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The problem of risk protection in agriculture of Ukraine

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Abstract. An important specific feature of risk insurance in the agricultural business is the possibility of systemic risks, which are characterized by large amounts of loss-making for agricultural enterprises. In this case, the amount of insurance premiums received by insurers may significantly exceed the amount of their insurance payments. In our opinion, the insurance products offered by Ukrainian insurers in the field of agricultural insurance do not fully meet the needs of consumers. The main problems of Ukrainian insurance organizations providing services in the field of agricultural insurance are the low level of solvency of agricultural enterprises, as well as inflationary processes that make long-term agricultural insurance contracts concluded in the national currency of little demand. The evolutionary development of the Ukrainian insurance market for agricultural risk insurance, in our opinion, should correlate with the development of reinsurance of these risks. This will make it possible to balance the insurance portfolios of insurance companies and provide insurers with additional opportunities for their investment activities. The creation of a specialized national reinsurance company for reinsurance of agricultural risks, in our opinion, will improve the insurance coverage of Ukrainian agricultural enterprises.

1. Introduction

Agricultural production is a very risky type of business activity, which correlates with the seasonal nature of agricultural production, its dependence on climatic and weather conditions, and a long production cycle.

According to [1], the agricultural sector of the economy has pronounced specific features that reduce its attractiveness for potential investors (figure 1):



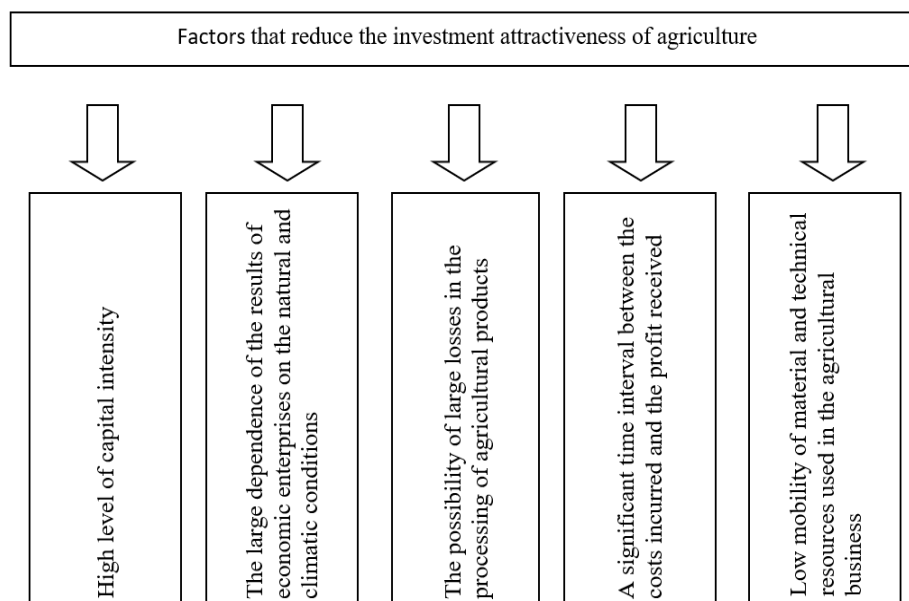


Figure 1. Factors that reduce the investment attractiveness of agriculture.

According to [2], low investment attractiveness, as well as high dependence on attracting credit resources, along with the specifics of agricultural production, make agricultural business a highly risky activity.

According to [3], the processes of sales and production of agricultural products correlate with the emergence of situations that can cause damage to the agricultural producer, and in certain circumstances even lead to the bankruptcy of an agricultural enterprise.

This in turn, in our opinion, determines the need for agricultural business in insurance protection.

The authors [4] distinguish the following types of risks that occur in the agricultural business that need insurance (figure 2):

