FINANCIAL SUPPORT FOR INNOVATIVE DEVELOPMENT OF THE AGRICULTURAL SECTOR OF UKRAINE

The article reveals the peculiarities of the functioning of finance in the agricultural sector of the economy, presents the specifics of the structure of non-current assets and current assets of agricultural enterprises, and highlights the impact of military operations in Ukraine on the efficiency of the domestic agricultural sector. The author substantiates the existence of high economic risks in the agricultural sector, which requires the organization of effective state regulation with the use of modern effective financial instruments, reveals the essence of financial resources of agricultural enterprises through the scheme of their circulation, identifies sources of capital formation and emphasizes the importance of attracting sufficient own funds.
It is emphasized that ensuring innovative development of the agrarian sector of the economic system is the main factor in the stable operation of business structures in this sector and the achievement of their strategic goals; several destructive factors that negatively affect the innovative development of the Ukrainian agrarian sector are identified; the key directions of implementation of the policy of introducing innovations into the agrarian sector of Ukraine are outlined.

The expediency of applying an integrated approach in the process of organizing financial support for the innovative development of the domestic agricultural sector is proved, and the instruments for forming financial resources in the context of applying such an approach are determined.

The article studies the dynamics of capital investments in the agricultural sector of Ukraine and analyzes the structure of sources of their formation; highlights the trends in the formation of financial resources by domestic agricultural enterprises and the dynamics of the share of equity capital in them; assesses the structure of financial resources of national agricultural companies during 2013—2022; analyzes the formation of net profit (loss) by economic entities in the studied industry.

The authors identify the directions of intensification of innovative development of the domestic agricultural sector, outline strategic priorities in its financing and present key instruments of government support for agribusiness in Ukraine in the context of post-war economic reconstruction.

STATEMENT OF THE PROBLEM
IN GENERAL AND ITS CONNECTION
WITH IMPORTANT SCIENTIFIC
OR PRACTICAL TASKS

Today, Ukraine’s national economy is operating in a wartime environment, which significantly limits the capabilities of business entities and the state and creates several critical problems that are unlikely to be solved at this stage of development. In addition, the government is unable to stimulate and maintain favorable conditions for the agricultural sector, as it is experiencing an acute shortage of financial resources in the public sector of the economy. On the other hand, the aggressor’s blockade of sea trade routes and ports has made it possible for the...
entire civilized world to understand the importance of
domestic agricultural products and the role of the Ukrainian
agricultural sector in ensuring food security at the
international level. This situation proved that our country
is an important agricultural country in the world and has
significant untapped potential in this area, which can be
fully realized in the postwar period.

Given the above, the agricultural sector and agricul-
tural enterprises, in particular, occupy a special place
in the Ukrainian economy, as it is in this sector that
domestic entrepreneurs have significant undiscovered
opportunities, the realization of which requires the
construction of an effective mechanism for financial
support of this type of activity. It is worth noting that the
agricultural sector is one of the few that has a strong
competitive position in the global market and opportuni-
ties to sell high-value-added products. However, their
consolidation and growth require the availability of
affordable and risk-acceptable financial resources on the
domestic market, as domestic farms typically use their
capital, short-term bank loans, and accounts payable.
This situation prevents them from investing capital in the
modernization and renewal of their material and technical
base and therefore does not contribute to improving the
quality of agricultural products as a key factor in increasing
competitiveness. Given the outlined situation in the
national economy, an important and relevant area of
research in the current conditions is to identify additional
sources of capital formation and search for reserves to
strengthen the financial condition of agricultural enter-
prises to develop new markets and create prerequisites
for innovative development.

