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Article

Prioritizing National and Fiscal Risks in Bulgaria: An Expert-Based Assessment of Sovereign Resilience

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Abstract

National risks constitute an important but still underexplored dimension of sustainable development, particularly in countries exposed to institutional fragility, demographic decline, and geopolitical uncertainty. This study identifies and prioritizes the ten most significant risks facing Bulgaria's development over the next decade, with particular attention to their fiscal and macro-financial transmission channels. The analysis is based on a structured expert survey conducted among 82 specialists from academia, business, research institutions, civil society, and public practice. Respondents assessed 32 potential risks according to likelihood and impact using a five-point scale. The empirical framework combines descriptive statistics, Cronbach's alpha, the Kaiser–Meyer–Olkin test, exploratory factor analysis, Spearman's rank correlation, and the Kruskal–Wallis test. A combined priority index was constructed as the product of mean likelihood and mean impact scores. The results show that the most significant risks are concentrated around institutional and systemic vulnerabilities, especially distrust in the rule of law, ineffective healthcare, disinformation, corruption, crisis of statehood, demographic decline, and deterioration in education and infrastructure. The findings indicate that these risks affect Bulgaria's long-term development through five main fiscal and macro-financial channels: higher sovereign risk premia, expenditure pressure, weaker revenue capacity and investment efficiency, labor market deterioration, and broader financial fragility. The study contributes to the literature on sustainability governance, sovereign resilience, and fiscal sustainability by showing that national resilience depends not only on the management of external shocks, but also on the institutional capacity of the state to absorb long-term structural pressures.

Keywords: risk management; national risk assessment; sovereign risk; fiscal sustainability; macro-financial resilience; institutional quality; public finance; Bulgaria

1. Introduction

National risks constitute an important but still insufficiently systematized dimension of sustainable development, especially in countries exposed to institutional fragility, demographic decline, geopolitical uncertainty, and uneven public-sector performance. In such contexts, sustainability is not limited to environmental concerns alone; it also depends on the resilience of public institutions, the quality of governance, fiscal capacity, and the ability of the state to anticipate and manage long-term systemic threats.

From this perspective, risk management has evolved into an important analytical field for identifying, assessing, and prioritizing events and processes that may undermine long-term societal, economic, and institutional stability. While a substantial body of literature examines global, sectoral, financial, environmental, and technological risks, fewer studies investigate how nationally specific

risks interact and translate into fiscal and macro-financial vulnerability in emerging European economies.

Bulgaria provides an especially relevant case in this regard. The country faces overlapping challenges related to institutional effectiveness, demographic deterioration, healthcare performance, corruption, disinformation, infrastructure quality, and geopolitical exposure. These risks do not operate in isolation. Rather, they affect the country's development through interconnected channels that influence public expenditure, revenue capacity, investment dynamics, market confidence, and long-term sovereign resilience.

The aim of this article is to identify and assess the most significant risks facing Bulgaria's development over the next decade and to determine which of them carry the greatest implications for fiscal sustainability, macro-financial stability, and long-term development capacity. The object of the research is the system of national risks relevant to Bulgaria's development, while the subject of the study is the expert-based assessment and prioritization of those risks.

The working hypothesis is that the highest-ranked national risks are not isolated shocks but interrelated structural vulnerabilities that can cumulatively weaken Bulgaria's sustainable development path if not addressed through integrated public policy responses.

The study also addresses the following research question: which of the identified national risks generate the strongest fiscal and macro-financial transmission effects, and how can their prioritization contribute to a more coherent framework for national resilience and sustainability governance?

By combining expert assessment with statistical analysis and a fiscal transmission perspective, the article contributes to the literature on sovereign resilience, institutional quality, and fiscal sustainability in small, open EU economies exposed to compounding structural risks.

2. Materials and Methods

In the science of risk management, a variety of standards, methodologies, and methods are used. Their development is continuous; nevertheless, some have been accepted by a broad community of organizations, public institutions, and entire states, and are applied widely. There are also consulting firms specializing in risk management that develop their own standards and methodologies, which subsequently become established in risk management practice. Let us consider some of the more widely recognized standards, methodologies, and methods employed in the study, analysis, assessment, and mitigation of risk events.

As is well known, a standard is a document, generally accepted by consensus and approved by a recognized body, that provides rules or guidelines for the design, use, or implementation of materials, products, technologies, processes, services, systems, or people. Standards may be developed by national, regional, and international organizations, such as ISO, IEC, CEN, ETSI, and DIN. They may also be developed by consortia of companies in response to a specific market need, or by governmental authorities in accordance with legislation. Not every standard is explicitly designated as such; for example, another frequently used term is technical specification.