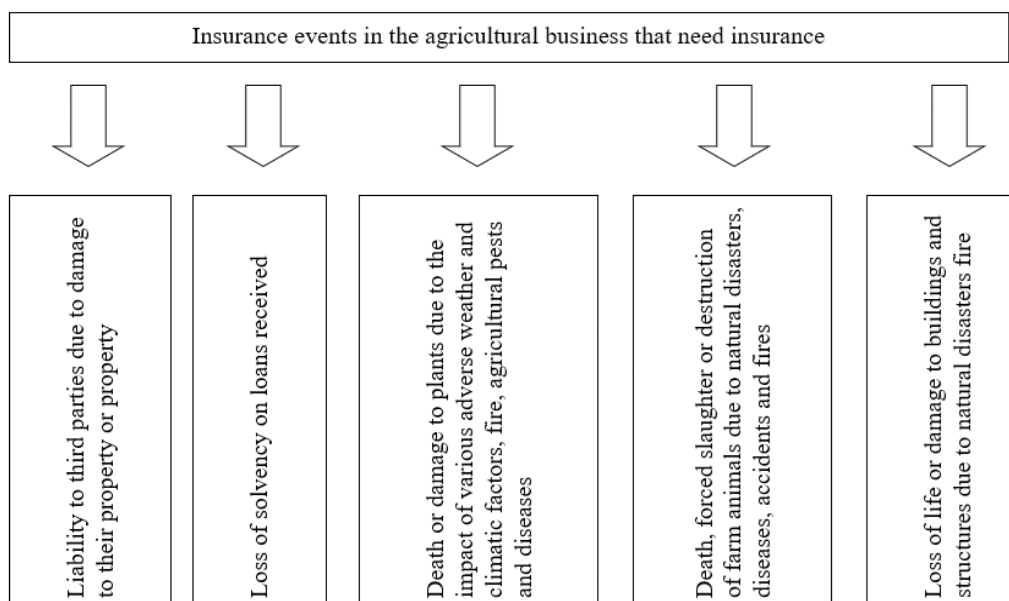


Figure 2. Insurance events in the agricultural business that need insurance.

According to [5], the level of effectiveness of insurance protection of agricultural enterprises depends on the overall development of the state economy, the financial competence of potential policyholders, the state of the agricultural sector of the economy, and a number of other factors.

As an alternative insurance method to combat risks in the agricultural business, the authors [6] propose to carry out the selection of agricultural crops that will be more resistant to adverse natural and climatic conditions, as well as to use innovative agrotechnical technologies that can increase the yield of agricultural crops and their resistance to pests and weeds.

According to [7], the effectiveness and efficiency of the entire agricultural production process largely depends on the functioning of the management system of an agricultural enterprise.

According to [8], agricultural producers need to predict, account for, and assess business risks. As a result of ignoring business risks or making a decision in conditions of lack of necessary information about the state of the agricultural enterprise, the manager may make a wrong management decision, which will have a negative impact on the company. In this regard, an effective assessment of business risks can provide invaluable assistance to the management of an agricultural enterprise for effective and high-quality management decision-making.

The assessment of the business risks of an agricultural enterprise, in our opinion, will reduce the likelihood of reducing the financial stability of an agricultural enterprise by making effective and timely management decisions.

According to [9], one of the main reasons for the unsatisfactory distribution of agricultural insurance in the CIS countries is tort risks. High insurance rates, ambiguity in determining the criterion for the existence of an insured event violate the insurance protection mechanism and make it possible for policyholders to receive illegal benefits and cause damage to insurance companies.

According to [10], the current system of agricultural insurance does not have the necessary line of insurance products for potential policyholders. In the CIS countries, this leads to the fact that insurance coverage covers about 10-30% of the acreage, while in economically developed countries this figure reaches up to 95%.

2. Methods

During the implementation of this research, we used an analytical method, which gave us the opportunity to study the problems studied in the article in their development and unity. Taking into account the purpose and purpose of this study, we used the functional-structural method of scientific cognition. As a result, we were able to study a number of problems related to the solution of the problem of risk protection in the agricultural enterprise.

3. Results

Modern insurance companies offer agricultural enterprises various lines of insurance products. Agricultural enterprises are offered to insure both individual risks and several risks at the same time. In the conditions of Ukraine, the most widespread insurance of winter crops against various risks at the same time. A promising type of insurance is also index insurance on the yield index or on the weather index. Index insurance is based on the deviation of weather or temperature values from the average value in a given area during the growing season of agricultural crops.

Among the insurance of individual risks in Ukraine, the most popular are storm, hail and flood insurance.

As support for the insurance of agricultural enterprises, the authors [11] suggest the implementation of state support in the form of compensation for the payment of 30-50% of insurance premiums at the expense of the state budget. However, in practice, this form of state support was not effective enough. Due to the chronic budget deficit, insurance companies received compensation with a delay in time, which negatively affected the desire of insurance companies to insure agricultural risks.

The way out of this situation could be the use of reinsurance of agricultural risks. However, the Ukrainian agricultural risk reinsurance market is characterized by:

1. Low capitalization of reinsurers.
2. The use of reinsurance as part of shadow schemes to understate the tax base of agricultural enterprises
3. The lack of a stable state policy in the field of reinsurance.
4. Instability of the national currency exchange rate, which creates additional costs when calculating Ukrainian insurance companies with foreign reinsurers.
5. The small volume of the Ukrainian insurance market.

In the context of the impact of the financial crisis, in our opinion, reinsurance can play an important role in the functioning of the protective mechanism of insurance organizations and ensuring their solvency and financial stability.

In our opinion, the Ukrainian agricultural risk reinsurance market has prospects for successful growth, but this requires:

1. To oblige by law to increase the authorized capital of companies engaged in reinsurance activities in the field of agricultural reinsurance.
2. State regulation of the functioning of brokerage and agency companies operating in the field of insurance is necessary.
3. Deeper integration of the Ukrainian reinsurance market into the global reinsurance market.
4. Expanding the geography of insurance companies' activities.

