

INTEGRAL APPROACH TO REGIONAL FINANCIAL SECURITY EVALUATION

Oleh Chepurnyi, PhD in Economics, Associate Professor
Anatolii Deriuha
National University «Yuri Kondratyuk Poltava Polytechnic»

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Introduction. Financial security of the region is an integral part of ensuring socio-economic development security, and its understanding as an object of study is formed on the basis of financial system macro and meso levels nature. The need to study and develop the financial security issue has arisen since Ukraine's transition to market economy, and it is relevant today. Scientific studies prove that determining the level of financial security of a region is objectively necessary, due to its being characterized by the work of all economic entities.

Recent publications review. Although financial security is nowadays an important objective for the regions effective development, financial security by itself and methods of its level determining are poorly investigated. Partially theoretical, methodological and practical principles of financial security of the region are considered in the works by O. Baranovskyi, Z. Varnalii, B. Karpinskyi, L. Mykhailov, I. Mykytiuk, V. Muntian, S. Onyshchenko, V. Petrov, T. Pushkar, Da Silva and others.

Problem statement: the aim of the article is to reveal an integrated approach to determining the level of financial security of the region and justify its content.

Description of the research main text. At present, determining the level of financial security of a region is a top priority for its effective further development. However, it should be started with revealing the financial security of the region theoretical foundations and its substantive characteristics; attention should be paid to clarifying the essence of this concept.

Financial security of the region is a condition of financial system and budgetary relations, which ensures financial independence of the region, its self-sufficiency and sustainability in order to maintain stable socio-economic development [1].

Scholars identify the following components of financial security of the region (Fig. 1).

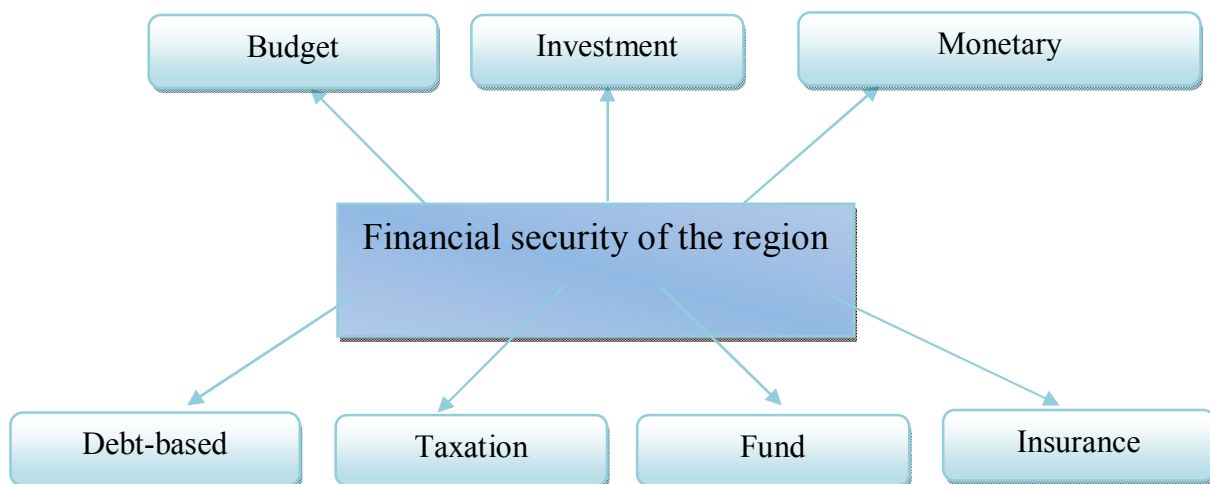


Fig.1. Constituents of financial security of the region

Source: generalized according to [1, p. 261]

The object of financial security of a region is its financial interests and protection of financial potential of the oblast (region). The subjects of financial security of the region include local authorities, fiscal service, financial departments of regional state administrations, state audit service and the head offices of the State Treasury Service of Ukraine.

Peculiarity of providing financial security at the regional level is relatively independent financial subsystems: financial resources of the state budget (transfers), financial resources of oblast level and the finances of individual legal and private entities, which create the territory potential.