Some standards incorporate methodologies, while other methodologies are published in the form of standards. In Bulgarian academic terminology, the concept of *methodic* is used to denote a set of methods and procedures for studying phenomena or processes, that is, a system of theories, principles, and approaches that determines the path of inquiry. Methodology, by contrast, is more theoretical in nature, being concerned with the systematic study of methods themselves, as well as their principles, rules, and postulates. In English, this distinction is generally not made, and a single term, methodology, is commonly used.

A methodology describes how something is to be done, whereas a standard prescribes what is to be done, with compliance often being associated with certification. Despite this conceptual distinction, standards and methodologies are frequently conflated in practice.

In the document of the European Network and Information Security Agency (ENISA), it is called Risk Management Standards. Analysis of Standardization Requirements in Support of Cybersecurity

Policy [1], the organization provides a detailed list of standards addressing risk assessment issues across various domains, and above all in cybersecurity. In 2006, ENISA also published a report reviewing the most widely used risk assessment methodologies [2].

Risk management involves various methods and techniques that support the identification, assessment, and control of potential risks. Some of the most widely used risk management methods are presented below:

- Fault Tree Analysis (FTA).
- SWOT analysis and its modifications, including PEST, PESTEL, PESTELI, STEEP, SLEPT, STEEPLE, STEEPLED, PESTLIED, and LONGPEST.
- Gap analysis.
- HAZOP (Hazard and Operability Study).
- BowTie analysis.
- Monte Carlo simulation.
- Risk matrix.
- Scenario planning.
- Key Risk Indicators (KRIs).
- Root Cause Analysis (RCA), among others.

The methodology to be applied in risk management, as well as the methods to be used, depends on the specific needs of the organization and on the context of the inquiry. Some risks are specific to a single organization; others concern entire sectors, threaten individual states, or even affect the whole world. In our study, we focused on risks specific to Bulgaria, with the aim of identifying, through a survey of specialists from various fields, the ten most significant risks facing the country in the coming years. The objective and purpose of the study determined the risk analysis methods we employed. We considered the construction of a risk matrix to be the most appropriate method for risk assessment, as recommended by the updated 2013 version of COSO’s ICIF [3]. This technique is also recommended for all public sector organizations by the Ministry of Finance of the Republic of Bulgaria [4].

3. Results

During the period May to June 2025, a survey study was conducted among 82 experts from different organizations (Table 1). A total of 32 potential risks were formulated, and the experts were asked to assess them according to their likelihood of occurrence and impact, on a scale from 1 to 5, where 1 indicated the lowest likelihood and weakest impact, and 5 indicated the highest likelihood and strongest impact. They were advised to base their assessments on the use of scientific methods such as PESTEL analysis, gap analysis, expert judgment, risk assessment matrices, statistical methods, and others.

Table 1. Distribution of respondents by type of organization.

Type of organization	Number
Educational institutions	25
Business organizations	22
Research institutions	17
Non-governmental organizations	7
Liberal professions	4
State institutions	2
Employers’ organizations	3
Media	1
Retiree	1

Source: own elaboration.

The list of risks assessed, the mean values of the ratings assigned by the experts, as well as the standard deviation and variance, are presented in Appendix A. Standard deviation is a measure of how dispersed a set of values is. It indicates the typical distance between each data point and the mean value of the data set. A low standard deviation means that the data points are clustered closely around the mean, whereas a high standard deviation indicates that they are more widely dispersed.

Variance also measures the dispersion of data points in a data set relative to their mean, but it overcomes the weakness of standard deviation whereby negative deviations from the mean cancel out positive ones. Here as well, a higher variance indicates that the data points are spread farther from the mean, whereas a lower variance suggests that the data points are clustered more closely around the mean.

Alongside the descriptive analysis, methods were applied to assess the reliability of the analytical instrument, test the suitability of the data for factor analysis, examine the latent structure of the data, analyze the relationships between likelihood and impact, and conduct comparative analysis across respondent types.

To assess the internal consistency of the instrument used, Cronbach's alpha coefficient was calculated. The results indicate very high reliability both for the "Likelihood" scale ($\alpha = 0.948$) and for the "Impact" scale ($\alpha = 0.967$). When all 64 items were considered simultaneously, the overall coefficient value was $\alpha = 0.953$. These results demonstrate a high degree of internal consistency among the individual indicators and confirm that the instrument measures the characteristics studied in a stable and consistent manner.

