens the analytical capacity of the NACP as the coordinator of anti-corruption

policy (European Parliament & Council of the European Union, 2014).

Consequently, the risk-oriented approach to preventing corruption in public procurement assumes a dual character: it serves both as a tool for managing the quality of financial processes and as a mechanism for ensuring integrity in contracting authorities' activities. This highlights the necessity of its further normative consolidation in the Methodology for Corruption Risk Management, approved by the NACP, and its adaptation to the contemporary challenges of public administration under martial-law conditions.

CONCLUSIONS

Firstly, the application of the risk-oriented approach involves transforming open data into a set of formalised criteria (so-called "indicators") that signal the likelihood of corruption. In this context, the experience of the European Union Anti-Corruption Initiative in monitoring the modernisation of school canteens may be useful (European Union Anti-Corruption Initiative, 2025). For this purpose, the information already required by law to be published is sufficient. In particular, Article 10 of the Law of Ukraine "On Public Procurement" obliges contracting authorities to publish tender documentation, procurement announcements, decision protocols, procurement contracts, and amendments thereto in the Prozorro system. Working groups may use this data to replicate the logic of the risk system in the form of internal checklists and verification algorithms.

Secondly, decisions on the initiation and results of monitoring carried out by the State Audit Service of Ukraine (SASU), in accordance with Article 8 of the Law of Ukraine "On Public Procurement", are publicly available. The analysis of these materials enables the identification of typical features of violations. The use of such cases in the activities of working groups on corruption risk assessment enhances the effectiveness of internal controls. It reduces the likelihood of overlooking the most common procurement abuses.

Thirdly, working groups may independently develop their own sets of risk indicators based on data from public sources: open state registers (the Unified State Register of Enterprises and Organisations of Ukraine, information on beneficial owners, court decisions), reports of the Accounting Chamber, and open finance portals. The use of such indicators does not contradict current legislation, as they constitute internal control procedures aimed at minimising corruption risks.

Such preventive indicators may be based on open data from the Prozorro system, state registers, and the monitoring practice and typical violations identified by the SASU. Their activation should not automatically trigger the state financial control procedure. Still, it should obligate the contracting authority to conduct an internal analysis of the causes and document the results in its anti-corruption programs. The introduction of such an innovation is possible through amendments to the Methodology for Corruption Risk Management, which would enable the NACP to institutionalise the risk-oriented approach in public procurement.

This will increase transparency and accountability of contracting authorities, establish working groups on corruption risk assessment with clear benchmarks for risk evaluation and response, and strengthen the analytical capacity of the NACP as a coordinator of anti-corruption policy. In summary, combining monitoring and preventive indicators will create an integrated two-level control system that combines preventive and supervisory mechanisms in public procurement.

In conclusion, it can be stated that minimising corruption risks in public procurement requires the institutionalisation of internal control based on a risk-oriented approach at all stages of the procurement cycle. The NACP should play a key role in this system as the body capable of developing the appropriate methodology, while the corruption risk assessment working group, as a collegial body authorised to identify, analyse, assess, and monitor corruption risks, as well as initiate corrective and preventive measures, should act as the main mechanism of implementation. It is precisely the corruption risk assessment working group that has the real tools to prevent corruption in the activities of a specific legal entity.

Therefore, the prevention of corruption risks in public procurement should be based on a

combination of regulatory clarity and proper organisational support. The implementation of the proposed approaches will ensure proactive identification and minimisation of corruption risks at all stages of procurement, enhance transparency and accountability of contracting authorities, and strengthen the capacity of the NACP and authorised anti-corruption officers at the level of individual legal entities.

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Conflict of Interest

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