ANALYSIS OF RECENT RESEARCH
AND PUBLICATIONS, WHICH INITIATED
THE SOLUTION OF THIS PROBLEM
AND ON WHICH THE AUTHOR RELIES,
THE SELECTION OF PREVIOUSLY
UNSOLVED PARTS OF THE GENERAL
PROBLEM, WHICH IS THE SUBJECT
OF THIS ARTICLE

The peculiarities of building a financial mechanism for
ensuring innovative development of the agricultural sector
in the regions of Ukraine are studied by the following
domestic scholars: A. Biloienko, I. Hushcha [1], T. Holban
[2], Ya. Dropa, M. Petyk [3], L. Kustrich [4], A. Mykhailov
[5], N. Petrenko [7], S. Polishchuk, S. Piatchenko [8],

Taking into account the significant achievements of
Ukrainian scientists in the direction of solving the
problems of improving the financing of innovative
activities of domestic agricultural enterprises in 2022,
new challenges appeared in this area that require an
immediate response, in particular: identifying additional
sources of capital formation of agrarians in conditions
of economic reconstruction, their use of innovative tools
for attracting financial resources, finding directions for
improving the government's financial policy regarding the
activation of innovative activities in the field of regional
agriculture, building an effective strategy for the
innovative development of the agricultural sector of
Ukraine.

FORMULATION OF THE GOALS
OF THE ARTICLE (TASK STATEMENT)

The purpose of the article is to improve the financing
mechanism for the innovative development of the
agrarian sphere in the territorial communities of Ukraine
under the conditions of accession to the European
Union.

PRESENTATION OF THE MAIN MATERIAL
OF THE STUDY WITH A FULL
JUSTIFICATION OF THE OBTAINED
SCIENTIFIC RESULTS

Since the days of Kievan Rus, Ukraine has always been
famous for the industriousness and ingenuity of its people,
ferile chernozems, and rich rivers, which contributed to
the rapid development of agriculture, which has remained
a popular type of activity even today. It is not for nothing
that Ukraine is often called the granary of the world, and
the products produced are known in many countries, as
they have high quality and uniqueness of varieties, which
ensures an appropriate level of international competi-
tiveness.

The agricultural sector by its nature has significant
differences from other types of economic activity, as it
produces products of animal and plant origin and uses land
in the production process, which is the main resource that
cannot be replaced. Land resources for any state are very
important and expensive, and if they are used incorrectly,
or depleted, they will require huge capital investments for
restoration, which will take place very slowly with
unpredictable results. It should be noted that basic assets
(land, granaries, elevators, agricultural machinery) are very
expensive for farmers and require the accumulation of
significant amounts of financial resources. This determines
the need for the services of leasing companies and the use
of available long-term credit.

The key feature of the structure and composition of
non-current assets of agricultural companies in comparison
with industry is that, along with the main means that were
created in other types of activity (machines, equipment,
buildings), special means of labor function — various types
of animals and perennial crops, which also have human
labor in the form of caring for them and growing fruits.
Their share in the structure of the main means of production
is quite significant in farms that grow and fatten animals.
This feature of the structure of non-current assets is
reflected in the process of reproduction of the main means
of production: if machines, equipment, buildings, and other
main means can be in production processes until they are
completely worn out, then perennial plantations actively
function throughout the year only within the limits of the
productive (vegetation) period. Such features should be
taken into account by farmers to increase the efficiency
of the use of all structural components of non-current
assets.

Any agricultural production has a constant need for
financial resources for ongoing and capital repairs,
improvements, improvements, and renewal of fixed assets,
which is reflected in the cost of agricultural products and
the need to create appropriate reserves. Depreciation in
agriculture forms a real item in the cost of production,
which ensures the continuous functioning of agricultural
The composition and structure of working capital in the agricultural sector have their characteristics, which determine the sources of formation and directions of use of working capital. For example, such components as seeds, fodder bases, organic fertilizers, and other components must be constantly renewed throughout the entire cycle of current assets at the expense of own production. These items are usually not subject to sale and remain in the production area until the start of the next operating cycle, which significantly affects the working capital ratio and the duration of the production process.

Today, a significant number of agricultural business entities are in a state of crisis, their financial stability is impaired, and the formation of financial resources is significantly influenced by the difficult economic situation in the country, in particular: frequent devaluation of the hryvnia, a significant decrease in the level of average household incomes, the need to standardize agricultural products by the requirements of the EU and other developed countries, disruption of stability in the global economic system, the impact of the war in Ukraine on procurement policy at the international level, the lack of effective government support programs for agricultural production, etc. The result of the impact of these negative factors was a shortage of financial resources in the domestic agricultural sector and the appearance of losses in many companies.