Before conducting factor analysis, the suitability of the correlation matrices was tested using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity. For the "Likelihood" scale, a value of $KMO = 0.862$ was obtained, while for the "Impact" scale the value was $KMO = 0.915$, indicating very good and excellent suitability of the data for factorization, respectively. The results of Bartlett's test were also statistically significant for both scales ($p < 0.001$), which allows the conclusion that sufficiently strong relationships exist among the analyzed variables and that factor analysis is methodologically justified.

The exploratory factor analysis revealed that the risks do not constitute isolated and unrelated units, but rather cluster into several substantively interpretable latent dimensions.

For the "Likelihood" scale, seven components with eigenvalues greater than 1 were identified. The first factor explains approximately 40.6% of the total variance, while the first four factors together explain about 61.0%. The substantive interpretation makes it possible to distinguish several major thematic blocks:

- first, institutional and social erosion, including risks such as distrust in the rule of law, corruption, a crisis of statehood, problems in healthcare, the pension system, and disinformation.
- second, vulnerability related to sovereignty, energy, and geopolitics, associated with energy security, dependence on critical raw materials, loss of sovereignty, and weakening of defense capacity.
- third, the technological and environmental transition and emerging threats, encompassing climate change, risks associated with artificial intelligence, technological lagging, digitalization, and cyber threats.
- fourth, demographic and systemic pressure, including the demographic crisis and the vulnerability of key public systems.

For the "Impact" scale, five components with eigenvalues greater than 1 were identified. The first factor explains about 53.5% of the variance, while the first four factors explain approximately 69.0%. Here too, several major groups of risks are clearly outlined, associated with socio-institutional collapse, environmental and technological threats, and sovereignty, security, and macroeconomic vulnerability. This indicates that the perception of impact is more structured and concentrated around several principal latent dimensions.

The results obtained from the factor analysis are particularly important because they show that the system of risks has an internal logic and can be conceptualized through several broader analytical directions, rather than being treated merely as a list of separate indicators.

In order to test the degree of association between the likelihood and impact ratings for each risk, Spearman’s rank correlation analysis was applied. The results show that 13 out of the 32 risks display a statistically significant positive relationship between the two dimensions at a significant level of $p < 0.05$. The median correlation value is $\rho = 0.172$, which indicates a weak to moderate overall relationship.

The strongest associations were identified for the risk of “Inflation during currency conversion/speculation” ($\rho = 0.489$), followed by “Disinformation and manipulation of public opinion” ($\rho = 0.310$), “Climate change” ($\rho = 0.305$), “Risks associated with artificial intelligence” ($\rho = 0.287$), and “Unreformed and inefficient healthcare” ($\rho = 0.281$). These results indicate that respondents do not automatically perceive the most likely risks as those with the highest impact. Therefore, likelihood and impact should be regarded as related, yet analytically distinct, dimensions of risk.

In order to provide a more comprehensive assessment of the significance of risks, a combined priority index was constructed, calculated as the product of the mean likelihood rating and the mean impact rating. This approach makes it possible to identify the risks that are perceived simultaneously as relatively likely and as having a high negative impact.

The highest values of the combined index were reported for the following risks: distrust in the rule of law (12.95), unreformed and inefficient healthcare (12.44), disinformation and manipulation of public opinion (12.38), maintenance of a high level of corruption (12.26), crisis of statehood (12.06), worsening demographic conditions (12.00), deterioration of the education system (11.43), climate change (11.37), failure to maintain critical infrastructure (11.05), and difficulties in the pension and social insurance system (11.01). The resulting ranking shows the predominance of institutional, socio-systemic, demographic, informational, and environmental risks. This makes it possible to conclude that, in the respondents’ perception, the highest-priority risks are not so much isolated technological or external shocks but rather risks related to the resilience of state and public systems.

In order to test whether different types of respondents assess risks differently, the non-parametric Kruskal-Wallis test was applied, as it is appropriate for Likert-scale ratings and uneven group distributions. The analysis included groups with sufficient size: representatives of educational institutions, business organizations, research institutions, non-governmental organizations, and the category “other”.

The results do not show statistically significant differences between the groups either in terms of the overall likelihood index ($p = 0.783$), the overall impact index ($p = 0.446$), or the combined risk index ($p = 0.386$). This means that, regardless of the institutional affiliation of the participants, a relatively similar pattern of risk perception can be observed. The absence of significant differences may be interpreted as an indicator of the existence of broad expert and public consensus regarding the principal threats.