Financial security as a component of economic security determines the condition of vitally important regions protection and their business structures, citizens in the financial sphere from the impact of various threats. On this point, Karpinskyi B.A. rightly notes that “balance of the financial system of the region lies in the purposeful creation and implementation of measures of financial regional policy to ensure the correspondence between the real needs and the available opportunities for economic development of the region” [2].

Threat in this case is to be understood as a number of conditions and factors that can lead to occurrence of danger (possibility of negative consequences) for the main economic interests of both individuals and communities, the region and the country as a whole in the forecast period.

Scholars also divide destabilizing factors of financial security of the region into the external and internal ones. The main external factors include:

- 1) political instability in the country,
- 2) high level of internal and external debts,
- 3) permanent deficit of the state budget,
- 4) high level of inflation and shadow economy.

Internal destabilizing factors include economic, social, scientific, technical and information ones. The lack of priorities in their socio-economic development also influences the level of financial security of the regions.

Therefore, financial security of the region should be aimed at creating necessary financial preconditions for enhancing financial potential, increasing financial independence, as well as sustainable growth of socio-economic indicators of its development in the current period and in the future. At the same time, financial security of a region implies its relative financial independence, and also its integration with the national financial security [3].

Under sufficient level of financial security of the region, development of the financial potential of the territory is provided, its ability to withstand destabilizing factors is enhanced, infrastructure is developed and vital interests of the population are satisfied.

Under current terms, Ukraine does not ensure balanced regional development. This leads to low efficiency of using the financial resources available to the regions and emergence of regional disparities in economic development. Therefore, the issue of timely assessment of the level of financial security of the region, which is an important component of economic security at the regional level, is particularly acute.

An integrated (indicator) approach is most common in assessing both economic and financial security (of state and region). According to the integrated approach, financial security of the region is estimated by comparing the actual values of the indices with their indicators and corresponding estimation of the detected deviations [12]. There are numerous publications on the use of integrated approach in assessing the financial security of the region, with each author preferring his own set of indicators. At macroeconomic security level this issue has already been resolved – there are Methodological recommendations for calculating the level of economic security of Ukraine (2013) [4].

Integral index (integral indicator) of financial security of a region is a calculated indicator that is determined with using the financial security indices of a region. Integral index is a quantitative assessment of its complexity, as it covers the most important aspects of financial security and socio-economic development of the region.

The study of the financial security of the region according to the integrated approach is carried out in several stages, which are presented in Figure 2.