In general, it should be noted that the economic activity of the agricultural sector is characterized by the presence of significant uncertainty and risks, which determine the peculiarities of the organization of finances and argue for the need for government regulation of the functioning of agricultural enterprises with the help of the use of modern effective tools: the provision of various subsidies, simplified conditions for making mandatory payments, the use of preferential crediting system for agrarian business, creation of an effective mechanism for insurance of existing risks, promotion of the development of an affordable agricultural machinery leasing market, etc. Taking into account the above, it is advisable to highlight the economic content of the financial resources of agrarian companies from the point of view of a tool (means), which contributes to their smooth functioning throughout the entire life cycle (from the formation of authorized capital, the formation of fixed and current assets, the organization of the production process and obtaining financial results). It is expedient to reveal the essence of the financial resources of farmers with the help of a scheme of their circulation and role in the process of extended reproduction and development of the enterprise (Fig. 1).

Financial resources of agricultural business entities are the sum of all the company’s own and involved sources of current and non-current assets formation in value terms, which are designed to ensure continuity of the production process, timely and complete fulfillment of financial obligations, and stimulate high rates of economic development.

The availability of capital on the market at an affordable price (both owned and borrowed) is important in financing the activities of agricultural enterprises. Today, investment and financial activities hurt the functioning of the agricultural sector, which is reflected in the reduction of its financial results and losses. The key factor in the decrease in profitability is the sky-high price of certain types of capital that was mobilized in production activities and the slow development of the stock market. In the end, agricultural companies are forced to direct a significant part of the proceeds to the maintenance of the financial resources involved and to reduce the amount of profit investment in the development of the company and renewal of fixed assets.

Agricultural enterprises form financial resources from all available sources (similar to industry and other types of activity), however, during recent times, their functioning usually provided their funds, which determined their high financial stability even during the global financial crisis. It is quite difficult for many farms to count on the attraction of capital investments because investors are interested in investing only in highly profitable productions of the agrarian sector, therefore many enterprises that produce important products and need to renew fixed assets remain with limited financial resources. This necessitates state
support for such farmers, which can take many forms (stabilization of the agricultural market, stimulation of the development of start-ups, assistance in updating and modernizing equipment, etc.) and create prerequisites for ensuring the financial stability of the agricultural sector.

Ensuring the innovative development of the agrarian sphere of the economic system is a key condition for the stable activity of business structures in this sector and their achievement of strategic goals. The creation of prerequisites for the activation of investment and innovation activity is characterized as the main factor of economic progress since innovations are the hidden reserve of increasing the company's financial results because they make it possible to reduce the cost of agricultural products, improve their quality, and strengthen competitiveness on domestic and international markets.

It should be noted that the production processes in the agricultural sector are quite complex from the point of view of the combination of equipment and technology, which requires the use of special methods and principles of management of innovative activities, the use of several approaches to the introduction of new products, and the activation of the state’s participation in creating appropriate conditions for the inflow of investments. On the other hand, the influence of several factors (natural, climatic, and other) on production processes in agriculture significantly increases the degree of uncertainty, which negatively affects the conduct of innovative activities. In addition, domestic farmers are closely dependent on foreign models of agricultural machinery, which partially violates Ukraine’s food independence. With the beginning of the war in the south of the country, a large amount of such equipment, which was still under leasing, was lost, which, in part, reduced the innovativeness of the national agricultural industry.

The reason for the low level of innovative activity in the agrarian sphere is usually considered to be the low effectiveness of the organizational and economic mechanism for implementing the achievements of science and technology. This situation contributes to the further degradation of certain types of activities in the agricultural sector, the increase in the cost of agricultural goods, the deterioration of product quality, and, as a result, the decrease in the competitiveness of Ukrainian commodity producers in this area, which slows down the development of rural regions and does not contribute to increasing the level of welfare of citizens engaged in agriculture.

The innovative development of the Ukrainian agrarian sector is influenced by several destructive factors, in particular: ineffective management of NTP and weak cooperation between the government and agrarian entrepreneurs; constant reduction of capital investments in agricultural research and development; lack of qualified workers in the field of agriculture; low level of aggregate demand for innovative agricultural goods and services; reducing the size of the allocation of financial resources to agricultural scientific and technical research, innovative projects and programs; lack of algorithms for financial regulation of innovative development of the agricultural sector, etc.