The results of the statistical analysis indicate that the instrument used has very high reliability and that the data are fully suitable for more in-depth multivariate statistical procedures. Factor analysis demonstrates that risks cluster into several stable and substantively meaningful latent dimensions. Correlation analysis shows that likelihood and impact are related, but do not fully overlap, which justifies their separate analytical consideration. The combined priority index identifies as most significant the risks associated with institutional instability, public systems, demographic processes, disinformation, and climate-related threats. The ten most significant risks facing Bulgaria in the coming years are presented in Table 2 below.

Table 2. The ten most important risks facing Bulgaria in the coming years.

Rank	Risk	Score
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1	Risk of increasing distrust in the rule of law	12.95
2	Risk arising from the unreformed and inefficient healthcare system	12.44
3	Risk of intensified disinformation and manipulation of public opinion	12.38
4	Risk of maintaining an unacceptably high level of corruption	12.26
5	Risk of a crisis of statehood	12.06
6	Risk of further deterioration of the demographic situation in the country	12.00
7	Risk of deterioration of the education system	11.43
8	Risks associated with climate change	11.37
9	Risk of the negative impact of geopolitical conflicts on Bulgaria	11.09
10	Risk arising from failure to maintain infrastructure in good condition	11.05

Source: own elaboration.

4. Discussion

Several organizations are recognized as leaders in the study and assessment of global risks. Foremost among them are the World Economic Forum (WEF) and the Foundation for global challenges (GCF). The report on global risks the WEF follows the tradition for research on the most significant processes shaping the modern world, like for example acceleration on technological development, geostrategic tension, change on climate, demographics imbalances and interaction between them [5].

The Global Challenges Foundation, established in 2012, is among the largest international platforms for collaboration in the social sciences. Its goal is to offer original proposals for new decision-making centers that can stimulate effective international responses to global catastrophic risks. The foundation publishes annual reports and studies examining various aspects of global challenges. Central among them is the report „Global Catastrophic Risks” [6], which identifies and analyzes risks that could lead to mass loss of life, collapse of key systems and long-term harm for civilization.

The European Union Agency for Cybersecurity (ENISA) advocates for Europe’s resilience to address cyber threats by publishing an anniversary ENISA „Threat Landscape” [7], which provides both strategic and technical information on cybersecurity, mapping prevalent threats, trends and countermeasures.

The international institute for strategic Studies (IISS), founded in 1958 in London, is a leading source of analysis in the fields of global security, military strategy, geopolitics and risks to international stability.

In addition to the big organizations, many scientists publish research on risks. For example, Sadat Momoh Shuaibu research the connection between political and economic risks in Greece, Albania, Bulgaria and Romania [8]. Gao Fei and Guo Peycin I study risks in the Arctic region [9].

Significant volume literature examines especially the fiscal and financial dimensions of national risk. Reinhart and Rogoff [10] show that the institutional Sovereign debt quality and dynamics are deeply intertwined: fiscal instability often stems from the erosion of the institutional framework, rather than from isolated economic shocks. Their cross-country historical analysis shows that sovereign defaults and financial crises are systematically preceded by deteriorating governance indicators, making institutional resilience a prerequisite for macroeconomic stability.

The link between corruption and economic performance, including fiscal, is well documented. Mauro [11] found that, that corruption significantly reduces investments and prevents economic growth, while Tanzi and Davudi [12] shows that the high one the degree of corruption distorts the composition of public expenditure, increases capital expenditure and reduces the productivity of public investment, directly undermining fiscal sustainability. Knack and Keefer [13] further show that institutional quality, measured by the rule of law and the protection of property rights, is among the strongest predictors of investment and growth.

Fiscal sustainability under demographic pressures is receiving increasing scholarly attention. Bloom, Canning, and Fink [14] analyzed how aging population is becoming a growing burden on public pension, health and long-term care services, including that demographic transitions represent a structural fiscal shock requiring long-term policy adjustment. Similarly, the Ageing Report on population on The European commission [15] quantifies the expected fiscal pressures on EU countries, with Bulgaria facing one of the steepest long-term increases in public spending in the Union due to rapid and demographic decline.

The fiscal implications of geopolitical risk and energy dependence are becoming increasingly apparent in European research beyond 2022. Acharya and Steffen [16] analyzed how Macroeconomic and geopolitical shocks propagate through market risks of government bonds and banking systems, raising sovereign premia. Balchilar et al. [17] shows, that the geopolitical risk significantly increases fiscal uncertainty in emerging market economies, reducing the predictability of public revenues and increasing borrowing costs.