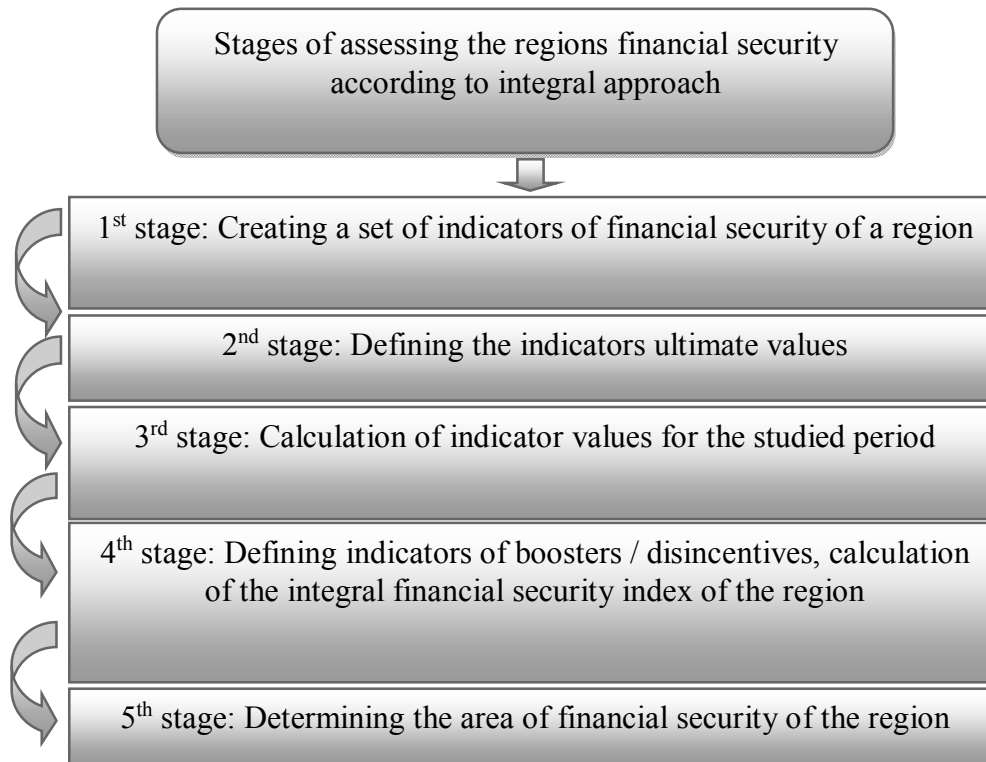


Fig. 2. An algorithm for calculating the financial security of a region by an integrated approach

At the last stage of determining the level of financial security of the region, we perform an integrated assessment of the financial security of the region by the formula:

$$W^{pt} = \sum a_i \times x_i \quad 1)$$

where W^{pt} – integrated assessment of financial security in the p-th region for the t-th period;

a_i – a weighting coefficient that reflects the impact of a particular indicator on an integrated financial security assessment;

x_i – the value of the indicator that characterizes the financial security of the region.

As a result of the financial security assessment, the above method determines its area by the integral index:

- 1) satisfactory state zone (from 0.6 to 1);
- 2) unsatisfactory zone (from 0.4 to 0.6);
- 3) critical state zone (from 0.2 to 0.4);
- 4) absolutely unsatisfactory state zone (from 0 to 0,2).

The selected indicators most accurately characterize and reflect the financial security of the region; directly related to it. Indicators are calculated according to Poltava Region (Oblast) data (Table 1).

Among the indicators that characterize the financial security of the Poltava region, there are both stimulants and stimulators. The vast majority of indicators is stimulants and has a positive effect on the financial security of the region. The calculation of the integral index includes multiplication of indicators by weighting factors. Their algebraic sum is an integral indicator that reflects the level of financial security of the region:

$$W^{2014} = (1,2 \times 0,08) + (1,2 \times 0,04) + (0,04 \times 0,02) + \dots + (1,9 \times 0,02) = 0,6378$$

$$W^{2015} = (1,37 \times 0,08) + (1,38 \times 0,04) + (0,05 \times 0,02) + \dots + (1,6 \times 0,02) = 0,6268$$

$$W^{2016} = (1,21 \times 0,08) + (1,22 \times 0,04) + (0,05 \times 0,02) + \dots + (1,7 \times 0,02) = 0,6191$$

$$W^{2017} = (1,3 \times 0,08) + (1,13 \times 0,04) + (0,05 \times 0,02) + \dots + (1,6 \times 0,02) = 0,6287$$

$$W^{2018} = (1,04 \times 0,08) + (1,02 \times 0,04) + (0,05 \times 0,02) + \dots + (1,4 \times 0,02) = 0,5157$$