Scientists and practitioners include the key directions of implementation of the policy of introducing innovations in the agricultural sphere of Ukraine: improvement of regulatory and legal support for innovative activities and the formation of enhanced legal protection for investors who invest in the domestic agricultural sector; carrying out multifaceted stimulation of the development of agricultural production in an innovative way; development of a strategy for innovative development of the agro-industrial sector of the economy; the use of effective types of partnership and cooperation and the creation of the necessary organizational and economic ties between institutes in the agrarian sphere; staff training and advanced training of personnel and their acquisition of skills and abilities in conducting activities in the innovative direction; strengthening international cooperation of Ukrainian agrarian business entities in the innovative sphere.

The innovative development of the agricultural sector in any country is significantly influenced by progress in industry, which is the main supplier of machinery and other means of production to agriculture. Adequate financial support is the main guarantee of innovative progress of the agricultural sector from the industrial production of agricultural products, which will become the basis for increasing the return on fixed assets. This is evidenced by the significant subsidization of farmers in the world’s leading countries (the European Union subsidizes agriculture by half, and Japan by three-fourths). The basis of such a trend is the peculiarity of the agrarian sphere, which is characterized by the law of diminishing returns, which determines the need to attract external financial resources. Such capital mobilization can take place with the involvement of related industries that have a high progressive capital return and produce the lion’s share of knowledge-intensive products (for example, the Ukrainian manufacturing industry).

The use of such a scheme in the financial provision of innovative progress of the agricultural sector will make it possible to prevent the implementation of a false strategy for the development of the domestic economic system and to consider foreign capital investments from a negative point of view since developed countries today do not show interest in investing in the Ukrainian manufacturing industry. At one time, when Ireland joined the European Economic Union, its agricultural sector began to attract large-scale foreign capital investments, but they did not create the prerequisites for the development of this sector which only led to a significant debt burden on the population engaged in agriculture. This was a consequence of the formation of too much production potential, which was difficult to realize since it was not possible to reach the relevant markets for the sale of agricultural products.

The application of a complex approach to the financial support of innovative progress in the domestic agricultural sector is usually aimed at the formation of innovations and their implementation in local agricultural production. Tools for the formation of financial resources under the conditions of application of such an approach are expedient to systematize in several directions: financial support of fundamental and applied agricultural developments; development and use of modern digital tools for attracting capital to finance the creation of innovative products in the agricultural sector; tools that determine the scope of operational and sales activities of
agricultural enterprises, the introduction, and dissemination of innovations; capital formation tools that will determine only the dimensions of implementation, promotion, and distribution of innovative products; covering expenses related to the introduction of innovations in the agricultural sector of the region.

The consequences of applying a comprehensive approach to the financial support of innovative progress in the agricultural sector should be the formation of a financial mechanism for stimulating the strategic innovative development of a certain territory or community.

In a situation of capital shortage for financing scientific and research works, it is expedient to implement a concept in which the government fully provides funds for carrying out fundamental, and commercial structures to invest in the implementation of applied research. To effectively implement applied research, it is necessary to create favorable conditions for the functioning of venture companies and to allocate sufficient budget funds for the activities of territorial scientific institutions that conduct scientific and research activities in the agricultural sector. Investing financial resources only in the process of production of agricultural products in the region pursues a complex goal, which consists of the development of innovative products, improvement of the technological structure of operational processes, the use of modern approaches to reducing damage to the environment, the constant introduction of innovative digital technologies in the agricultural sector, etc.

It is necessary to note the peculiarities of agricultural production, which must be taken into account when financing agricultural innovations. The specificity of agriculture lies in the fact that along with industrial means of production, biological factors — animals and plants, and the land is filled with biota — take an active part in the production process. Their development is subject to the laws of nature and depends on such factors as climatic and weather conditions, heat, humidity, solar radiation, and the availability of nutrients. Extended reproduction in agriculture occurs in the process of interaction of economic, social, and natural-biological processes. Therefore, when financing the process of creating innovations in the agricultural sector, it is necessary to take into account the requirements of not only economic but also social and natural-biological laws. In the process of agricultural production, natural and biological laws, in particular equivalence, irreplaceability, and the totality of vital factors, the laws of minimum, optimum, and maximum, are of particular importance. The effect of the law of irreplaceability of production factors is manifested, for example, in the fact that insufficient solar radiation cannot be compensated by agricultural technology, etc. [9, p. 128].