The macro-financial consequences of disinformation and political uncertainty are documented from Baker, Bloom and Davis [18], which shows that the increased Economic policy uncertainty significantly dampens investment, consumption and production, ultimately reducing tax revenues and increasing countercyclical fiscal pressures. Quite soon Guriev and Treisman [19] analyzed how Disinformation and media manipulation undermine the effectiveness of economic policies, hinder structural reforms, and increase the fiscal risks associated with policy reversals. This interpretation is consistent with recent evidence from South-Eastern Europe showing that unfinished reforms in the rule of law, protection of property rights, administrative modernization, and fiscal policy reduce business adaptability and resilience under conditions of poly-crisis and digital transformation [20].

From the above, it can be concluded that multitude international organizations, agencies and individuals' scientists identify, evaluate and analyze the risks associated with human activity. Some focus on global risks, while others specialize in specific sectors such as cybersecurity, environmental change, public health, or financial markets. This scope of research provides the basis for our research on risks specific to Bulgaria, without limiting the analysis to a single economic sector.

The results obtained outline a clearly articulated and internally consistent picture of perceived societal risks. Already at the level of instrument reliability, a very high degree of internal consistency was established for the two scales, "likelihood" and "impact," which allows the conclusions drawn to be regarded as statistically robust. This is significant because it shows that the study does not capture random and fragmented evaluations, but rather a relatively stable system of expert and professional perceptions.

The results of the factor analysis are particularly revealing. They demonstrate that the risks under assessment are not perceived by respondents as isolated phenomena, but as interrelated elements of broader problem complexes. Most prominent is the group of institutional and social risks, including distrust in the rule of law, corruption, a crisis of statehood, problems in healthcare, the pension system, and disinformation. This indicates that, in the minds of the participants, the principal source of vulnerability lies not solely in the external environment, but above all in the internal resilience of public institutions and societal systems. Such a finding is especially important because it directs attention to the understanding that risk is not only a function of external shocks, but also of accumulated structural deficits within the social order itself.

A second clearly identifiable line in the results is associated with vulnerability related to sovereignty, energy, and geopolitics. The clustering of risks such as energy security, dependence on critical raw materials, loss of sovereignty, and weakening defense capacity shows that respondents perceive national resilience as a multilayered system in which political autonomy, economic dependence, and security are closely interconnected. This is indicative of an expanded, strategic understanding of risk that goes beyond the traditional distinction between internal and external threats.

Technological and environmental risks also occupy a substantial place. The inclusion within a single common factor of climate change, risks associated with artificial intelligence, technological

lagging, digitalization, and cyber threats indicate that respondents interpret these processes as part of a shared transformational environment. This means that emerging risks are not perceived merely as technological innovations, but as systemic factors capable of exerting profound influence on economic, institutional, and social stability. In this sense, the results point to sensitivity toward the so-called “transition risks,” in which processes of innovation are simultaneously a source of opportunity and of new forms of vulnerability.

The combined prioritization index provides a particularly valuable analytical perspective because it makes it possible to see not simply which risks were rated highly on individual scales, but which are perceived simultaneously as likely and highly consequential. The fact that the highest values are assigned to distrust in the rule of law, ineffective healthcare, disinformation, corruption, and a crisis of statehood points to the strong predominance of risks associated with the quality of the institutional environment. This pattern is also consistent with firm-level survey evidence from Bulgaria during overlapping crisis conditions, where businesses identified labor shortages, low quality of education, bureaucracy, weak e-government, corruption, and an inefficient judiciary as persistent constraints on resilience and economic activity [21]. This is a significant finding because it shows that, according to the respondents, the most substantial threats are not necessarily one-off catastrophic events, but processes of prolonged systemic erosion. It is precisely this type of process that often undermines the adaptive capacity of society and reduces its ability to respond effectively to other crises as well.

The high ranking of the demographic crisis, problems in education, critical infrastructure, and the pension and social security system further reinforces the conclusion that respondents perceive resilience within a long-term horizon. This long-term perspective is especially relevant in the area of pension sustainability, where recent analysis for Central and Eastern Europe emphasizes that adverse demographic trends, inflationary pressures, and political risks are increasing the need for reforms that support the long-run sustainability of both pension systems and public finances [22]. This means that risk is understood not only through immediate threats, but also through processes that gradually weaken human capital, institutional capacity, and social reproduction. In this sense, the results place emphasis on strategic and cumulative risks whose effects are often less visible in the short term, yet substantially deeper from a long-term perspective.

The correlation analysis between likelihood and impact adds an important nuance to the interpretation. The weak to moderate overall relationship established between the two dimensions shows that respondents do not automatically equate the frequency of a given risk with the severity of its consequences. This is an important result both methodologically and substantively. Methodologically, it justifies the separate analysis of the two scales. Substantively, it indicates a mature perception of risk: some events may be assessed as less likely, yet as having potentially severe consequences, while others may appear more likely but with more limited impact. Therefore, the assessment of risk in the study is not one-dimensional but involves differentiation between distinct dimensions of uncertainty.

Particularly noteworthy is the fact that no statistically significant differences were found between the main respondent groups. The absence of significant differences among representatives of educational, research, business, and non-governmental organizations may be interpreted as an indicator of a relatively broad consensus concerning the key risks. This increases the weight of the results, as it shows that they are not merely the product of the perspective of a single social or professional group. At the same time, this finding should be interpreted with caution. On the one hand, it may indeed signify a shared societal sensitivity to the principal threats. On the other hand, the lack of differences may partly also be due to limitations related to the size and structure of the individual subgroups. Consequently, this conclusion is strong, but it should be considered in the context of the specific sample.

The results also have important practical implications. They suggest that risk management policies should not focus solely on individual sectoral threats, but should instead be directed toward strengthening institutional capacity, public trust, and systemic resilience. If the highest-priority risks

are associated with the erosion of the rule of law, corruption, healthcare, disinformation, and demographic pressure, then the effective response should be integrated, cross-sectoral, and long-term. This means that policies for national resilience should be conceived not only as a reaction to external shocks, but also as prevention of internal systemic deficits.

Some limitations of the study should also be acknowledged. First, the analysis is based on the subjective assessments of respondents, which is characteristic of this type of research, but implies dependence on personal experience, professional perspective, and the current social context. Second, although sample size permits the application of a number of statistical methods, it nevertheless imposes certain limitations on the depth of multivariate analysis and the stability of more fine-grained group comparisons. Third, the factor structure should be regarded as exploratory, which means that in future studies it would be useful to test it through confirmatory factor analysis on a new sample.

Despite these limitations, the results clearly show that the study provides a reliable and analytically rich picture of perceived risks. It identifies institutional and systemic resilience as the central core of the risk profile, demonstrates the complexity of the relationship between likelihood and impact, and shows that different categories of respondents share, to a considerable extent, a similar assessment of the key threats. In this way, the study not only describes the current perception of risk but also creates a solid foundation for formulating strategic conclusions regarding the management of societal and national resilience.

The ten highest-ranked risks identified in this study are not merely institutional or societal in character; each carries identifiable fiscal and macro-financial transmission channels that directly threaten Bulgaria's sovereign resilience and long-term fiscal sustainability. Analyzing these channels enables a reframing of the results within the framework of public finance risk management and contributes to the literature on macro-financial vulnerability in emerging EU economies.

Distrust in the rule of law (rank 1, score 12.95) represents the most critical fiscal risk. Weak rule-of-law environments are consistently associated with elevated sovereign risk premia [23], as investors price in political and institutional uncertainty when determining required returns on government debt. Moreover, insufficient judicial enforcement reduces tax collection effectiveness, increases tax evasion, and impairs contract enforcement, which suppresses private investment and narrows the tax base. The European Commission's 2025 Rule of Law Report explicitly links judicial independence to fiscal governance quality in Bulgaria. This interpretation is also consistent with previous research on Bulgaria's fiscal policy in the EU integration process, which shows that fiscal stability and compliance with EU fiscal governance requirements depend not only on nominal budget discipline, but also on the broader quality of institutional coordination and policy implementation [24].

Corruption (rank 4, score 12.26) carries a direct fiscal transmission channel. Tanzi and Davoodi [12] demonstrate empirically that high corruption inflates capital expenditure costs, distorts the composition of public spending, and reduces the efficiency of public investment. For Bulgaria, maintaining one of the highest corruption perception levels in the EU directly translates into fiscal waste, reduced absorptive capacity of EU structural funds, and impaired long-term growth potential [25].

Disinformation (rank 3, score 12.38) impairs fiscal outcomes through the economic policy uncertainty channel documented by Baker, Bloom and Davis [18]. Systemic disinformation distorts the quality of fiscal and structural reform decisions, delays necessary adjustments, and reduces market confidence in policy credibility. Worsening demographic conditions (rank 6, score 12.00) constitute the most structurally significant long-term fiscal risk: Bulgaria is projected to lose 20–25% of its working-age population by 2050, creating a structural fiscal gap through mounting pension and healthcare expenditure against a shrinking labor tax base [15,27].

Critical infrastructure failure (rank 10, score 11.05) represents a deferred fiscal liability: inadequate maintenance today creates acute capital expenditure requirements in the future and reduces economic competitiveness. Taken together, these transmission channels confirm a coherent fiscal risk profile for Bulgaria in which institutional erosion, demographic pressure, and structural

underinvestment are mutually reinforcing. Table 3 below provides a systematic mapping of each top-ranked risk to its primary fiscal transmission channel, time horizon, and policy relevance.

Table 3. Financial and fiscal transmission of the ten highest-ranked national risks in Bulgaria.

Risk	Likelihood	Impact	Score	Main fiscal/financial transmission channel	Time horizon	Policy relevance
Distrust in rule of law	3.69	3.51	12.95	Elevated sovereign risk premium; reduced investment; impaired tax collection efficiency	Short–medium term	Judicial reform; anti-corruption policy; fiscal governance
Unreformed and inefficient healthcare	3.66	3.4	12.44	Rising public health expenditure; labor productivity loss; human capital erosion	Medium term	Healthcare financing reform; public expenditure efficiency
Disinformation and manipulation of public opinion	3.68	3.36	12.38	Policy uncertainty; delayed reforms; reduced market confidence and investment	Short term	Media regulation; institutional communication; policy credibility
Maintaining unacceptably high level of corruption	3.62	3.39	12.26	Fiscal waste; distorted public expenditure; impaired EU fund absorption; reduced FDI	Short–medium term	Anti-corruption enforcement; public procurement reform; financial control
Crisis of statehood	3.58	3.37	12.06	Institutional collapse risk; fiscal governance breakdown; sovereign rating deterioration	Medium term	Constitutional and institutional reform; state capacity building
Worsening demographic conditions	3.72	3.23	12	Structural fiscal gap: pension/healthcare/social expenditure pressure vs. shrinking tax base	Long term	Pension reform; family policy; healthcare sustainability planning
Deterioration of education system	3.63	3.15	11.43	Human capital decline; labour productivity loss; reduced innovation capacity and tax revenue	Long term	Education financing; human capital investment strategy
Climate change risks	3.52	3.23	11.37	Physical and transition risk costs; agricultural and infrastructure losses; fiscal adaptation costs	Medium–long term	Climate fiscal risk assessment; green transition financing
Negative impact of geopolitical conflicts	3.52	3.15	11.09	Energy price shocks; supply chain disruptions; elevated defence expenditure; sovereign spread widening	Short–medium term	Energy diversification; defence budget planning; reserve policy

Failure to maintain critical infrastructure	3.58	3.09	11.05	Deferred capital expenditure liability; productivity loss; infrastructure failure costs	Medium term	Infrastructure investment planning; public-private partnerships; maintenance budgeting
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Source: own elaboration.

5. Conclusions

The present study shows that perceived societal risks are characterized by high internal consistency, clearly expressed structuring, and a pronounced concentration around risks associated with institutional and systemic resilience. The statistical analysis applied confirms the high reliability of the measurement instrument used and provides grounds for treating the results as methodologically sound and analytically robust.

The factor analysis conducted establishes that individual risks are not perceived in isolation, but rather cluster into broader thematic complexes. Most prominent are the risks associated with institutional and social erosion, including distrust in the rule of law, corruption, a crisis of statehood, problems in healthcare, the pension system, and disinformation. Alongside these, risks related to vulnerability in terms of sovereignty, energy, and geopolitics also stand out, as do technological and environmental challenges associated with climate change, artificial intelligence, digitalization, and cyber threats. This shows that respondents perceive risk as a multilayered and systemic phenomenon affecting both the internal resilience of society and its capacity to adapt to external and transformational processes.

Particularly revealing are the results of the combined prioritization index, which identifies as most significant those risks combining high likelihood and high impact. Among these, the leading positions are occupied by distrust in the rule of law, ineffective healthcare, disinformation, corruption, a crisis of statehood, the demographic crisis, and problems in education and critical infrastructure. This makes it possible to conclude that, according to the respondents, the most serious threats arise above all from long-term processes of internal erosion that weaken the adaptive capacity of the state and society.

The correlation analysis between likelihood and impact shows that the two dimensions are related, but do not fully overlap. This result confirms that risk should be treated as a multidimensional category in which the frequency of occurrence and the severity of consequences do not always coincide. The absence of statistically significant differences among the main respondent groups further reinforces the conclusion that there is a relatively broad consensus regarding the leading risks, regardless of the institutional or professional affiliation of the participants.

In summary, the study outlines a risk profile in which the problems of institutional effectiveness, public trust, social resilience, and the capacity of systems to respond to long-term challenges occupy a central place. At the same time, it confirms the growing importance of technological, environmental, and geopolitical factors, which are increasingly intertwined with the internal deficits of social organization. This gives the study both scientific and practical value and makes it a suitable basis for future analyses and for the formulation of policies in the field of risk management and societal resilience.

From a financial risk governance perspective, the study identifies the key fiscal transmission channels through which Bulgaria’s ten most significant national risks impair macro-financial stability and sovereign resilience. The analysis demonstrates that institutional erosion particularly distrust in the rule of law, corruption, and a crisis of statehood represents the primary channel for elevated sovereign risk premia, reduced investment, and impaired fiscal efficiency. Demographic decline, healthcare system failure, and infrastructure deterioration constitute structural fiscal liabilities that

accumulate over time and require integrated, cross-sectoral policy responses. The findings of this study support the formulation of evidence-based public finance risk management policies and contribute to the growing literature on sovereign resilience, institutional quality, and fiscal sustainability in small, open EU economies facing compounding structural challenges.

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Appendix A

Table A1. Risk assessment results – mean values, standard deviation and variance.

Descriptive Statistics				
Risk	N	Mean	Std. Deviation	Variance
Risk of further deterioration of the demographic situation in the country	82	12.00	7,952	63,235
Risk of deterioration of the education system	82	11.43	7,360	54,174
Risk of unreformed and ineffective healthcare system	82	12.44	7,705	59,360
Risk of deepening social polarization of society	82	10.70	6,407	41,054
Risk of increasing the percentage of the population below the poverty line	82	10.24	6,056	36,681
Risk of increasing distrust in the rule of law	82	12.95	8,169	66,738
Risk of maintaining an unacceptably high level of corruption	82	12.26	8,286	68,662
Risk of loss of national identity	82	9.00	6,746	45,506
Risk of increasing disinformation and manipulation of public opinion	82	12.38	7,262	52,732
Risk of lagging behind in the pace of economic development	82	9.66	5,642	31,833
Risk of labor shortage, including talent for high-tech sectors and R&D	82	10.89	6,633	44,000
Risk of maintaining a high budget deficit and falling into a debt crisis	82	10.17	5,940	35,279
Risk of increasing inflation when prices are revalued	82	9.71	7,519	56,531

Risk of deepening regional disparities between regions in the country	82	10.76	6,186	38,261
Risk of a breakthrough in the country's energy security	82	8.16	4,923	24,234
Risk of difficulties in the functioning of the pension and social security systems	82	11.01	6,318	39,913
Risk of a crisis of statehood	82	12.06	7,707	59,391
Risk of deepening internal political tensions and social conflicts	82	10.57	6,146	37,779
Risk of changes in the ethnic composition of the Bulgarian nation	82	9.04	6,310	39,813
Risk of social exclusion and marginalization of part of the population	82	9.56	5,961	35,533
Risk of negative impact of geopolitical conflicts on Bulgaria	82	11.09	6,748	45,536
Risk of loss of state sovereignty, increasing dependence on external factors	82	9.35	6,626	43,910
Risk of weakening the armed forces	82	10.38	6,951	48,312
Risk of deepening dependence on imported fuels and critical raw materials	82	9.41	6,311	39,826
Risk of technological lag of Bulgaria compared to other EU countries	82	10.04	6,476	41,937
Risk of lagging behind in innovation and digitalization of all key systems in the country	82	9.82	6,628	43,929
Risks associated with the introduction of artificial intelligence	82	10.24	6,463	41,767
Risks of security breaches, increase in cyberattacks and cyberthreats	81	10.78	6,620	43,825
Risks related to climate change	82	11.37	7,171	51,420
Risks associated with deterioration of the quality of the natural environment caused by human activity	82	10.18	6,157	37,904
Risk of failure to maintain infrastructure in good condition	82	11.05	6,661	44,368
Risk of allowing gender inequality	82	7.06	5,897	34,774

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