At this stage of development of the agricultural risk insurance market in Ukraine, in our opinion, it is necessary to create a specialized national reinsurance company for agricultural risk reinsurance. In our opinion, it should be a joint-stock company, the participants of which would be all the insurance companies of Ukraine that carry out insurance of agricultural risks, as well as the state. The state should have a controlling stake in this company.

Such a measure, in our opinion, will solve the following problems:

1. The share of reinsurance premiums paid by Ukrainian insurers to foreign reinsurers of agricultural risks will decrease.
2. Will allow, to a certain extent, to solve the problem of tax evasion by agricultural enterprises through the use of schemes based on insurance.
3. The participation of the state in the capital of a specialized national reinsurance company for reinsurance of agricultural risks will allow for reinsurance of risks associated with major natural disasters.

For further improvement of the agricultural risk insurance system, in our opinion, it is necessary to:

1. Development of requirements for the reliability of insurance companies operating in the field of agricultural risk insurance.
2. Development of independent institutions for expert assessment of losses and rules for compensation of damage in agricultural insurance.
3. Expansion of the set of insurance products in the field of agricultural insurance.
4. Improving the types and forms of state support in the field of agricultural insurance.

4. Discussion

One of the specific features of agricultural risk insurance is the presence of systemic risks, when the size of losses is of great importance for many subjects of the agricultural market at the same time. In this situation, the amount of insurance payments may significantly exceed the amount of insurance premiums collected by insurance companies.

The insurance products offered by insurers for agricultural risk insurance do not fully meet the needs of consumers.

The main disadvantages are their high cost with low solvency of agricultural enterprises. In addition, inflationary processes make long-term insurance contracts concluded in the national currency of little demand.

Thus, there is a need for the functioning of an agricultural insurance system that would take into account the interests of the state, insurance companies and agricultural enterprises.

5. Conclusions

Agriculture is a high-risk activity. To ensure the protection of the agricultural sector of the economy, insurance can play a great role. At the moment, the successful functioning of the agricultural risk insurance market requires its state support and regulation. In our opinion, the development of the insurance market for agricultural risk protection in Ukraine should take place together with the development of agricultural risk reinsurance. This will make it possible to balance the insurance portfolios of insurance companies and give them additional opportunities for investment activities.

References

- [1] Brylev A and Turchaeva I 2019 *Competitiveness and Agricultural Insurance* DOI: 10.12737/1019955
- [2] Maslova V V and Savkina G M 2021 Efficiency of agricultural insurance with state support *Economy of agricultural and processing enterprises* 39-45 DOI: 10.31442/0235-2494-2021-0-3-39-45
- [3] Aleskerova Y 2020 Development of agricultural insurance system *Green, Blue and Digital Economy Journal* **1** 1-7 DOI: 10.30525/2661-5169/2020-1-1
- [4] Georgievich Kiselev 2019 Statistical modeling in agricultural insurance 1-4 DOI: 10.1109/MLSD.2019.8911066
- [5] Rolinsky A V, Ulianych Y V and Ptashnyk S A 2020 The current state of the agricultural insurance market of Ukraine *Collected Works of Uman National University of Horticulture* **2** 208-18 DOI: 10.31395/2415-8240-2020-97-2-208-218
- [6] Rolinsky A V, Ulianych Y V and Ptashnyk S A 2020 The current state of the agricultural insurance market of Ukraine *Collected Works of Uman National University of Horticulture* **2** 208-18 DOI: 10.31395/2415-8240-2020-97-2-208-218
- [7] Motashko T and Panchulidze K 2020 Agricultural insurance in the conditions of climate change *Agrosvit* 99 DOI: 10.32702/2306-6792.2020.10.99
- [8] Botasheva L Kh, Ryzhenkova N E and Zubarev T S 2018 Agricultural insurance: problems and solutions *Economy of agricultural and processing enterprises* 61-3 DOI: 10.31442/0235-2494-2018-0-11-61-63
- [9] Iskandarov A M 2020 Analysis of activities of support of agricultural insurance *ACADEMICIA: An International Multidisciplinary Research Journal* **10** 178 DOI: 10.5958/2249-7137.2020.00069.5
- [10] Baimisheva T, Kurmaeva I, Gazizyanova Yu, Baimeshev R and Aiesheva G 2019 State regulation systems of agricultural insurance *IOP Conference Series: Earth and Environmental Science* **315** 022090 DOI: 10.1088/1755-1315/315/2/022090
- [11] Potiiko S 2019 Analytical providing for agricultural insurance management *Problems of systemic approach in the economy* DOI: 10.32782/2520-2200/2019-3-69