In many countries of the world, in which the agrarian sector occupies a significant specific weight in the structure of the economic system, studies aimed at identifying factors that influenced the positive and negative results of financial support for the innovative progress of the agrarian sector in the context of individual territorial communities have become widespread. A study of the experience of the world’s leading countries confirms the use of a large number of coefficients, which are used to analyze the degree of innovative progress and determine it by several factors. Well-known international institutions form a set of their parameters that highlight the degree of innovative capacity of the state or individual territories, the most popular of which include:

1. The indicator of scientific and technical capacity, which is part of the integral coefficient of the analysis of the degree of competitiveness of the economic system of the state. Usually, researchers consider sustainable economic progress from the perspective of medium— and long-term expectations based on several parameters that determine macroeconomic parameters, the quality of the institutional environment, and technological progress.

2. Formation of the rating of innovative economic systems by well-known institutions (for example, Bloomberg), which are determined based on data on the activity of scientific and research activities, the production of the latest products, the increase in labor intensity, the quality of educational services, and the number of economic entities in the state in which there is an innovative ingredient

3. The set of parameters for the analysis of innovative activity, which are used by EU countries to conduct a comparative assessment, covers several indicators, which are systematized into the following groups: human resources; production of new experience, and skills; transfer and application of modern achievements of science and technology; financial support for the implementation of innovation policy. The analysis of
Innovation policy based on this approach makes it possible to make rational decisions regarding the stimulation of NTP in the agricultural sector.

4. Vertical and horizontal analysis of the progress of the innovative economic system is carried out by OECD employees in individual countries of the world. The set of parameters proposed by the organization covers the share of the high-tech sphere of the economic system in the goods and services of the processing sector of the industry; the activity of scientific and research activities; the size of capital investments in the scientific sector; generation and production of information technologies, software; the number of people employed in the field of scientific research and modern technical developments; dimensions of patent activity.

In the conditions of developing the parameters of the analysis of the effectiveness of financial support for the innovative progress of the agrarian sphere of territorial communities, it is advisable to take into account: the size of the aggregate demand and the size of the financial potential for the implementation of innovative activities by farms and agrarian companies; the real ability to introduce novelties and inventions by the actual resource provision, the experience of employees, environmental regulations, domestic standards and the progress of digital technologies, etc.; the presence of innovative institutions and organizations and the potential for creating and disseminating the results of scientific research activities (organization of scientific conferences, round tables, discussions).

It is worth noting that the implementation of reforms in agriculture did not contribute to the improvement of financial support and the attraction of investments in the agrarian sphere. This is evidenced by the drop in the absolute volume of capital investments in agriculture, forestry, and fisheries of Ukraine during 2018—2021 by almost UAH 17 billion or by -25.68% (Fig. 2). An identical
A negative phenomenon is also the fact that in the structure of financial resources, there is a significant specific weight of current liabilities and a very low share of long-term liabilities and provisions. This proves that agrarians constantly need to look for highly liquid funds to repay obligations that are due shortly. This situation hurts the liquidity of agricultural enterprises and their working capital.

Therefore, in this direction, government assistance in providing them with preferential long-term loans for the formation of investment resources is important (Fig. 5). As for long-term liabilities, their share overall decreased from 13.74% to 6.8% (by 6.94 percentage points) over the analyzed period, and its lowest value was 4.03% in 2016. However, during 2016—2021, we observe a positive trend, which consists of a gradual increase in the specific weight of long-term liabilities (by 4.99 percentage points) and a decrease in the share of current liabilities [6].