Table 1

Analysis of financial security indicators of Poltava Oblast for 2014 – 2018

	Indicator	Limit value	year					Weighting coefficient
			2014	2015	2016	2017	2018	
1	GRP Index	≥1	1,20	1,37	1,21	1,30	1,04	0,08
2	Index GRP per 1 citizen	≥1	1,20	1,38	1,22	1,13	1,02	0,04
3	Share of the region's GDP in the country's GDP,%	≥3,7	4,4	4,8	4,9	5,1	5	0,02
4	Local budget revenues (% of GRP)	≥ 16	9	20	17	42	48	0,14
5	Revenue efficiency	≥ -1 ≤ 1	0,86	0,89	0,89	0,89	0,36	0,07
6	Local government revenue index per capita (excluding intergovernmental transfers)	≥1	0,04	0,03	0,04	0,04	0,05	0,03
7	Index of budget expenditures (including transfers) per capita	≥ 1	0,08	0,26	0,24	0,22	0,16	0,08
8	The ratio of the amount of received transfers to the amount of received revenues of budgets transferred to the state budget	≥ 1	0,28	0,06	0,11	0,3	0,21	0,05
9	Share of tax revenues in total local budget revenues	≥ 40%	49	28	37	35	45	0,06
10	The share of official transfers in total local budget revenues	≤ 50%	52	36	45	35	50	0,09
11	Budget independence Ratio	≥ 0,8	0,32	0,42	0,45	0,46	0,49	0,12
12	Budget Sustainability Ratio	≤ 0,3	0,56	0,54	0,5	0,5	0,5	0,06
13	Share of unprofitable enterprises in the total number of enterprises in the region,%	≤20%	29,7	23,8	23,9	25,4	23,6	0,06
14	Specific gravity of the GVA in the volume of production,%	≥25%	53	52,5	55,2	58,1	51,3	0,01
15	Industrial production index,%	≥1	0,92	0,96	1	0,98	1,01	0,01
16	Agricultural production volume index,%	≥1	0,96	1,07	1,03	0,83	1,24	0,01
17	Share of investment in fixed capital,%	≥20%	12,6	9	13,1	10,5	12,3	0,01
18	Capital Index investment,%	≥ 1	0,83	0,91	1,04	1,6	1,04	0,02
19	Index of foreign direct investment per capita	≥ 1	1,02	0,97	1,01	1,05	0,86	0,02
20	Import export coverage ratio	≥ 1	1,9	1,6	1,7	1,6	1,4	0,02

Source: compiled on the basis [5; 9]

As a result of the evaluation, it was found that during

2014 – 2017, the level of financial security of the Poltava region was in the satisfactory state, but in 2018 its deterioration is due to several indicators such as foreign direct investment index, import export coverage ratio, the region's GDP share in GDP (Fig. 3).

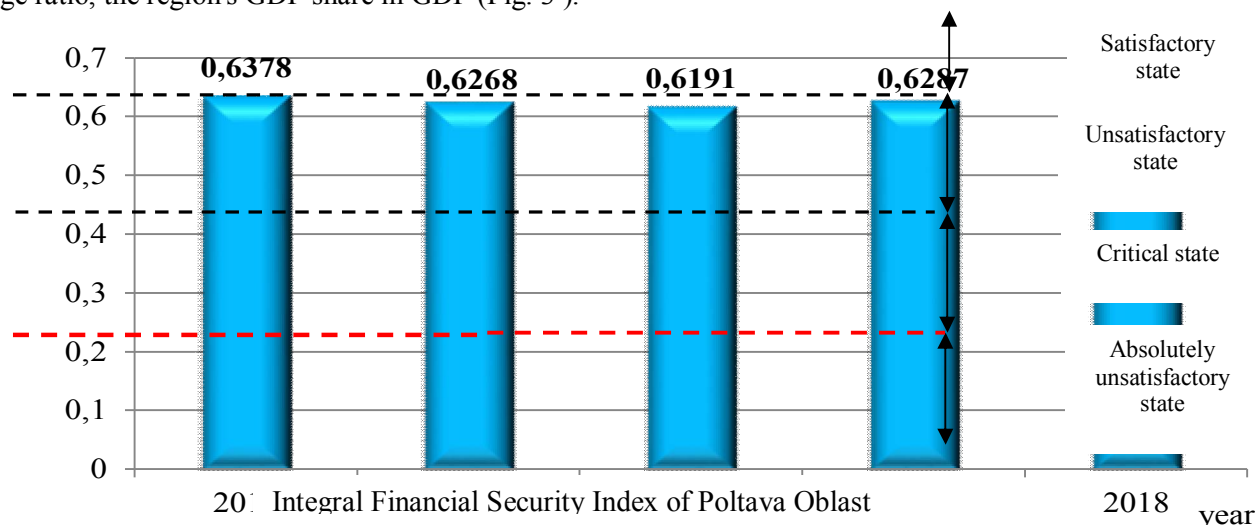


Fig. 3. Dynamics of Integrated Financial Security Index of Poltava Oblast for 2014–2018

Source: calculated by the author

It should also be noted that the decrease in the integral financial security index in 2018 due to the decrease in indicators: GRP index, GRP index per 1 inhabitant and the share of GVA in the volume of manufactured products, which is negative despite their exceeding the regulatory values.

In this case, the following measures should be taken to improve the financial security level of Poltava Oblast (Fig. 4).

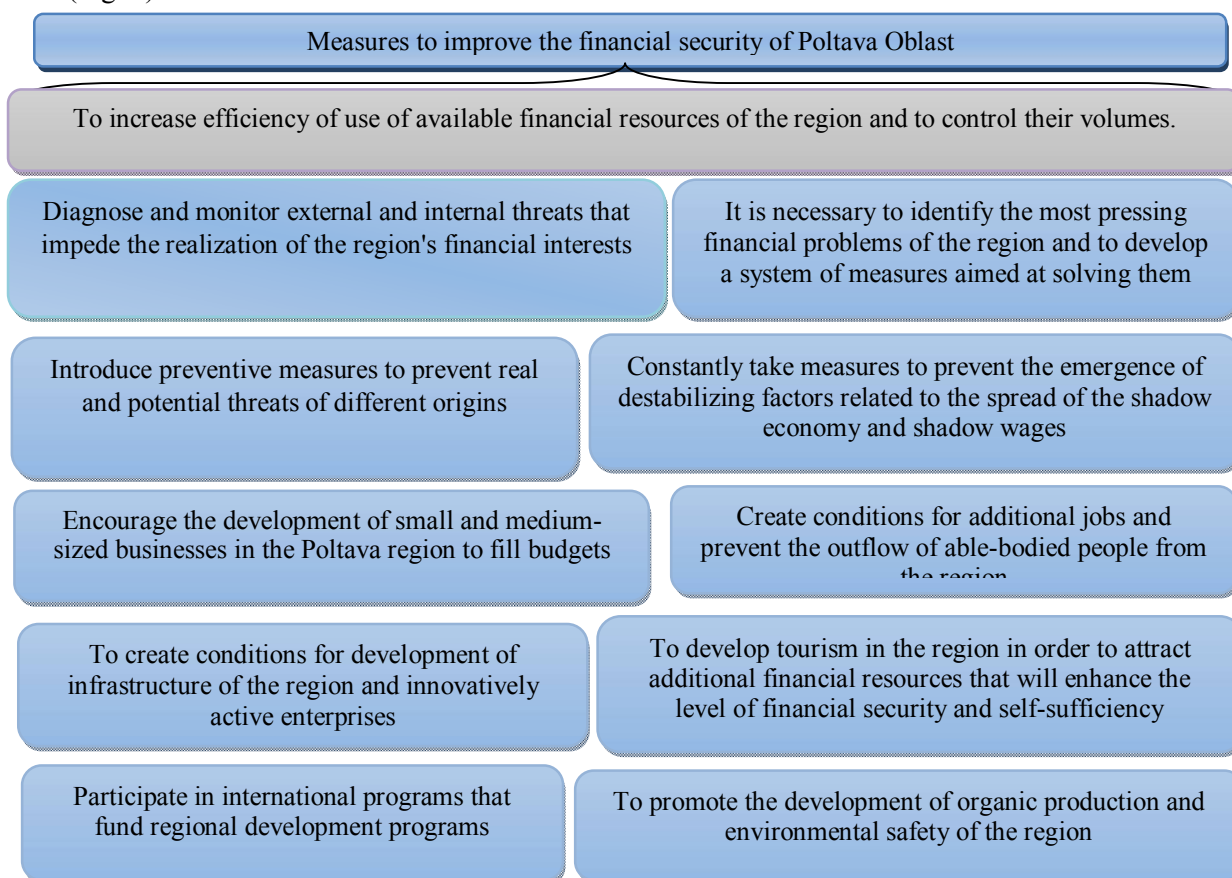


Fig. 4. Measures to improve the financial security of Poltava Oblast

Source: Developed by the author

Therefore, ensuring the financial security of a region should begin with a focus on evaluating and identifying ways to increase its level, developing specific measures and mechanisms for their implementation.

An important aspect of enhancing financial security is the introduction of an organizational and economic mechanism for preventing threats at different stages of their formation [6].

Conclusion. Thus, the study revealed the essence of the financial security in the region, its contents and components. Determining the level of financial security of Poltava region by the integrated approach indicated its negative dynamics from the area of satisfactory condition (2014 – 2017) to the zone of unsatisfactory condition (2018) due to the decrease of 6 indicators.

In general, an integrated approach to determining the level of financial security of a region is quite accurate and appropriate to apply when selecting indicators that most fully characterize the state of financial security of a region, but not timely disclosure of primary indicators limits the timely calculation of the level of financial security of the region.

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УДК 338.351

Чепурний Олег Вікторович, кандидат економічних наук, доцент. **Дерюга Анатолій Володимирович**, магістрант. Національний університет «Полтавська політехніка імені Юрія Кондратюка». **Інтегральний підхід оцінювання рівня фінансової безпеки регіону.** Стаття присвячена визначенню сутності поняття «фінансова безпека регіону»; основних показників, що характеризують стан фінансової безпеки Полтавського регіону в умовах нестабільностей та економічної кризи у країні; визначенню фінансової безпеки Полтавського регіону за допомогою інтегрального підходу. Досить актуальним є питання забезпечення фінансової безпеки регіону, виходячи з того, що на сьогоднішній день українські реалії характеризуються макроекономічними, фінансовими та політичними нестабільностями. Метою є поглиблення теоретичних засад, закріплення методичного підходу та практичних рекомендацій з підвищення

рівня фінансової безпеки Полтавського регіону. Завдання: дослідити сутність фінансової безпеки регіону та надати їй змістовну характеристику; охарактеризувати інтегральний підхід для визначення рівня фінансової безпеки регіону; проаналізувати стан фінансової безпеки Полтавського регіону за інтегральним підходом. У процесі дослідження використані такі методи: теоретичного узагальнення, порівняльного аналізу, економіко-статистичний та графічний.

Ключові слова: фінансова безпека Полтавського регіону, аналіз індикаторів, інтегральний підхід, економічна нестабільність.

UDC 338.351

Cherpurnyi Oleh, Ph.D. in Economics, Associate Professor. **Deriuha Anatolii**, Master-student. National University «Yuri Kondratyuk Poltava Polytechnic». **An integrated approach to assessing the level of financial security of the region.** The article is devoted to defining the concept of "financial security of the region"; the main indicators characterizing the financial security of Poltava region in the conditions of instability and economic crisis in the country; determination of financial security of Poltava region with integrated approach. The issue of ensuring the financial security of the region is quite urgent, due to the fact that current Ukrainian realities are characterized by macroeconomic, financial and political instability. The purpose of the work is to deep the theoretical foundations, consolidate the methodological approach and practical recommendations for improving the level of financial security of Poltava region. Objective: to research the essence of financial security of the region and to give its meaningful description; to characterize the integrated approach for determination of the level of financial security of the region; to analyze the financial security of Poltava region with an integrated approach. In the course of the research the following methods were used: theoretical generalization, comparative analysis, economic-statistical and graphical.

Keywords: financial security of Poltava region, indicator analysis, integrated approach, economic instability.

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Чепурной Олег Викторович, кандидат экономических наук, доцент. **Дерюга Анатолий Владимирович**, магистрант. Национальный университет «Полтавская политехника имени Юрия Кондратюка». **Интегральный подход оценки уровня финансовой безопасности региона.** Статья посвящена определению сущности понятия «финансовая безопасность региона»; основных показателей, характеризующих состояние финансовой безопасности Полтавского региона в условиях нестабильностей и экономического кризиса в стране; определению финансовой безопасности Полтавского региона с помощью интегрального подхода. Целью статьи является углубление теоретических основ, закрепление методического подхода и практических рекомендаций по повышению уровня финансовой безопасности Полтавского региона. Задачи: исследовать сущность финансовой безопасности региона и дать ее содержательную характеристику; охарактеризовать интегральный подход для определения уровня финансовой безопасности региона; проанализировать состояние финансовой безопасности Полтавского региона за интегральным подходом. В процессе исследования использованы следующие методы: теоретического обобщения, сравнительного анализа, экономико-статистический и графический.

Ключевые слова: финансовая безопасность Полтавского региона, анализ индикаторов, интегральный подход, экономическая нестабильность.