An important internal source of the formation of financial resources of any economic entity is the net profit, which reflects the final results of the enterprise’s activity, and its sufficient value can be a factor in the activation of investment activity. Fig. 6 shows the dynamics of net profit (loss) of agricultural enterprises in comparison with all economic entities of Ukraine [3, p. 157].
As you can see, these charts show a slight upward trend in the net profit of farmers over the analyzed period — by UAH 76,085 million or more than four times. In general, it is worth noting that the absolute financial results of agriculture, forestry, and fisheries were usually at a rather low level, although starting from 2017, they are gradually increasing, and sometimes decreasing.

Interestingly, the net profit (loss) of farmers did not significantly react to the start of military operations on the territory of Ukraine and the aggravation of the economic and socio-political situation in 2014, compared to all domestic economic entities, which received a record net loss in this year — UAH 590,067 million. Moreover, throughout the analyzed period, the agricultural sector of Ukraine was never unprofitable, although it did not receive the expected amount of profits. This partly refutes the statement about the bad investment climate in this field and gives good reasons for the state to implement an effective financial policy to attract investment resources to agriculture. Convincing for this is the fact that many types of agricultural products have long gained popularity outside of Ukraine (oil, wheat, corn, vegetables and fruits, dairy products, etc.), have high competitiveness, and their producers have great potential for developing new sales markets. However, the beginning of the war in Ukraine significantly changes the situation, and based on the results of the first 9 months of 2022, we ascertain the fact of unprofitable activity not only of agricultural but also of all domestic economic entities [3, p. 158].

To speed up the innovative progress of the domestic agricultural sector in individual regions, it is expedient to develop an effective government-stimulating financial policy that will cover a range of measures and combine the efforts of the state and private businesses. It is necessary to create prerequisites for the formation of sufficient financial resources by entrepreneurial structures in the field of agriculture, which will be formed based on developed state programs, which will cover measures aimed at the activation of innovative activities. Such measures should include the provision of affordable agricultural lending (reasonable level of interest on loans, activation of medium— and long-term credit programs for farmers); state participation in financing the innovative progress of the Ukrainian agricultural sector using modern methods and tools; involvement in capital formation by agrarian business structures of large companies that are interested in the results of their operation. In general, the strengthening of the innovative orientation of the domestic agricultural sector will help to increase its investment attractiveness and increase the volume of capital investments, which will become a serious basis for the development of the European market in the conditions of granting Ukraine membership in the European Union.

The construction of the financial and economic mechanism of the agrarian sector should take place by the outlined strategic directions of innovative development, namely: the formation of systems of legislative stimulation of innovative activity; the use of program-target management in the development and implementation of innovations in the agriculture of territorial communities; strengthening cooperation between government institutions and private business to accumulate sufficient financial resources based on the formation of the latter’s interest in the implementation of joint socially important programs and projects at the regional level.

An effective way to activate the process of development and implementation of innovations in agriculture is to attract state financial resources based on established partnerships with commercial structures. This will help to form mechanisms for the concentration of various sources of funds for the activation of innovative activities in the agricultural sector, as well as to fairly distribute financial results among all subjects of such a mechanism, which will contribute to increasing the efficiency of spending state funds.

The experience of the developed countries of the world convinces that the government directly stimulates the profitability of agricultural companies due to the construction of price regimes and production restrictions, the establishment of maximum market prices for certain types of agricultural products, the formation of effective antimonopoly legislation and with the help of other tools. In the national economy, government stimulation of the development of the
agrarian sector covers several programs related to the financial support of scientific and applied research, preferential lending to farms, and a program to support fishing, crop production, poultry production, and livestock production.

CONCLUSIONS FROM THIS STUDY AND PROSPECTS FOR FURTHER EXPLORATION IN THIS DIRECTION

So, it is worth noting that using separate instruments of government support for agribusiness in Ukraine based on the implementation of foreign experience will be quite difficult given the peculiarities of the modern development of the domestic economy. The activation of government support usually requires the allocation of significant amounts of state funds, which in today’s conditions, given the large deficit of the state budget, does not seem to be an entirely realistic task. In addition, in the conditions of war, it is necessary to increase the number of stocks of agricultural products and to send their surplus to export, to maintain a high level of food security. At the same time, the agro-industrial complex, which suffered significant losses as a result of the war, needs significant support from the state today, and it needs to improve the financing mechanisms for recovery and ensure further full-fledged development.

References: