



MINISTRY OF AGRICULTURE
OF THE REPUBLIC
OF UZBEKISTAN



COUNCIL OF MINISTERS
OF THE REPUBLIC
OF KARAKALPAKSTAN



AGRICULTURAL FINANCING IN UZBEKISTAN: ANALYSIS AND RECOMMENDATIONS FOR ALTERNATIVE FINANCIAL MECHANISMS

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INTRODUCTION

Today, virtually all countries in the world are working towards the transition and achievement of the global Sustainable Development Goals, one component of which is the transition to sustainable agricultural systems. Building more sustainable agricultural production systems will require significant additional financial resources. However, relying solely on public funding sources or private investment will yield mixed results.

Providing farmers, agricultural producers, entrepreneurs, and other participants in agricultural activities with broad access to financial resources and instruments is crucial for ensuring the sustainable development of the agricultural sector and the socio-economic well-being of rural populations.

Given the importance of sustainable agricultural development, the agricultural financing system of the Republic of Uzbekistan has been analyzed, and foreign experiences have been studied. Based on this analysis, recommendations have been developed for implementing more effective alternative mechanisms for financing agricultural producers.

The institutional component of existing agricultural financing mechanisms in Uzbekistan, particularly financial organizations and institutions, has also been assessed. Accordingly, their activities have been reviewed, and recommendations for their inclusion in pilot projects focused on implementing new agricultural financing directions have been made.

The aim of this initiative is to identify best practices in non-public agricultural financing and to develop recommendations for their implementation in the economic practices of the Republic of Uzbekistan, considering the existing institutional framework to create conditions for sustainable development.

Stages of the Study:

Stage I – Study of International and Local Experiences in Agricultural Financing.

1. The experiences of foreign countries in using non-state financial instruments in agriculture have been studied;

- Systems involving additional financial instruments/mechanisms such as credit, leasing, and financing of farmers, aside from state support, have been analyzed.

2. The experience of the World Bank project implementation in Uzbekistan from 2014 to 2023 has been reviewed;

- The results and experiences from providing farmers and agro-firms with access to finance under the «Horticulture Development Project in Uzbekistan» implemented with World Bank support were analyzed.

Stage II – Analysis of the Institutional Component of Uzbekistan’s Agricultural Finance System.

3. The legislative framework of Uzbekistan regarding financial instruments/mechanisms in the country has been analyzed;

- The current legislative framework was reviewed to identify the potential for using additional financial instruments/mechanisms in agriculture.

4. Based on this analysis, recommendations for improving the regulatory and legal framework were developed;

- Recommendations and proposals were substantiated for making appropriate changes in the regulatory and methodological framework to accommodate new financial instruments in agriculture.

5. Information on licensed microfinance organizations/institutions was collected and consolidated, and their readiness to introduce new financial instruments was analyzed;

- A list of licensed microfinance organizations/institutions operating in Uzbekistan was compiled. Based on the analysis of these organizations, proposals were developed to assess their readiness and competence to pilot revolving funds and other instruments/mechanisms focusing on green and energy-efficient technologies for the agricultural sector.

6. The possibilities for exempting farmers or agricultural cooperatives from land and water taxes in exchange for implementing green technologies were studied;

- The study explored the feasibility and mechanisms for exempting farmers or agricultural cooperatives from land and water taxes (both surface and groundwater) for 3-5 years if they install «green» alternative technologies (e.g., solar panels) on their land.

Stage III – Generalization and development of recommendations on alternative financing mechanisms in agriculture.

Recommendations for Uzbekistan on the implementation of alternative financing mechanisms in agriculture have been substantiated, developed based on the analyses conducted and taking into account the legal and institutional characteristics of the Republic.

1. STUDY OF INTERNATIONAL AND LOCAL EXPERIENCE IN AGRICULTURAL FINANCING

1.1. ANALYSING AGRICULTURAL FINANCE IN FOREIGN COUNTRIES

Agriculture plays a significant role in the development of the national economy in many countries, being one of its leading sectors. The sustainable development of agriculture is vital for providing food security and ensuring the population's well-being. Moreover, many countries are leading exporters of agricultural products, contributing to increased export revenues and improving the foreign trade balance. Agricultural development, when aligned with environmental and social aspects, can enhance the quality of life and protect the environment.

Thus, agriculture is crucial for the country's economic growth, ensuring food security, creating jobs, stimulating economic expansion, improving the foreign trade balance, and strengthening social stability. In this context, the stable and sustainable development of agriculture is essential, and financing for farmers is critical. Specifically:

- Farmers require working capital to invest in seeds, fertilizers, equipment, and other inputs necessary for agricultural production. Without access to financial resources, farmers may struggle to adapt to changing market demands;
- Access to financial resources enables farmers to invest in new technologies and practices that can enhance productivity and sustainability, such as climate-smart agriculture, precision farming methods, or equipment that reduces water and energy consumption;
- Agriculture is inherently risky due to factors such as weather fluctuations, market volatility, and pest infestations. Crop insurance and credit facilities can help farmers mitigate these risks and recover from potential losses;
- Financing supports the development of agricultural value chains by providing resources for storage, processing, marketing, and distribution, thereby improving the overall efficiency of the agricultural sector;
- Sustainable agricultural practices, such as organic farming, agroforestry, or conservation agriculture, often require initial investments in infrastructure, training, and technology.

In this context, financing for farmers is vital for sustainable agricultural development. It provides the necessary resources to increase productivity and profitability in the agricultural sector, facilitates access to capital, and supports value chain development, contributing to a more efficient and sustainable agricultural system.

Next, let's examine the experience of agricultural financing in various countries.

Russian Federation

In the Russian Federation, state support for agriculture is robust and highly developed due to the sector's significant role in the economy, contributing to food security and rural development. Agriculture is considered a strategic industry that helps address rural poverty and inequality, create rural jobs, strengthen national sovereignty, and address regional disparities and strategic investments in agricultural development. This strong government support has enabled the Russian agricultural sector to meet challenges, increase productivity, and contribute to the country's food security and economic growth.

The Russian government has made strategic investments in agricultural research, technology transfer, and infrastructure development to modernize the sector and enhance its competitiveness. Government support for innovation and technology adoption is crucial for improving the productivity and sustainability of Russian agriculture.

State support. The state provides guarantees or subsidies for loans to farmers through banks or credit institutions authorized by the Ministry of Agriculture of the Russian Federation. Article 11 of the Federal Law of the Russian Federation “On the Development of Agriculture” reflects the rationale for state support from the federal budget in the form of subsidies and benefits on commercial loans»¹.

Without state support, the majority of borrowers, especially those from among small farms (peasant farms, private subsidiary farms, individual entrepreneurs, family farms), are doomed to find themselves in a «credit trap», as interest rates on loans and collateral conditions are obviously unrealistic for most small agricultural producers due to objectively high risks of agricultural production and low profitability. There are also special loan programs for farmers.

In addition, the state actively uses grants and subsidies as financial support for agricultural producers. Farmers can receive grants and subsidies from the state or other organizations to support their activities.

Subsidies. The Government of the Russian Federation adopted Decree No. 717 of July 14, 2012, “On the State Program for the Development of Agriculture and Regulation of Markets in Agricultural Products, Raw Materials and Foodstuffs”². This program allows agricultural producers to receive subsidies based on rules for granting subsidies to the budgets of the constituent entities of the Russian Federation for various areas of state support included in the program.

The State Program provides for the creation by 2024 of an end-to-end system of financial and non-financial support at all stages of the life cycle of an agro-industrial export project.

The State Program aims to create a comprehensive system of financial and non-financial support at all stages of the life cycle of an agro-industrial export project by 2024. It includes funding from the federal budget and other budgets, extra-budgetary funding, and public-private partnership mechanisms.

Subsidies from the federal budget to the constituent entities of the Russian Federation are focused on the following areas:

- Supporting priority areas of the agro-industrial complex and small farms.
- Reimbursing a portion of interest expenses on loans from Russian credit organizations and agricultural credit consumer cooperatives.
- Stimulating increased production of oilseeds, potatoes, and vegetables.
- Developing rural tourism.
- Reimbursing part of the costs of interest payments on investment credits (loans) in the agro-industrial complex;
- Financial provision (reimbursement) to producers of grain crops of part of the costs of production and sale of grain crops;

¹ Federal Law of the Russian Federation "On the development of agriculture" from 29.12.2006 № 264-FZ Art. 11. State support of lending in the field of agricultural development" // Consultant Plus. URL: http://www.consultant.ru/document/cons_doc_LAW_64930/

² <https://mirror2.garant.ru/webclient/navigation.dsp?PHPSESSID=tt7hjec7bl6mta878vje128de6&number=0&page=1>

- Reimbursing a portion of direct costs incurred for the creation and (or) modernisation of facilities for the processing of agricultural products;
- Financially supporting the creation of conditions for veterinary laboratories of constituent entities of the Russian Federation to obtain accreditation in the national accreditation system and (or) to expand their area of accreditation.

Grants. The State Program has developed a funding mechanism in the form of an «Agrostartup» grant, which is awarded to a grantee for the implementation of a project for the establishment and (or) development of a farm, in particular:

- a) for breeding cattle of meat or dairy productivity – in the amount not exceeding 7 million roubles, but not more than 90% of the costs;
- b) for the breeding of cattle of meat or dairy productivity, if it is envisaged to use part of the grant «Agrostartup» for the purposes of forming the indivisible fund of the agricultural consumer cooperative, of which the grantee is a member, – in the amount not exceeding 8 million roubles, but not more than 90% of the costs;
- c) for other areas of the project of creation and (or) development of the farm – in the amount not exceeding RUB 5 million, but not more than 90% of the costs;
- d) in other areas of the project of creation and (or) development of the farm, if it is envisaged to use part of the grant «Agrostartup» for the purposes of formation of the indivisible fund of the agricultural consumer cooperative, of which the grantee is a member – in the amount not exceeding 6 million roubles, but not more than 90% of the costs.

However, it should be noted that the **system of non-state financing of farmers** in Russia has been developing very actively in recent years. Although state support plays a significant role in the agricultural sector, there is a growing trend towards diversification of sources of financing for farmers, including non-state financing options. This shift is driven by various factors, such as the need for additional capital, access to modern technologies and increased competitiveness in the global market.

The analysis has shown that the system of non-governmental financing of agriculture in the Russian Federation includes the following institutions, which offer additional financial resources to farmers and agricultural producers:

1. Commercial banks and credit organisations. Some banks have specialized agricultural lending programs tailored to the needs of farmers, allowing them to access loans, credit lines, and other financial products for financing their activities, investing in equipment and infrastructure, or expanding their agricultural business.

According to official data, there are currently 49 financial and credit institutions³, financing the Russian agro-industrial complex (AIC). Primarily, this list includes the 10 largest banks approved by the Central Bank of the Russian Federation in accordance with the directive of July 22, 2015, No. 3737-U «On the methodology for determining systemically important credit institutions.» Among them are AO «Rosselkhozbank», PJSC Sberbank, Gazprombank (AO), VTB Bank (PJSC), AO «Alfa-Bank», PJSC Bank «FC Otkritie», PJSC ROSBANK, PJSC Promsvyazbank, AO Raiffeisenbank, and AO UniCredit Bank.

The largest commercial banks in the Russian Federation provide the following financial support to agricultural enterprises:

Sberbank of Russia: The largest bank in Russia offers various financial products and services for agricultural development, including loans for agribusiness development, leasing of agricultural equipment, and other financial instruments.

³ <http://radm63sp.ru/wp-content/uploads/2023/01/Perechen-upolnomochennyh-bankov.pdf>

VTB Bank: Provides financial support to agricultural enterprises and farmers, including loans for land acquisition, farm construction, upgrading agricultural equipment, and other purposes.

Rosselkhozbank: A specialized bank focused on financing the agro-industrial sector, including farms. The bank offers a wide range of products and services for farmers, such as loans for agricultural development, leasing of agricultural equipment, and others.

There are also many small and regional banks, cooperative credit organizations, and other financial institutions that can offer various financial products and services for the development of agriculture.

2. Crowdfunding and Peer-to-Peer (P2P) Lending: Considering the specifics of agricultural activities, finding alternative forms of financing is important, particularly for small-scale farming, including effective lending mechanisms that are alternatives to bank loans, often using technological platforms. These forms include crowdfunding and peer-to-peer lending.

Online platforms for crowdfunding and P2P lending have become alternative sources of financing for farmers in Russia. They allow people to invest in agricultural projects, support small farmers, and promote sustainable farming practices.

P2P lending, also known as **peer-to-peer or P2P lending**, is a popular form of non-traditional financing that has gained popularity in recent years in Russia. P2P lending platforms connect individual investors with borrowers, including small businesses, entrepreneurs, and individuals in need of funds. These platforms provide loans funded by multiple individual investors, bypassing traditional financial institutions like banks.

In other words, P2P lending provides an alternative source of financing for borrowers who may not qualify for traditional bank loans or wish to avoid the high-interest rates charged by banks. At the same time, P2P lending allows individual investors to diversify their investment portfolios by lending money to a variety of borrowers across different sectors and risk profiles.

P2P lending platforms typically offer a transparent and efficient loan application and approval process, making it easier for borrowers to quickly access funds. Individual investors may potentially earn higher returns compared to traditional investment options by participating in P2P lending platforms.

Some popular P2P lending platforms in Russia include:

1. Mintos is a global P2P lending platform that connects investors with borrowers from different countries, including Russia. Mintos offers a wide range of lending options, including consumer loans, business loans and mortgages.
2. DoFinance is a P2P lending platform based in Latvia that allows investors to invest in consumer loans from borrowers in Russia and other countries. DoFinance offers competitive interest rates and flexible investment options.
3. MyTripleA is a P2P lending platform based in Spain that allows individual investors to lend to small and medium-sized enterprises (SMEs) in Russia and other countries. MyTripleA offers a wide range of investment opportunities with different risk profiles.

While P2P lending is growing in Russia, both borrowers and investors must conduct thorough due diligence and understand the risks associated with this form of financing. The regulations governing P2P lending are evolving, and it is crucial to ensure that platforms comply with specific laws and regulations to protect the interests of all parties involved.

In Russia, there are several types of crowdfunding models, with donation-based crowdfunding being the most common. Reward-based crowdfunding, equity crowdfunding, and debt-based crowdfunding are also gaining momentum.

The crowdfunding industry in Russia is regulated by the Federal Financial Markets Service (FFMS) and the Central Bank of Russia. Legislation regulating crowdfunding activities was adopted in 2015 to provide a legal framework for crowdfunding platforms and protect investors.

Several crowdfunding platforms in Russia cater to different types of projects and campaigns. Some popular crowdfunding platforms in Russia include Planeta.ru, Boomstarter, Wefund, and Startnext.

Overall, crowdfunding in Russia continues to develop and grow, offering new opportunities for fundraising and community interaction. Crowdfunding remains a popular tool for raising funds and supporting projects across various fields and areas of activity in Russia.

3. Agricultural credit consumer co-operatives. The peculiarities of market forms of modern agricultural credit include such an alternative financial institution as agricultural credit consumer co-operatives⁴ (ACCCs), which are designed to promote the sustainable development of small-scale farming. ACCCs provide farmers with access to credit, marketing services, resources and knowledge sharing platforms.

The main goal of ACCCs is to address the problem of financial resource shortages among agricultural producers by providing loans to cooperative members based on a collective fund and other resources. In addition to mutual lending, ACCCs have the right and opportunity to place temporarily idle funds in bank deposits or invest in government securities, thereby replenishing their own reserve fund. Despite these activities, they remain non-profit organizations, as the income they generate primarily goes towards increasing the financial assistance fund for cooperative members. Their management process is regulated by federal legislation and internal statutes.

4. Microfinance Organizations (MFOs) offer small loans, microcredits, and financial services to farmers, particularly those living in rural areas or with limited access to traditional banks. These institutions play a crucial role in ensuring financial accessibility for underprivileged farmers.

Over the years, MFOs in Russia have gradually expanded and developed. This sector is regulated by the Central Bank of Russia, which has established rules to ensure the stability and transparency of MFO operations. In recent years, regulatory changes have been made to increase the transparency of microfinance activities and protect borrowers' rights.

The MFO sector is steadily growing, with a large number of MFOs operating in the market. According to the Central Bank of Russia, as of 2020, there were more than 1,500 MFOs operating in the country, reflecting the growing demand for microfinance services. In recent years, many MFOs have adopted online lending platforms and digital technologies to provide faster and more convenient services to their clients, making them attractive to farmers in terms of financial accessibility and coverage of rural populations in remote areas.

However, despite their accessibility, MFOs often have high interest rates, which frequently lead to excessive debt among borrowers. The Central Bank of Russia has taken steps to address this issue and protect consumers from predatory lending practices. Specifically, on October 1, 2020, the Central Bank set a limit on the maximum interest rate. According to the regulations, the total cost of a loan, including interest rates and fees, must not exceed 1.5 times the average market interest rate for consumer loans during the reporting period.

⁴Federal Law of the Russian Federation from 08.12.1995 № 193-FZ (ed. from 03.08.2018) "On Agricultural Cooperation" // Laws, codes and normative-legal acts of the Russian Federation. URL: <https://legalacts.ru/doc/federalnyi-zakon-ot-08121995-n-193-fz-o/>

In addition to capping interest rates, the Central Bank of Russia introduced requirements for transparent disclosure of loan terms, limits on additional fees and charges, and rules for debt collection.

5. Private and venture capital. These companies and venture capitalists are increasingly interested in supporting agricultural projects and agribusinesses in Russia. These investors provide capital, expertise and strategic guidance to help farmers scale their operations and achieve sustainable growth.

INSERT 1.

There are numerous financial institutions, investment funds, and private investors that play a role in supporting the country's agricultural sector. Here are a few examples of private and venture companies that finance agriculture in Russia, in particular:

Rosselkhozbank: As a state-owned bank, Rosselkhozbank is one of the largest agricultural lenders in Russia, providing financing to a wide range of agricultural enterprises, including farms, food producers, and agro-industrial companies.

AFK Sistema: This diversified holding company has investments in various industries, including agriculture. Through its agricultural subsidiary «Sistema Agro», the company invests in agricultural projects and provides financing and support to farmers and agribusinesses in Russia.

Bright Capital: This venture firm specializes in investments in fast-growing sectors, including agriculture and agribusiness. Bright Capital has invested in several agricultural technology companies in Russia, supporting innovation and modernization in the agricultural sector.

Russian Direct Investment Fund (RDIF): This sovereign wealth fund invests in various industries in Russia, including agriculture. The fund has financed several agricultural projects and initiatives aimed at modernizing and improving the efficiency of the country's agricultural sector.

UFG Asset Management: This investment management firm specializes in private equity investments in Russia and other emerging markets. UFG has invested in agricultural and agribusiness companies in Russia, providing capital and expertise to support their growth and expansion.

6. **Agricultural Insurance.** Farmers gain access to private funding through agricultural insurance products that help mitigate risks associated with weather, pests, diseases, market fluctuations, and other unforeseen events. Agricultural insurance products can provide financial protection and stability for farmers during times of crisis. Overall, the system of private funding for farmers in Russia is still developing and expanding, offering farmers a greater variety of financial opportunities beyond traditional government support. Access to private funding can help farmers diversify their funding sources, increase financial resilience, and foster innovation and growth in the agricultural sector.

INSERT 2.

Despite a relatively developed insurance market in Russia, the government provides state support to companies engaged in agricultural insurance. The Ministry of Agriculture selects companies eligible for agricultural insurance with government support. According to the law⁵, companies admitted to agricultural insurance with state support must have capital of at least 3 billion rubles, at least five years of experience in agricultural insurance, a financial stability rating of at least «ruA-» according to the national rating scale of the Russian credit rating agency «Expert RA», and must be members of the National Union of Agricultural Insurers (NSA). In 2023, the list of approved companies included: JSC «SOGAZ», JSC «RESO-Garantiya», PJSC «Ingosstrakh», PJSC SK «Rosgosstrakh», JSC «AlfaStrakhovanie», JSC «VSK», LLC SK «Soglasie», LLC SK «Sberbank Insurance», JSC «Moscow Joint-Stock Insurance Company», PJSC SAC «Energogarant», JSC SK «RSHB-Insurance».

В 2023 году в список допущенных компаний вошли: АО «СОГАЗ», ЗАО «РЕСО-Гарантия», СПАО «Ингосстрах», ПАО СК «Росгосстрах», АО «АльфаСтрахование», ЗАО «ВСК», ООО СК «Согласие», ООО СК «Сбербанк страхование», АО «Московская акционерная страховая компания», ПАО САК «Энергогарант», АО СК «РСХБ-Страхование».

⁵ Federal Law of 13.06.2023 No. 254-FZ On Amending the Federal Law "On State Support in the Field of Agricultural Insurance and On Amending the Federal Law "On Agricultural Development "

7. Leasing and Factoring. In recent years, the popularity and significance of leasing and factoring in Russian agriculture have been growing. Leasing is a financing option where a farmer or agricultural business can rent equipment, machinery, or other assets instead of purchasing them outright. Factoring is a financial transaction in which a business sells its accounts receivable to a third party to improve cash flow. In other words, a farmer can receive money in advance for sold agricultural products, ensuring liquidity and the production cycle.

Thus, in the total volume of leasing transactions by all leasing companies, the share of Agricultural Machinery and Livestock amounted to 5.5% in the first nine months of 2022 and 3.46% in the first nine months of 2023 as a share of new business. Currently, the largest leasing companies in the Russian agricultural sector include:

Rosagroleasing – a state-owned leasing company specializing in providing leasing services to the agricultural sector. It offers leasing options for various agricultural assets, including machinery, equipment, and land.

Sberbank Leasing – offers leasing solutions to the agricultural business for acquiring equipment, vehicles, and other assets.

VTB Leasing – provides leasing services to the agricultural sector for acquiring machinery, equipment, and other assets necessary for agricultural activities.

These are some of the renowned leasing companies in Russia that cater to the needs of the agricultural sector by providing financial solutions for the acquisition of capital assets. Leasing companies in Russia offer flexible leasing terms and competitive interest rates to attract agricultural customers and support modernisation and expansion of the agricultural sector.

Factoring in Russian agriculture is also gaining momentum as businesses seek ways to improve cash flow and manage working capital efficiently. Factoring helps agricultural enterprises maintain a stable cash flow, reduce the risk of non-payment by customers, and access funds for investment and growth opportunities. According to the Association of Factoring Companies⁶ the agricultural sector's portfolio amounted to 12.0 billion rubles (118 clients in the industry) by the end of 2022.

Overall, the largest factoring companies in Russia actively serve the agricultural sector, providing financial solutions to agricultural enterprises, helping them manage cash flows, improve liquidity, and optimize working capital. Each of these companies offers a range of factoring services tailored to the specific needs of agricultural clients, supporting their growth and development in this sector. In particular:

Alfa-Bank – one of the largest private commercial banks, offering factoring services to a wide range of industries, including agriculture. The bank provides factoring solutions to agricultural enterprises, helping them manage their cash flows and working capital efficiently.

Sberbank Factoring – a subsidiary of Sberbank, offering factoring services to agricultural companies to help them optimize their cash flows, manage accounts receivable, and improve liquidity.

Rosbank – a subsidiary of the Societe Generale group, providing factoring solutions to agricultural enterprises to meet their financing needs and ensure smooth operations.

Promsvyazbank – a major Russian bank offering factoring services to various industries, including agriculture.

⁶ https://asfact.ru/wp-content/uploads/2023/02/AFC-Y2022_open.pdf

Gazprombank – one of the largest banks in Russia, offers factoring services to enterprises in various industries, including agriculture. The bank provides factoring solutions to agricultural companies to help them unlock working capital and support their operations.

These financial instruments offer farmers and agribusinesses flexible financing options, improved cash flow, and access to the necessary equipment and machinery to support their activities and development. The Russian government and financial institutions continue to promote and support leasing and factoring as viable financing solutions for the agricultural industry.



Republic of Kazakhstan

In Kazakhstan, the agricultural sector is vital to the economy and the development of rural areas, but financing remains a challenge for many farmers. To address this issue, Kazakhstan has explored and implemented various financial instruments and mechanisms beyond traditional government support to facilitate farmers' access to funding. These include revolving funds, credit cooperatives, and leasing options to offer more favorable conditions for farmers.

1. Agricultural Revolving Funds have been established to provide sustainable financial resources for farmers. These funds operate by recycling loan repayments into new loans, ensuring a continuous flow of financing. For example, the «Agrarian Credit Corporation» (ACC) in Kazakhstan manages such funds to support farmers with the necessary capital for seasonal agricultural activities. ACC offers various financial products, including short-term and long-term loans, to enhance the productivity and competitiveness of Kazakhstan's agriculture.

2. Credit Cooperatives, similar to cooperative banks, were created to offer members more favorable loan terms than those available through traditional banking. These partnerships are formed by groups of farmers or agricultural enterprises pooling their resources to provide mutual financial support. A notable example is «KazAgroFinance», a national company offering financial leasing and lending services to agricultural producers. Through its services, KazAgroFinance has facilitated the acquisition of agricultural machinery and equipment, advancing technological progress and the efficiency of agricultural practices in Kazakhstan.

3. Leasing Programs. Leasing has become an important alternative financing mechanism for farmers who cannot afford the upfront costs of major agricultural machinery and equipment. The government, through organizations like KazAgroFinance, promotes leasing options that allow farmers to pay for these assets over time, making modernization more accessible. These leasing agreements often include flexible payment terms and lower interest rates compared to traditional loans, making them an attractive option for many farmers (see Appendix 1).

4. Microfinance organisations (MFIs) in Kazakhstan have played a crucial role in providing smallholder farmers with access to credit. These institutions offer smaller loans with less stringent requirements than traditional banks, making them more accessible to farmers with limited collateral. The success of MFIs in reaching poor rural populations has been significant, enabling small investments in agriculture that contribute to rural development and poverty reduction.

5. State-backed loan guarantees. To reduce risk for lenders and make credit more accessible to farmers, the government of Kazakhstan has introduced loan guarantee schemes. These schemes provide a government guarantee for a portion of the loan, reducing risk for financial institutions and encouraging them to lend to the agricultural sector. This has been particularly

beneficial for small and medium-sized enterprises (SMEs) in agriculture, which often face problems in securing financing due to perceived high risks and lack of collateral.

Agrarian Credit Corporation JSC. The mission of the Corporation is to promote sustainable development of the agro-industrial complex of the Republic of Kazakhstan by forming an affordable and effective system of financing through the involvement of private financial institutions and improving the competences of the subjects of agro-industrial complex (see Appendix 2).

Business Model. The Agrarian Credit Corporation is a financial operator of agricultural development programs and implements them through lending programs provided directly and through financial institutions (credit cooperatives, microfinance organizations, second-tier banks, leasing companies, regional investment centers) (see Appendix 3). Lending through microfinance organizations and leasing companies began in 2016 and requires further development (see Appendix 4). The Corporation also participates in the implementation of agricultural investment projects.

To reduce dependence on budgetary funds, the Corporation diversifies its funding sources. Raising funds in domestic capital markets can be done primarily through the issuance of corporate bonds. The Corporation also attracts funds from international financial institutions. The target business model identifies two main areas of the Corporation's activity: financial and non-financial support measures.

The first area includes direct lending, which is planned to be reduced to zero by 2025, and indirect lending as the institutional development of financial institutions in agricultural financing improves (see Appendix 5). The Corporation also finances investment projects that have the greatest socio-economic impact on the agro-industrial complex (see Appendix 6).

Loan Acquisition Mechanism. Online platform for submitting loan applications up to 6 million tenge – AGRONESIE.KZ (see Appendix 7).

Key Provisions of the Collateral Policy of JSC «Agrarian Credit Corporation.» The Society's Collateral Policy was approved by the Board of Directors on April 8, 2022, and came into force on June 1, 2022. When financing borrowers, the Corporation accepts movable and immovable property, guarantees, loan insurance, and property rights as collateral. The pledged property must not be withdrawn from circulation, must not be under a primary pledge to other persons, and the owner of the pledged property must be a resident of the Republic of Kazakhstan and have established ownership rights to the property.

However, the Corporation does not accept as collateral property withdrawn from civil circulation (property whose alienation is not permitted), items with restricted circulation (poisonous, narcotic substances, weapons, etc.), goods with a shelf life of less than 18 months, property rights inextricably linked to the creditor's personality, dilapidated or emergency property, and other types of property restricted by legislative acts.

A standard requirement of the Collateral Policy is full coverage of loans by collateral. The share of liquid collateral in the collateral structure must be at least 70% of the required amount of security, while the remaining share can be secured by less liquid collateral, including future assets.

In addition, the threshold requirement is reduced for the following types of financing. When acquiring new agricultural machinery, special equipment, and equipment that does not require installation, the borrower has the opportunity to provide their own funds or an advance in the form of investment subsidies of at least 15% of the value of the acquired asset as an initial payment. The remaining 85% of the value of the acquired assets can be secured by less liquid collateral.

The Corporation also provides additional benefits for small projects. Liquid collateral of at least 30% of the required amount of security can be contributed by those who take out a loan of 6 to 100 million tenge for construction and installation work, equipment purchase, agricultural machinery, special equipment, and biological assets. The remaining portion is secured by less liquid collateral. For similar projects exceeding 100 million tenge, additional requirements regarding the financial condition of the borrower or guarantor are imposed.

Liquidity ratios for real estate in cities of republican and regional significance apply up to 80%, in district centers – up to 70%, and in other settlements – up to 60% of the market value of the property. The liquidity ratios for movable property reach up to 80% of the value of the property, depending on the condition and year of manufacture of the movable property. It should be noted that the final decision on the possibility/impossibility of financing the project and accepting the proposed property as collateral is made by the authorized body of the Corporation after a full analysis of the borrower's financial condition, confirmation of the borrower's participation in the project implementation, availability of sufficient collateral, market analysis, marketing, availability of a fodder base, sufficient land plots, and overall project risks.

State Subsidies

1. Subsidising interest rates on loans, as well as leasing of technological equipment and agricultural machinery (see Appendix 9).

Reference: Order No. 317 by the Acting Minister of Agriculture of the Republic of Kazakhstan dated July 23, 2018, « On Approval of the Rules for Subsidizing the Reimbursement of Part of the Costs Incurred by Entities in the Agro-industrial Complex During Investment Injections»

Subsidy terms and conditions:

1. Subsidies are provided for loan agreements concluded at a nominal interest rate calculated as the sum of the National Bank of Kazakhstan's base rate plus 7.5% per annum. Of this, the borrower pays 6% of the nominal interest rate. The remaining portion is subsidized from the state budget.
2. Subsidies are calculated:
 - From January 1 of the year in which the application was submitted– for loan agreements active as of the application submission date, provided they were signed no more than 4 (four) years prior to the submission.
 - From the moment the loan is issued or the leasing item is transferred– for loan agreements concluded in the year of the subsidy application.
3. The subsidy's target purposes include purchasing agricultural machinery (including attachments and trailers), acquiring agricultural animals, investment purposes (excluding passenger vehicles and transport), construction (excluding loans for acquiring fixed assets for flour production, mineral waters, and non-alcoholic beverages), replenishing working capital necessary for the technological cycle of production processes, and conducting spring fieldwork and harvesting.
4. Subsidies are provided for loan agreements that were concluded no more than four years before the application was submitted.
5. Only new, previously unused agricultural machinery and equipment registered in the «State Registration of Agricultural Machinery» subsystem of the «e-Agriculture» information system are eligible for subsidies.

6. The interest rate is not subsidized under other state and/or budgetary programs of the Republic of Kazakhstan.
7. The source of financing for the loan/leasing must not be from the state budget or the National Fund of the Republic of Kazakhstan.
8. At the time of application submission, there must be no outstanding obligations regarding the repayment of the principal debt and interest.
9. The loan agreement must be valid at the time of application submission (not terminated or canceled).

2. Subsidizing the Reimbursement of Part of the Costs Incurred by Entities in the Agro-industrial Complex During Investment Injections (see Appendix 10).

Reference: Order of the Deputy Prime Minister – Minister of Agriculture of the Republic of Kazakhstan dated 26 October 2018 № 436 «On approval of the Rules for subsidising interest rates when lending to entities of the agro-industrial complex, as well as leasing for the purchase of farm animals, machinery and technological equipment»

Subsidy conditions:

- Investment subsidies are provided for investment projects put into operation no earlier than three years before the year of electronic application submission for subsidies.
- Only new, previously unused machinery, equipment, or technology, produced no earlier than three years before the date of the investment project's commissioning, is eligible for subsidies.
- If the project passports exclusively involve the acquisition of machinery, equipment, and/or technology, then only new, previously unused items produced and purchased no earlier than three years before the year of application submission are eligible for subsidies.

Agricultural Insurance

Under the new system, insurance is carried out on the Agroinsurance information service (hereinafter referred to as ISS), hosted on the Kezekte.kz platform. All participants in the insurance process must register on the Kezekte.kz platform using an electronic digital signature (see Appendix 10). The entire insurance process occurs online. In the ISS personal account, farmers select the insurance object, insurance company, and pay 80% of the insurance premium.



United States

In the US, the main financing mechanisms used for agricultural purposes include the following:

- **Loans Provided by the Farm Service Agency (FSA):** These loans are offered to farmers and ranchers to help cover operational expenses, purchase equipment, and improve their operations.
- **Grants from Government Agencies and Non-Profit Organizations:** Farmers may receive grants for specific projects or initiatives that promote sustainable agriculture, nature conservation, or research.
- **Subsidies:** The government provides subsidies to farmers to help stabilize agricultural crop prices, support farmer incomes, and ensure a stable food supply.
- **Insurance:** There are crop insurance programs that protect farmers against crop loss due to natural disasters or other unforeseen circumstances.

- **Private Loans from Agricultural Banks and Financial Institutions:** Farmers can also access financing through private lenders who may offer specialized credit products tailored to agricultural needs. The agricultural credit system in the United States is well-developed.

The agricultural **credit system** consists of several key intermediaries that provide farmers with loans and other financial services:

- 1. Commercial Banks:** These banks accept deposits from the public and provide loans to farmers.
- 2. Cooperative-Based Agricultural Credit Institutions:** These institutions mobilize funds from the money market and provide affordable loans to agricultural enterprises.
- 3. Special State Programs:** Various levels of government (federal, regional, local) use these programs to finance the agricultural sector from the state budget.
- 4. Credit Unions:** Based on the collective responsibility of members, these unions also provide loans to agricultural enterprises.

These intermediaries play a crucial role in meeting the financial needs of farmers in the United States and contribute to the development of the country's agricultural sector.

For a long time, commercial banks were the primary source of borrowed funds to finance farmers' agricultural needs. However, not all commercial banks operating under market conditions may be reliable and profitable partners for farmers. For this reason, farmers prefer to seek loans from credit institutions that make up the Federal Farm Credit System (FFCS).

The FFCS is a financial support system for agricultural enterprises in the U.S., consisting of specialized credit institutions that provide loans and financial support to farmers. These institutions, part of the FFCS, offer farmers more favorable lending terms than commercial banks can offer, providing more reliable and stable financial solutions. As a result, many farmers prefer working with credit institutions within the FFCS to meet their financial needs.

The Farm Credit Association is an independent government agency that provides general oversight of the Federal Farm Credit System (FFCS) in the United States. In establishing the FFCS, the U.S. government provided the initial capital needed to operate the system in its first phase ⁷.

At the same time, measures have been provided for the gradual repayment of debts by FFCS member farmers. This means that creditors of agricultural credit institutions can gradually repay their debts on loans granted to them through the FFCS.

Currently, the FFCS system is no longer dependent on the government and operates solely on funds received from the member farmers themselves. This demonstrates the self-sustainability and success of the agricultural credit system in the United States. Farmers can continue to receive the necessary financial support and access to credit, ensuring the sustainable development of the agricultural sector.

The FFCS consists of seven banks called **Farm Credit Banks**. These banks provide loans to farmers and other participants in the agricultural sector. They provide funds to 232 local borrowers' associations that are members of the FFCS. **Local borrower associations** are located throughout the United States and place loans with rural customers, including farmers, co-operatives, ranchers and other agricultural businesses. These associations operate at the local level and help farmers access the financial resources they need to grow their businesses.

⁷ Choraeva Z. A. Features of lending to the agro-industrial complex by the banking sector in foreign countries // Materials of the international scientific-practical conference "Prospects of economic integration of the Caspian littoral states and their regions", Makhachkala. 2010 r. pp.429-431

Local associations are divided into four types.

- 1. Federal Land Bank Associations (FLBA):** 72 branches nationwide.
- 2. Production Credit Associations (PCA):** 69 branches nationwide.
- 3. Federal Land Credit Associations (FLCA):** 31 branches nationwide.
- 4. Agricultural Credit Associations (ACA):** 60 branches.

The FLBA and FLCA primarily specialise in meeting long-term credit needs. They provide loans for the purchase and maintenance of land plots, construction of farm facilities, and other long-term investments.

PCAs focus on providing short-term loans to finance farmers' current operations such as purchase of seeds, fertilisers, equipment, etc.

In some areas, these types of associations are combined into the Agricultural Credit Association (ACA), which provide both short-term and long-term lending to provide a wide range of financial services to agricultural enterprises in the area. This consolidation increases the availability of credit and makes it easier for agricultural producers to obtain financial support.

Lending institutions within the Federal Farm Credit System (FFCS) are subject to rigorous audits and oversight by an independent federal agency called the Farm Credit Administration. Three members of this agency's board of directors are appointed by the President of the United States and confirmed by the Senate.

It is important to note that not one cent of taxpayer funds is spent to oversee and monitor the FFCS's activities. Although Congress approves the Farm Credit Administration's annual budget, the agency's operating costs are borne entirely by the lending institutions it regulates. This ensures the agency's financial independence and eliminates the need to use taxpayer funds for its operation.

Important advantages of the Farm Credit System are the *availability of credit to small and medium-sized farm businesses*, as well as convenient loan repayment terms tailored to agricultural cycles. The Farm Credit System currently provides more than 25% of all loans used by U.S. farmers and ranchers. In addition, the system provides guarantees and loan insurance, which reduces financial risk for both farmers and lenders. The Farm Credit System is an important tool for supporting and developing the agricultural sector and ensuring the country's food security.

The U.S. farm credit system does have features that make it unique and effective for farmers and agricultural cooperatives. The system is designed to ensure a smooth flow of capital from the national money market to rural areas and, unlike commercial banks, is not authorised to attract deposits. The absence of permanent shareholdings among clients allows them to use credit resources more flexibly and to avoid long-term financial commitments. Thus, the shareholder's share exists only during the period of time during which he takes a loan and amounts to 2-5 per cent of its total amount.

The farmer's share, which increases or decreases depending on the size of the loan, makes the farm credit system more attractive to clients, as they are not obliged to invest large sums at once. It also promotes farmers' participation in the co-operative movement and brings their interests closer to those of the co-operative. The assets of the FFCS are considered to be the co-operative property of its members.

A leasing corporation such as Farm Credit Leasing Services Corporation, being owned by banks, plays an important role in the farm credit system by ensuring that farmers have access to the necessary machinery, equipment and facilities without having to purchase them directly.

The Leasing Corporation's programs, complemented by maintenance, technical support and construction financing services, help to increase efficiency in the use of machinery and infrastructure, which in turn contributes to the productivity and profitability of farm enterprises. In addition, finding sources of financing for agricultural development allows farmers to develop and modernise their farms without facing financial obstacles.

The optimal combination of own and borrowed funds in the farm credit system allows for sustainable and efficient development of agriculture. The leasing corporation and other financial institutions within the farm credit system play an important role in supporting farmers and providing them with the necessary resources for successful agricultural business.

Studies emphasise the importance of self-financing of agricultural enterprises for their stability and sustainability, i.e. the implementation of expanded reproduction by at least 80% at the expense of their own investments, including budgetary subsidies, and up to 20% on bank loans. Thanks to their own investments and budgetary support, these enterprises can avoid financial difficulties and bankruptcy. Long-term planning and a balanced approach to financing play a key role in the success of rural farms.



European Union

NSERT 3. COMMON KEY ELEMENTS OF AGRICULTURAL SECTOR FINANCING IN THE EU⁸

- The main providers of agricultural sector financing are cooperative and commercial banks, state banks and credit-guarantee institutions, credit unions, microcredit organizations, leasing companies, as well as suppliers of agricultural resources and cooperatives.
- Co-operative banks are often closer to farmers than commercial banks.
- Agricultural sector lending in 14 EU countries is concentrated among a very limited number of intermediaries with a strong market presence.
- The lack of agricultural specialists in banks limits the flow of financing into this sector.
- Typical banking products offered to the agricultural sector include short-term, medium-term, and long-term loans, as well as credit lines and bank overdrafts. The most common credit product specifically designed for the agricultural sector is loans that offer pre-financing of state support measures, i.e., a risk-free financial operation for banks.
- Leasing is available in all EU member states, and its popularity is growing.
- Guarantee instruments are widely used in EU countries at regional, national, and EU levels, but with very different conditions and effectiveness. Basic guarantee products are often available on the market.
- The volume of loans provided to the agricultural sector by financial intermediaries in EU countries tends to increase, and the growth of agricultural sector lending is higher than the growth of lending to the economy as a whole in individual countries.
- In a number of member states, the agricultural sector is characterized by a relatively low risk of default. In most member states, the share of non-performing loans in the agricultural sector is lower than in other sectors of the economy.
- Often, the agricultural sector faces higher interest rates than other sectors of the economy, which is explained by high transaction costs in assessing loan applications for small loan amounts, as well as high market concentration, where only a few participants determine loan conditions. Small farms and young farmers are particularly disadvantaged.
- Half of the farmers applying for long-term loans are asked to provide a guarantee, and the guarantee required by financial institutions is often higher for the agricultural sector than for other sectors of the economy.

Let us look at the financing of the agricultural sector in selected EU countries.

⁸ *fi-compass*, 2020, Financial needs in the agriculture and agri-food sectors in the European Union, Summary report, 94 pages. Available at: https://www.fi-compass.eu/sites/default/files/publications/financial_needs_agriculture_agrifood_sectors_eu_summary.pdf

Finland

The Finnish financial market is highly concentrated. The two largest banks are OP Financial Group, a domestic co-operative bank, and Nordea, a publicly listed company and one of the largest financial operators in the Scandinavian region. OP Financial Group has a 40 per cent market share in business lending and Nordea has a 30 per cent market share. The third largest bank, Danske Bank, has a market share of 9%⁹.

As far as agricultural lending in Finland is concerned, OP Finance Group is the largest financial services provider, providing 2/3 of the market. In 2018, OP Finance Group's market share was 67% of all agricultural lending. It was followed by Nordea and POP-group (co-operative), each with a market share of 10%. The fourth largest financial service provider is Säästöpankki Group, which had a market share of 8 per cent in 2018. Other financial service providers cover only a small share of the agricultural finance market.

OP Financial Group and Nordea have a strong presence throughout the country. POP Pankki Group and Säästöpankki Group have regional offices, especially in agricultural areas in Western Finland, and both groups also have operations in agricultural areas in Eastern Finland. The range of their operations (covering key agricultural regions in Finland) is the main factor explaining their strong agricultural market share.

Some farmers also have access to short-term finance through agri-food companies as well as agricultural co-operatives. To ensure the supply of high quality agricultural products for their business, agri-food companies look for ways to help farmers meet their working capital needs. Through forward contracts, farmers receive working capital loans against the promise of future deliveries of their produce (which may also be at a pre-fixed price).

Financing for agriculture in Finland is based on bank lending, which is often supplemented by EU and national support. Business loans to agriculture include long-term and medium-term investment loans as well as loans for short-term financing and credit lines. The cost of the loan (interest rate) depends on the clients, their credit history, the purpose of the loan and the repayment period. The types of loan products are detailed in Table 1 below.

TABLE 1. OVERVIEW OF FINANCIAL PRODUCTS OFFERED BY FINNISH BANKS TO FARMERS, 2019

| | Product type | Purpose | Maturity date | Interest rates % |
|---|------------------------------------|---------------------|--|--|
| 1 | Working Capital Loan / Credit line | Working capital | Mainly short-term loans (1.5 years on average) or credit lines (1 year on average) | 1-4% |
| 2 | Investment loans | Capital investments | Mainly medium and long-term, some short-term loans | Maximum EURIBOR rate ¹⁰ 6 months + margin ¹¹ |

Source: *fi-compass, 2020, Financial needs in the agriculture and agri-food sectors in Finland, Study report, 73 pages.*

Banks mainly finance physical investments (buildings and equipment) and land purchases. Farmers invest in buildings and equipment to improve the efficiency of their farming activities. Similar investments are made by new farmers who take over the management of an existing farm. Banks consider the livestock sub-sector as the most reliable. Investments in this subsector include renovation and construction of barns, piggery or broiler farms and land acquisition. In crop production, the largest loans are mainly used to purchase land,

⁹ Bank of Finland, 2019

¹⁰ European Interbank Offered Rate - average interest rate on interbank loans granted in euro.

¹¹ For example, Finland's S-Bank mentions margins ranging from 5.99% to 14.99% on its website, source: <https://www.s-pankki.fi/sv/lan-och-krediter/slan/>

but purchases of equipment such as grain dryers, heating plants and silos also play an important role.

Leasing (both financial and operational) also plays a role in Finland. In 2017, the entire leasing market in Finland was EUR 9.7 billion, of which instalment purchases accounted for EUR 4.6 billion¹². Around 95 per cent of all leasing (€9.2 billion) was for equipment. Rental and leasing income from agricultural machinery was estimated at EUR 6.5 million in 2019¹³. In Finnish agriculture, the share of financed machinery in total machinery sold (penetration rate) varies between 40% and 65%. The vast majority of all leasing is done through banks, which account for 84% of all transactions. In 2012, 21 companies were active in finance leasing in Finland, eight of which were credit institutions¹⁴.

In terms of EU funding, there are some funding options, e.g. under COSME¹⁵, InnovFin or EaSI¹⁶, but none of them are significant or important for the sector.

Finnish businesses are offered lower interest rates than businesses in the other 24 EU countries. However, the average interest rate of 2.25 per cent in the agriculture, forestry and fisheries sectors in Finland is higher than in almost all other sectors of the economy. This is despite the good risk performance of the agricultural portfolio.

Finnish banks mainly rely on mortgages as collateral. Depending on the loan amount and the type of borrower (new customer or customer with a credit history), movable property is also accepted as collateral. Personal guarantees are sometimes accepted, but they are of secondary importance. As noted earlier, banks also accept CAP¹⁷/EAFRD¹⁸ subsidies (direct payments and/or grants) and pledge of life insurance claims as collateral. However, their collateral value in comparison is relatively low.

As in other EU countries, personal collateral is the most widely used form of agricultural loan guarantee in Finland. According to Fi-Compass research, 76 per cent of all loans in Finland were guaranteed by a personal guarantee. Private guarantees were provided by 10 per cent of borrowers and 8 per cent used state guarantees.

Loans to small farms tend to have longer repayment periods than loans to large farms. Small farms are often involved in only one or two agricultural activities and thus have income only a couple of months a year. Large corporate holdings, on the other hand, engage in numerous farming activities and thus have more frequent income throughout the year. Consequently, they have shorter repayment periods because they can repay loans earlier or make repayments more frequently¹⁹.



Sweden

The agricultural sector in Sweden is financed through a diversified network of financial service providers. Commercial banks have an important share of the market for financing

¹² Santeri Rautio, 2018, Private-label financing of forestry and agriculture equipment in Finland and Estonia.

¹³ Statista, 2020, Industry revenue of 'rental and leasing of other machinery, equipment' in Finland from 2011 to 2023.

¹⁴ Statistics Finland, 2012, Financial leasing. Unfortunately, Statistics Finland discontinued these statistics and no new data has been produced by them since 2012

¹⁵ EU Programme on Enterprise and SME Competitiveness.

¹⁶ EU Employment and Social Innovation Programme.

¹⁷ Common Agricultural Policy.

¹⁸ European Agricultural Fund for Rural Development.

¹⁹ Alho, E., Arovuori, K., Heikkilä, A.-M., Niskanen, O., Väre, M. & Yrjölä, T., 2019. Financial position of Finnish agriculture. PTT Working Papers 200.

agricultural producers, but the network of savings banks is even more important. In addition, a mortgage association and an insurance company have a significant share of the agricultural and forestry financing market.

Sweden was heavily influenced by the establishment of savings banks in Europe in the early 19th century, and there are still many independent savings banks operating in regional or local markets.

Savings banks control almost a third of the rural and forestry finance market and are the preferred choice of financial institutions among farmers (including the market share of Swedbank, which is an independent commercial bank but where savings banks are one of the co-owners).

The mortgage association controls about 21% of the market. Established in the 19th century, Landshypotek Bank is based on a cooperative tradition where landowners jointly formed mortgage associations, offering farmers loans secured by agricultural property without any claim to profit. Landshypotek Bank is today one of the ten largest banks in Sweden. It plays an important role in the agricultural sector through its network of 19 branches.

After the financial crisis that hit Sweden in the early 1990s, 4 commercial banks became almost equally strong and formed the banking environment. The «Big Four», as they are commonly referred to, are: Handelsbanken; Nordea; SEB; and Swedbank. All four of these banks originated and developed in Sweden. Nordea and SEB control about 6 per cent each of the market. Swedbank is partly owned by the savings banks, so its market share is reported together with the savings banks.

Another player providing finance to the Swedish agricultural sector belongs to a group of insurance companies. Länsförsäkringar Bank is made up of 23 independent insurance companies mainly involved in the agricultural sector. Together they own the administrative centre Länsförsäkringar AB, which calculates tariffs and develops insurance terms and conditions for all independent companies. Länsförsäkringar Bank was founded in 1996 and is owned by Länsförsäkringar AB. The bank was conceived as a complement to the insurance offer, allowing customers to carry out their most important economic transactions in one company. According to Lantbruksbarometern, they control approximately 8 per cent of the market.

The role of **foreign banks** is increasing. Danske Bank is the second largest foreign bank in Sweden after Nordea and fifth in the Swedish market. Danske Bank provides services and products for all types of customers. It also plays a role in the agricultural sector, especially after a series of mergers and acquisitions, culminating in the merger of 17 regional Swedish banks in 1997. Danske Bank was the first foreign bank to have an extensive branch network in Sweden. The number of branches and their distribution are important for covering the agricultural sector.

The state-owned lending institution offers financing without guarantee requirements but with higher interest rates. Almi Företagspartner was founded in the mid-1990s as a government complement to existing private banks and financial institutions with a focus on innovative entrepreneurs (available for many sectors of the economy, including agriculture). Their approach is to finance investments without requiring guarantees. To compensate for the higher risk and to maintain their role as a complement rather than a competitor to banks and financial institutions, the interest rates they offer are higher than normal market rates.

Agricultural cooperatives, together with the Farmers' Union, have established a credit institution called Tillväxtbolaget. It includes HKScan (meat producers), Lantmännen (cereal producers) and the Swedish Farmers' Federation (Farmers' Union), which aim to increase

the competitiveness of the Swedish agri-food industry. In its current form, Tillväxtbolaget has existed since 2018 and provides loans, including mortgages, for investment in viable projects. In order to find suitable economic solutions, Tillväxtbolaget often organises tripartite discussions (farmer – representative(s) of the main farmer bank – representative of Tillväxtbolaget).

Leasing. Many banks provide leasing solutions and have their own subsidiaries specialising in this area. Some banks have a contract with an external leasing service provider and may therefore include leasing in their product range. From the farmer's point of view, leasing can be discussed with his regular bank representative. Leasing is a crucial product for banks competing in the Nordic market.

Cooperatives also work with leasing solutions in various forms. The Federation of Swedish Farmers' Cooperatives has agreements that allow them to offer favourable leasing terms to their members. Another cooperative in Sweden, Lantmännen, has its own division, Lantmännen Finans, which provides financial solutions for machinery leasing. In addition, there are financial institutions in the Swedish market that specialise in leasing and financing the purchase of machinery and vehicles.

Financial products for the agricultural sector

Mortgage loans

Long-term loans often rely on residential property as collateral, in which case they are referred to as mortgages. Banks offer mortgages with LTV ratios of up to 70% and in some cases up to 80%.

Credit card, credit line or account line of credit

Credit card via credit lines or account credit lines are often used in Sweden, regardless of the business sector. A maximum loan amount is agreed upon and interest is paid on the current debt. In addition, there is a fixed annual fee depending on the maximum loan amount. For the agricultural sector, this form of short-term financing is less demanded than for other industries because of the existence of credit organisations.

Leasing or purchase of machinery

The purchase of machinery can be financed in several ways. One can use a « standard loan», the repayment period of which is usually 4-6 years. The second option is leasing, where the bank buys the machine and leases it to the farmer. At the end of the lease term, the machine still has residual value and can be purchased at residual value or a new leasing agreement can be concluded.

CAP Support Guaranteed Loans

The bank loan for farmers is an EU credit line. Although most farmers seek and receive various grants from the CAP, the application process for subsidies is sometimes time-consuming. The EU credit line is a special loan that can amount to a maximum of 80% of the total CAP subsidy amount, subject to individual credit assessment. Upon full or partial payment of the grant, the loan is correspondingly repaid.



Bulgaria

Since Bulgaria now has full access to the EU market, financial institutions, despite agriculture being considered a risky sector, have begun to view the development opportunities in this sector more favorably. Since 2014, lending to the agricultural sector has been growing, culminating in €5.4 billion in 2018. This «credit boom» was driven by farmers' investments

in their enterprises, as well as subsidies from the CAP and the Bulgarian government. The level of financing provided by credit organizations almost matched the level of government support²⁰.

According to the National Bank of Bulgaria, the financial needs of agricultural holdings are potentially met by 261 financing providers: 26 banks, 26 credit co-operatives, 208 non-bank financial institutions and 1 National Guarantee Fund.

The main providers of credit for the development of the agro-industrial complex are **commercial banks**. There are 26 registered banks in Bulgaria, and almost half of them offer credit products to agricultural firms.

Three major banks dominate agricultural financing in Bulgaria: UniCredit Bulbank, Raiffeisenbank (Bulgaria) and ProCredit Bank (Bulgaria). These banks have the largest market share in the segment “agricultural credit and leasing”²¹. UniCredit Bulbank holds 32.3 per cent of the market, ProCredit Bank (Bulgaria) 17.8 per cent and Raiffeisenbank (Bulgaria) 15.5 per cent. Together, these three banks have more than 65 per cent of the market.

Banks mainly provide long-term loans, which are used to cover farm investment costs, and short-term consumer loans, which are used for working capital.

Banks offering agricultural loans also work with **National Guarantee Fund**. The National Guarantee Fund was established in 2008 as part of the Bulgarian Development Bank Group and issues guarantees to supplement the collateral required by commercial banks to approve loans for Bulgarian businesses, including agriculture. The National Guarantee Fund also benefits from COSME counter-guarantees and was the executive body of the EAFRD-funded financial instrument «**Bulgarian Rural Credit Guarantee Fund**» established during the RDP period (2007-2013). Under this financial instrument during the period 2013-2015, 613 guarantees were provided to 544 grantees²².

During the 2014-2020 period, the National Guarantee Fund continued to issue guarantees for agriculture using national resources. It worked with 16 commercial banks²³. Farmers with an approved loan application for an investment project under some measures of the RDP²⁴ for 2014-2020 could also benefit from the guarantee scheme. The guarantee covered up to 50 per cent of loans with a maximum amount of €1.5 million per loan. This helps to reduce collateral requirements for farmers and provides risk protection for participating banks. The National Guarantee Fund prioritises loans secured by assets financed under projects approved under the RDP, demonstrating further risk aversion. In addition, smallholder farmers were often unable to utilise the guarantees provided.

A number of non-bank financial institutions and credit cooperatives also operate in this sector and specialise in providing low-interest loans to their members, which are used, for example, to invest in land and agricultural machinery. Non-bank financial institutions and co-operatives/Credit cooperatives can provide both business and personal microloans.

²⁰ Based on FAO estimations, cited in: Borisov P., et al., 2019, ‘Influence of the common agriculture policy on Bulgarian agriculture’, published in: Bulgarian Journal of Agricultural Science 3:439–447. Available at: https://www.researchgate.net/publication/239809387_Institutions_exchange_and_firm_growth_Evidence_from_Bulgarian_agriculture

²¹ Since banks report loans and leasing together, it is not possible to provide detailed data on leasing.

²² Bulgarian EAFRD Managing Authority, June 2020.

²³ Allianz Bank, DSK Bank, Pireus Bank Bulgaria, Bulgarian American Credit Bank, Bulgarian Development Bank, United Bulgarian Bank, Municipal Bank, First Investment Bank, Raiffeisenbank Bulgaria, International Asset Bank, Investbank, Teksim Bank, TBI Bank, UniCredit Bulbank, D Commerce Bank, Eurobank Bulgaria.

²⁴ RDP Rural Development Programme.

With regard to business microloans, non-bank financial institutions and co-operatives/Credit cooperatives can disburse a maximum of €50,000 and €100,000 respectively.

Sometimes farmers can also turn to **non-banking financial agencies** (208 in Bulgaria) that offer short-term loans of up to €500, but mostly at very high interest rates, short repayment periods and high penalties for late repayment.

Bulgarian banks offer loans to farmers for both investment and working capital. The loan repayment period and financing amounts vary depending on the purpose of the loan, the size of the farm and the financial capacity of the farmer. These products include the following:

- Short-term loans up to 18 months, bank overdrafts and credit cards with an interest rate of around 5.5 per cent;
- Medium-term loans (up to 5 years) for investment purposes, interest rate of about 5%;
- Long-term loans (over 5 years) for investment purposes, with interest rates based on the short-term rate plus a margin determined individually depending on the amount, currency, term and collateral for the requested loan.

Financing provided by input suppliers or other agribusinesses plays a key role in Bulgaria. Farmers can benefit from value chain financing mechanisms. Particularly in the dairy value chain, large dairies such as Danone or Friesland have established sophisticated value chain mechanisms²⁵. This strong vertical integration has evolved over time: it started with the provision of quality inputs and extension services to farmers, and then moved to the provision of input finance, investment loans and bank loan guarantees. Farmers agree to sell their produce to this particular buyer, and in return, agri-food businesses provide these services. This also ensures that farmers produce the required output – in terms of quantity and quality.

In the grain sector, large farmers have started to act as aggregators and traders. They collect the produce of small farmers and sell it. Some of the large farmers also take care of crop exports. In this way, large farmers contribute to efficient market structuring.

Additional business loan products were offered under financial instruments financed by the EU's Competitiveness Program for Small and Medium-sized Enterprises (COSME). In Bulgaria, as of the end of 2018, COSME provided access to finance to 296 SMEs in the agriculture, forestry and fisheries sector totaling EUR 39.3 million (13.2 per cent of the total portfolio).

Partially guaranteed loans were also available under **InnovFin – EU Finance for Innovators program** for innovative SMEs and small mid-cap companies with up to 499 employees. InnovFin provided various financing instruments (including debt and equity products) focused on investments in research and innovation. In Bulgaria, as of the end of 2018, InnovFin provided access to finance to 168 SMEs in the agriculture, forestry and fisheries sectors totaling EUR 24.9 million (15% of the total portfolio).



Lithuania

Three Scandinavian banks control more than 80 per cent of the banking market. In 2019, there were six banks and seven branches of foreign banks operating in Lithuania. However, Lithuania's banking sector is dominated by subsidiaries of large Scandinavian banks, of which the three largest banks – SEB, Swedbank and Luminor – are wholly owned by their parent legal structures in Sweden and Norway. The sector is highly concentrated, with **these**

²⁵ Swinnen J., Inclusive Value Chains, November 2018, Agricultural Development and Poverty Reduction, presentation delivered at FERDI – AFD Workshop on 'Agricultural Value Chain Development and Smallholder Competitiveness', Paris.

three banks controlling 84% of the market. The remaining three banks – AB Šiaulių Bankas, UAB Medicinos Bankas and AB Citadele Bankas – are significantly smaller and owned by groups of local and foreign investors. In addition to banks, there are 64 Credit cooperatives operating in Lithuania, with assets totaling EUR 707.1 million as of April 2019, or 2.5 per cent of total banking sector assets. The Lithuanian government has no ownership interest in the banking sector.

Luminor is considered the most active bank in agricultural lending. Historically, the majority of the agricultural sector has been Luminor customers²⁶. Luminor currently maintains this leadership despite changes in name and ownership. Other major banks such as SEB, Swedbank and then AB Šiaulių Bankas and UAB Medicinos Bankas also work with the agricultural sector. Luminor as well as Swedbank and SEB have employees with agricultural experience who work only with the agricultural sector.

There are various products available in the market that are specifically targeted at the agricultural sector. Currently, the market offers products specifically targeted at the agriculture and agri-food sector, such as investment loans, machinery and equipment leasing, and loans specifically for the agricultural sector that advance direct payments. Working capital finance products such as lines of credit and working capital loans are also available.

Table 2 provides an overview of available products and their corresponding terms as of 2019.

Some lending platforms do not require collateral, but charge high interest rates and high administrative costs (0.15 to 0.6 per cent per month).

TABLE 2. OVERVIEW OF FINANCIAL PRODUCTS AND TERMS AVAILABLE FOR THE AGRICULTURAL SECTOR IN LITHUANIA IN 2019.

| Product type | Purpose | Providers | Repayment Term | Interest rate | Average loan amount, euros |
|------------------------------------|---|---|------------------------------------|--------------------------------------|---|
| Investment loans | Capital Investments | Banks | Medium-term and long-term loans | 3-4% | EUR 50 000-200 000 |
| | | Credit cooperatives | Medium-term and long-term loans | | |
| | | Fast loan companies, lending platforms | Predominantly medium and long-term | 3-4% | EUR 30 000-50 000 |
| Working capital loans | Working capital | Credit cooperatives | Short-term loans | +10% ²⁷ | From €2,000 up to 50% of monthly sales volume |
| | | Credit cooperatives | Short-term loans | +8% | EUR 10-20 000 |
| | | Resource providers | Short-term loans | Usually 1% per month | EUR 10-20 000 |
| | | Fast loan companies, lending platforms | Short-term loans | 6-18 % | EUR 2-5 000 |
| Loans with interest rate subsidies | Working capital and capital investments | Agricultural Credit Guarantee Fund through commercial banks and Credit cooperatives | Short, medium and long-term | Compensates 80% of the interest rate | 120 thousand euros family farms, 250 thousand euros agricultural companies (2018) |

Source: *fi-compass, 2020, Financial needs in the agriculture and agri-food sectors in Lithuania, Study report, 85 pages.*

²⁶ As of 1 April 2019.

²⁷ When banks are not interested in providing relatively small loans (less than €10,000), they instead offer consumer loans, which can carry an interest rate of more than 10 per cent plus additional administrative costs.

Medium-term investment loans for the development of capital in non-agricultural assets, such as machinery, equipment, buildings, and structures, constitute a significant portion of loan volumes. This type of loan is most often used in combination with investment support under the Rural Development Program. These investment loans are typically offered with a medium-term repayment period, usually two to three years. Long-term investment loans are less commonly offered. The interest rate varies from bank to bank, depending on the loan amount and repayment term, but currently ranges from 4-6%.

For supporting day-to-day activities, there is a long-standing tradition of providing loans in the form of working capital credit lines. These are offered with short-term repayment periods of 12, 15, or 18 months. This overdraft allows the farmer to overcome seasonal or cyclical issues typical in agriculture. Similar to a regular checking account, the working capital credit line allows daily withdrawals and deposits. The interest rate on this type of financial product is significantly higher compared to other types of loans.

The consumption of various products varies throughout the year. In the spring, short-term working capital loans and credit lines are more actively used. Medium-term and long-term loans, such as investment loans typically used for purchasing agricultural machinery or land, are utilized throughout the year, but with higher demand in the fall/winter.

In Lithuania, smaller loans are provided by Credit cooperatives and their financing of the sector is steadily increasing. Credit cooperatives tend to be more flexible towards customers and adapt to their needs. As Credit cooperatives have a long history of cooperation with the agricultural sector, they are familiar with the specifics of the sector, which reduces the credit risk and the required interest rate. For the same reasons, they do not always require collateral. However, due to their small amount and the higher impact of administrative costs, loans provided by Credit cooperatives are more expensive (high interest rates) than larger loans from banks with longer maturities. On average, a loan from a Credit cooperative to a farmer is around €20,000. The interest rate for loans below €50,000 is in the range of 8-12 per cent. Thus, larger agricultural producers/companies often receive financing from commercial banks, while Credit cooperatives provide more loans to smaller farms.

In addition to traditional loans from financial intermediaries, agricultural entities often use commodity credits from suppliers. Therefore, capital goods such as seeds, chemicals, spare parts for equipment, etc., are paid for after the sale of the harvest and deducted from the payment to the supplier. This financing method is one of the main sources of external financing for farmers and small businesses. Although exact data is lacking, it is estimated that these credits account for nearly 50% of the financial obligations of farming households.

The Agricultural Credit Guarantee Fund (ACGF) utilizes several different financial instruments, with the greatest demand for concessional loans being for short-term loans. The ACGF manages financial measures for the agricultural sector.

ACGF manages and offers five products, three of which are typical financial instruments (from 1 to 3):

- Provides individual guarantees to financial institutions and leasing companies for loans (leases) granted to entities in the agriculture and forestry sectors, food sector, and fisheries;
- Issues portfolio guarantees to credit organizations for loans for working capital replenishment and/or the acquisition of biological assets. Portfolio guarantees can be issued for loans provided to small enterprises engaged in primary production, as well as cooperatives operating in livestock, dairy, berry, fruit, and/or vegetable sub-sectors;

- Offers loans for agricultural machinery and equipment. Loans are provided to agricultural entities engaged in primary production;
- Provides support for subsidizing the guarantee fee;
- Provides support for subsidizing loan interest rates.

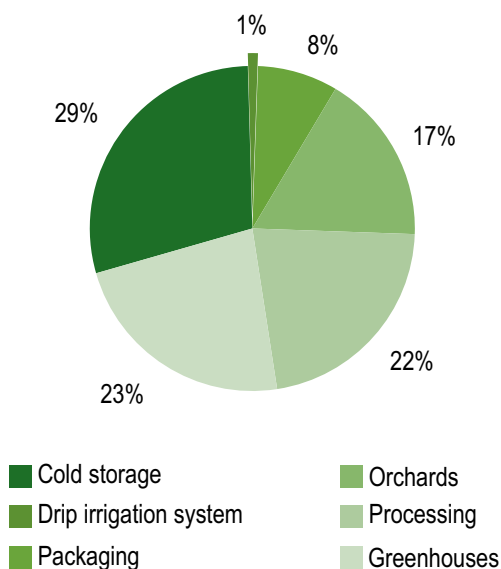
1.2. «EXPERIENCE OF THE «HORTICULTURE DEVELOPMENT PROJECT IN UZBEKISTAN» (2014-2023) FROM THE WORLD BANK TO FINANCE FARMERS AND AGRIBUSINESSES

«Uzbekistan Horticulture Development Project» is part of a portfolio of agricultural investments aimed at diversifying agriculture by growing higher value crops, increasing agricultural yields and productivity, and creating more and better jobs in rural areas. Approved in June 2014, the «Horticulture Development Project in Uzbekistan» focused on addressing several constraints facing the horticulture sector: (a) improving access to technology, knowledge and markets; (b) strengthening technical and managerial capacity in the agriculture and agribusiness sectors; and (c) introducing new financial products. The design of «Horticulture Development Project in Uzbekistan» drew on the experience of the Rural Enterprise Support Program (RESP), which has created a successful model of long-term agricultural finance through private and state-owned banks.

The primary beneficiaries of the «Horticultural Development Project in Uzbekistan» were farmers, private enterprises, agro-firms and agro-processing companies operating in the horticultural sub-sector of the country. Secondary beneficiaries were the participating financial institutions (commercial banks) through skills development and acquisition of a diversity of banking offers of appropriately adapted financial products.

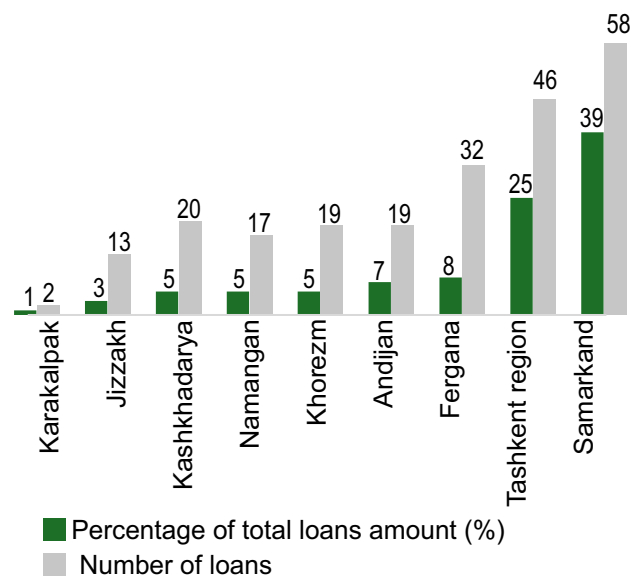
During the first two years of implementation, the Project financed 228 sub-loans, with total disbursements accounting for 97% of the allocated funding for Component 2. This demonstrated the effectiveness of the Project. Figures 1 and 2 provide a breakdown by type and location of sub-loans for the first 2 years of the Project.

FIGURE 1: PROJECT INVESTMENTS IN HORTICULTURE



Source: project reports

FIGURE 2: LOAN RECIPIENTS BY REGION



Source: project reports

The demand for loans in the horticulture sector was high and filled by liquidity constraints in the banking sector. Full utilisation of Component 2 of the project showed high demand for sub-loans. This was expected under the «Uzbekistan Horticulture Development Project», considering the experience of RESP II, sector analysis, and expressions of interest from potential PFIs [Participating financial institutions]. Given this accelerated utilization of the credit line and the ongoing significant unmet demand for investment resources in the agribusiness sector, the Government of the Republic of Uzbekistan approached the World Bank with a request for additional credit to expand investment and working capital sub-loans and leasing finance activities.

The financing of the «Uzbekistan Horticulture Development Project» played an important role in stimulating lending in the horticulture sector. The use of public funds to support the provision of financing through financial institutions is crucial for accelerating the sector's development and filling a critical gap in agricultural financing that cannot be fully met by private sector financial flows alone. This is a short-term measure aimed at kick-starting the growth of the horticulture sector, which will gradually be phased out to ensure the availability of financing from the private sector. However, at this stage, liquidity constraints remain a challenge in many sectors and are particularly severe in the agricultural sector, where investments in horticultural production and processing can be high, and repayment terms are much longer than those for annual crops or non-agricultural activities.

The World Bank-funded «Uzbekistan Horticulture Development Project» (UHDP) is estimated to have helped create over 34,000 new jobs, of which 13,000 were for women. Investments of USD 1 million within this project have, on average, created 31 jobs in greenhouse farms and 50 jobs in cold storage and processing facilities²⁸.

²⁸ World Bank, 2022 Analysis of the Implementation of the 2020-2021 Agricultural Development Strategy of the Republic of Uzbekistan, World Bank, Washington, D.C.

CONCLUSIONS TO THE FIRST CHAPTER

The examination of global financing experiences in agriculture shows that in the Russian Federation and Kazakhstan, this process is carried out through various mechanisms of state support, including government guarantees, subsidies, credit programs, and grants. These measures aim to improve the financial situation of agricultural producers, stimulate the development of the industry, increase agricultural production, and modernize infrastructure and technologies in agriculture.

Overall, the agricultural financing system in the aforementioned CIS countries encompasses a wide range of state support measures and instruments aimed at stimulating industry development, enhancing productivity, and ensuring the country's food security. The government actively invests in agriculture, facilitating its modernization and sustainable development.

At the same time, non-state forms of financing are actively developing, providing farmers with the opportunity to attract funds at various stages of their activities, including purchasing equipment, developing infrastructure, increasing production, and promoting their products in the market. This direction of financing helps to establish direct relationships between investors and farmers, contributing to the creation of long-term partnerships and increasing trust in the agricultural sector.

Thus, the development of non-state financing for farmers represents a promising direction that complements state support and contributes to the diversity of financial opportunities for agricultural development. The choice between different sources of financing allows farmers to select the most optimal and beneficial options for their business, ensuring sustainable development and growth in agricultural production in Russia.

As the experience of financing the agricultural sector in developed countries, particularly the United States and European nations, demonstrates, this system is highly developed and includes various banks, cooperatives, and associations that jointly provide financial support to farmers. They offer a wide range of financial products, such as mortgage loans, credit lines, leasing, and guaranteed loans, thereby helping farmers invest in projects and enhance the competitiveness of the agricultural sector. This synergy between different financial institutions and producers fosters the sustainable development of the agricultural sector.

A notable feature of the United States is the farmer credit system, which represents a well-coordinated and effective funding model for agricultural enterprises, contributing to their development, modernization, and sustainable operation. The absence of deposit attraction and the flexibility in using credit resources make this system more appealing to farmers. The use of shares when obtaining loans allows agricultural producers to avoid long-term financial commitments, facilitating their participation in the cooperative movement.


It is also significant that the farmer credit system provides access to financing for both small and medium-sized agricultural enterprises, as well as large producers in agriculture. Flexible repayment terms and credit guarantees help reduce financial risks for all market participants.

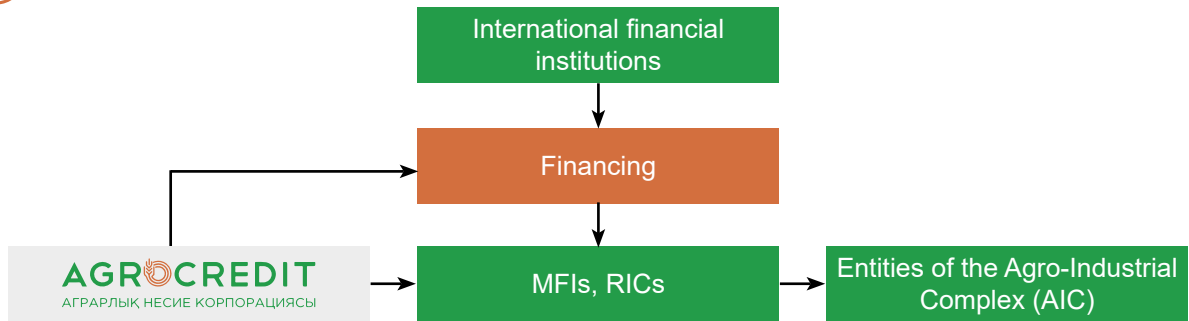
Credit unions and cooperatives also operate in the agricultural financing sector. Their main advantage for the industry is their specialization in providing loans to their members at low-interest rates.

Such models can serve as good examples for other countries, including Uzbekistan, where developing financial instruments and agricultural lending is a key task for the sustainable development of the industry. It is important to study the successful functioning of these financing systems in other countries and adapt them to local conditions to achieve the set goals.

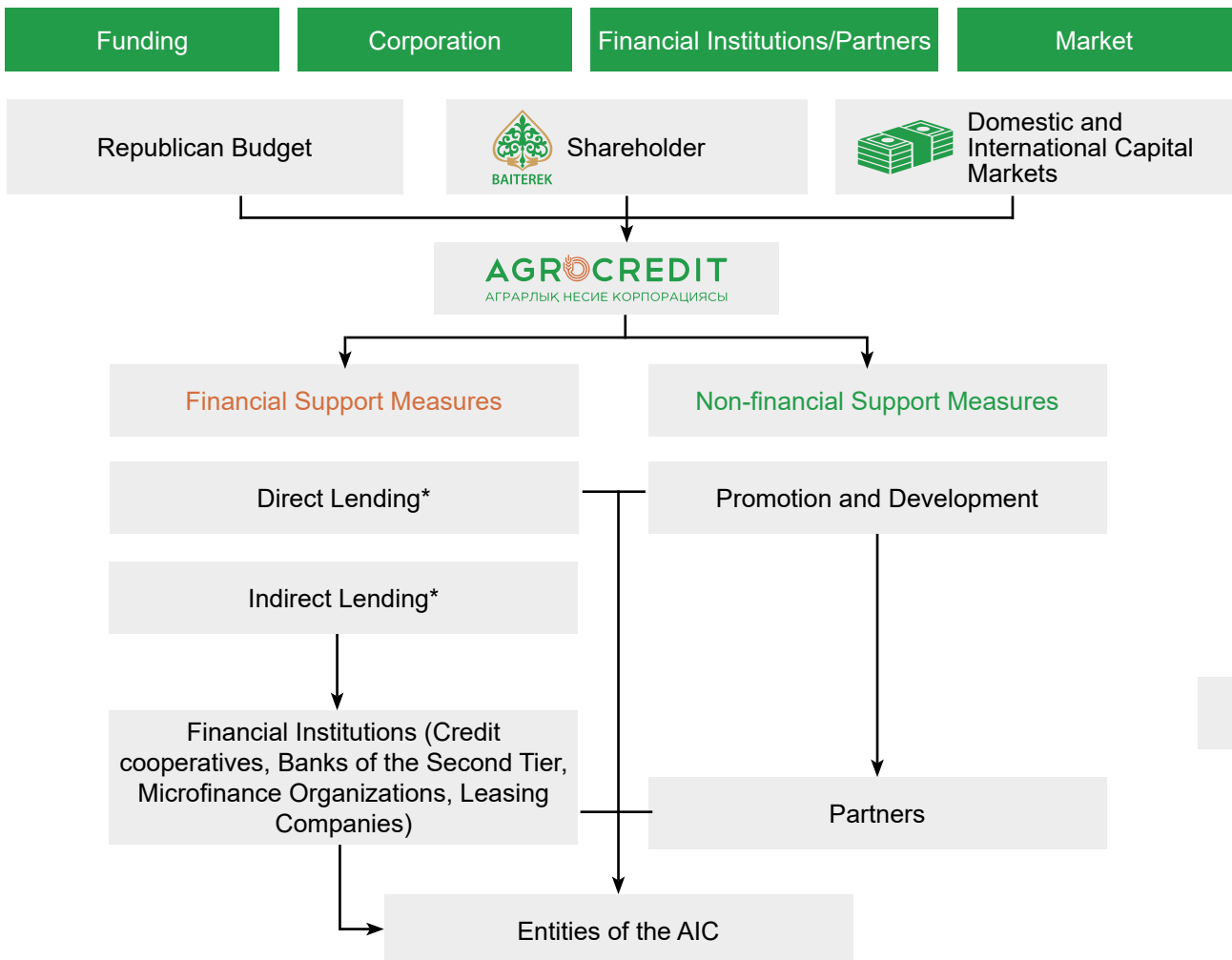
APPENDICES

APPENDIX 1. FINANCING OF AIC SUBJECTS THROUGH LEASING COMPANIES

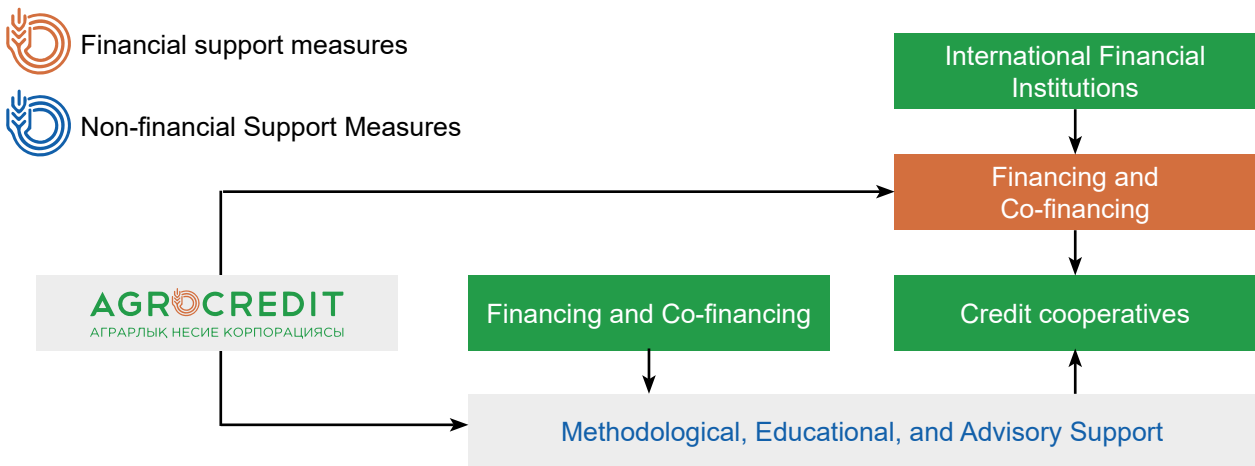
 Financial support measures



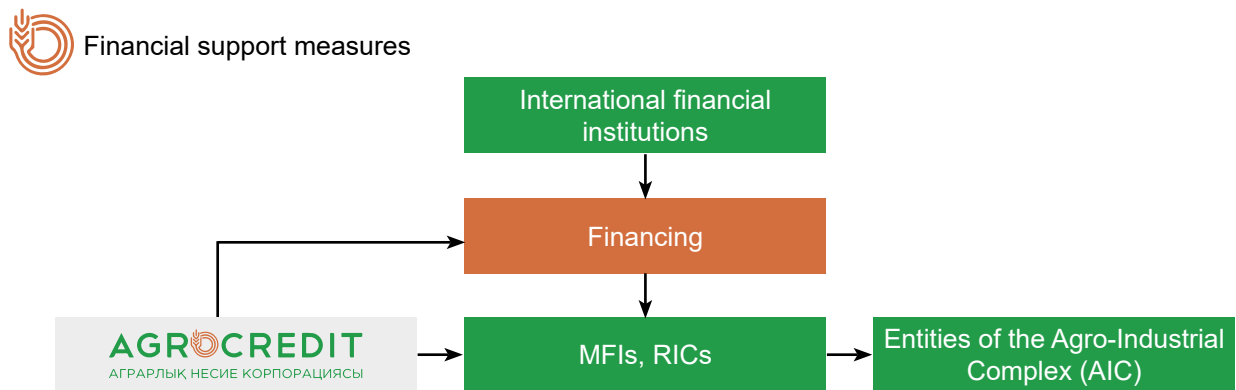
APPENDIX 2. AGRARIAN CREDIT CORPORATION JSC



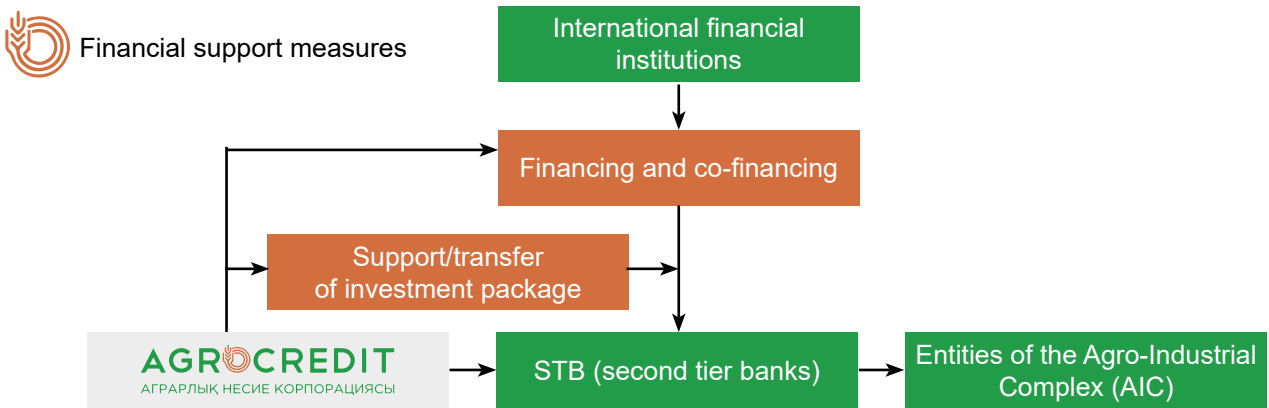
APPENDIX 3. FINANCING THROUGH CREDIT COOPERATIVES



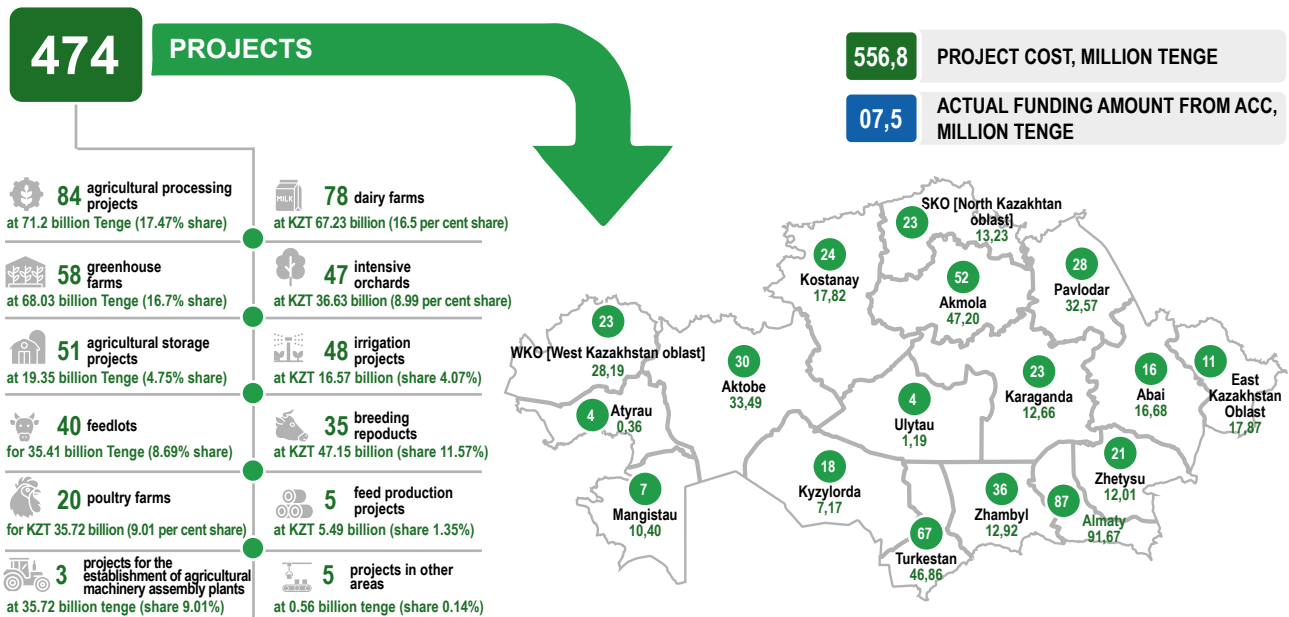
APPENDIX 4. FINANCING OF AGRICULTURAL SECTOR ENTITIES THROUGH MICROFINANCE ORGANISATIONS



APPENDIX 5. FINANCING THROUGH SECOND-TIER BANKS



APPENDIX 6. INFORMATION ON FINANCED INVESTMENT PROJECTS (2006-2023)

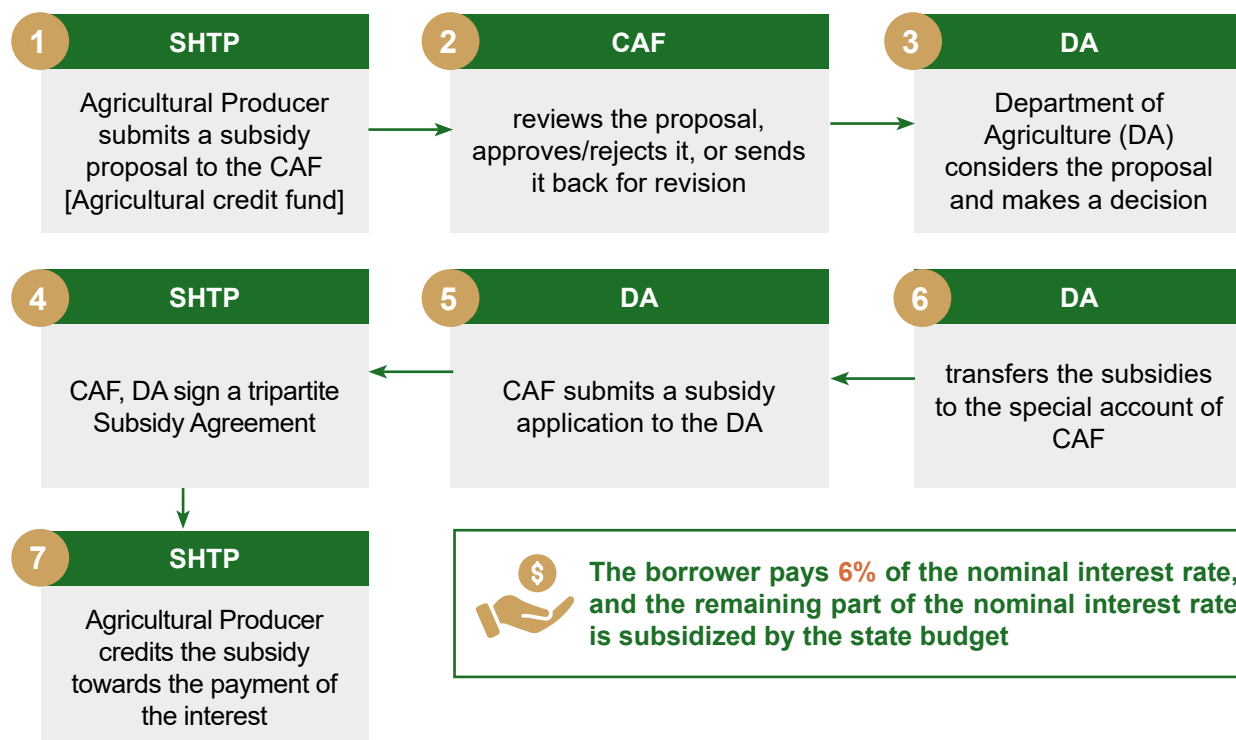


APPENDIX 7. LOAN PROGRAMS

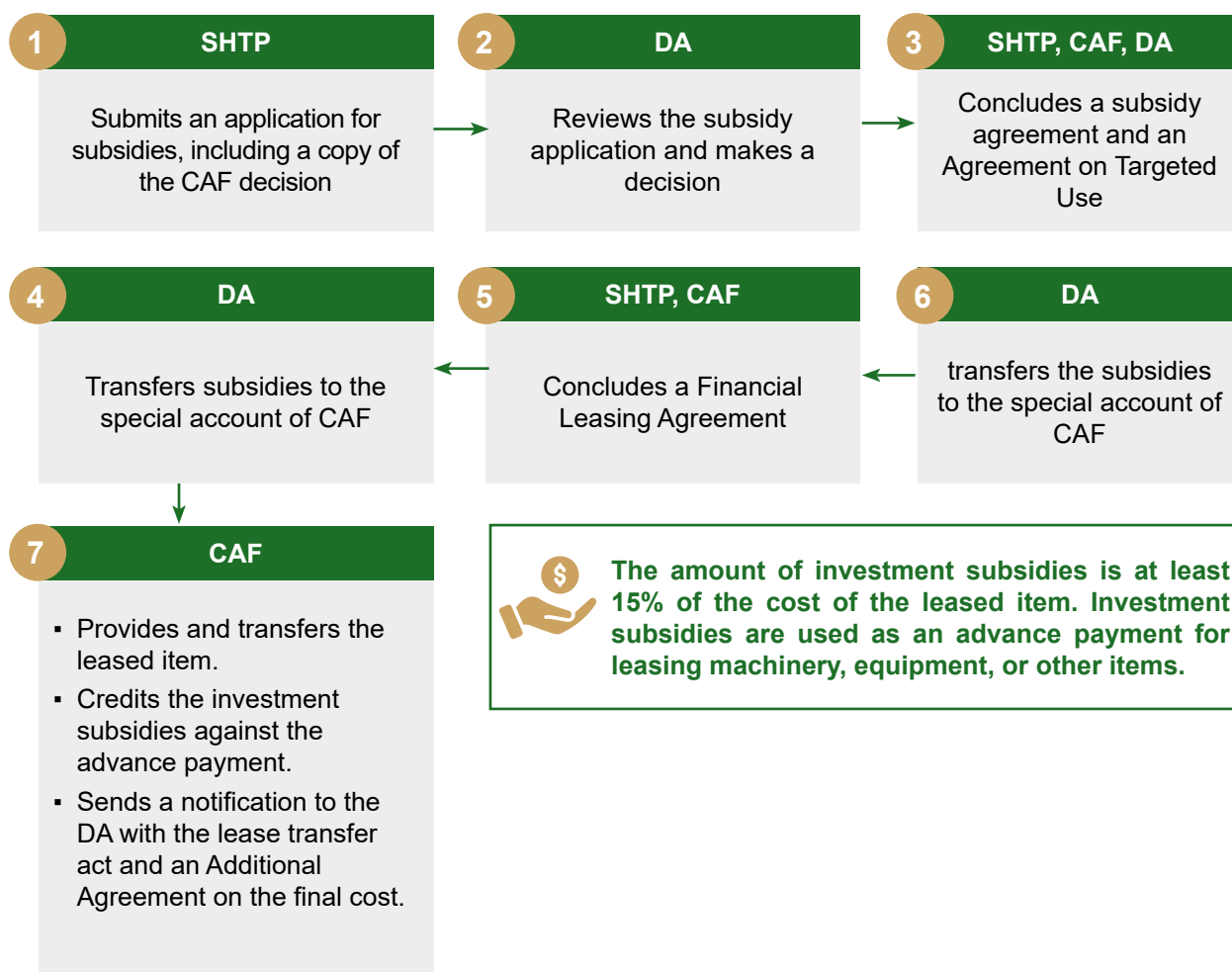
| | KEN DALA | Agribusiness | Isker | Microcredit for young people |
|--------------------|---|---|--|---|
| Financing channels | <ul style="list-style-type: none"> ▪ Credit Cooperative; ▪ Microfinance Organizations; ▪ Second-tier Banks; ▪ Regional Investment Centers. | <ul style="list-style-type: none"> ▪ Branches of JSC «Agrarian Credit Corporation»; ▪ Credit cooperatives; ▪ Leasing companies; ▪ Second-tier banks; ▪ Microfinance organizations; ▪ Regional investment centers. | <ul style="list-style-type: none"> ▪ Direct lending; ▪ Credit cooperatives; ▪ Microfinance organizations. | Branches of JSC «Agrarian Credit Corporation»; |
| Intended use | Lending for working capital replenishment to conduct spring fieldwork and harvest. | <ul style="list-style-type: none"> ▪ Acquisition of fixed assets; ▪ Construction and installation works; ▪ Working capital replenishment; ▪ Implementation of investment projects. | <ul style="list-style-type: none"> ▪ Acquisition of fixed assets; ▪ Working capital replenishment. | The program is aimed at supporting young entrepreneurs aged 21 to 35. |
| Loan amount | From 1 million tenge to 10 billion tenge (for financial institutions) Interest Rate 1.5% per annum (APR – from 1.5% per annum) (when lending to borrowers of Credit cooperatives, regional investment centers, microfinance organizations, second-tier banks – margin not more than 3.5%) | Minimum amount: from 1,000,000 tenge (for non-financial institutions of the Republic of Kazakhstan and District Credit Institutions – from 50 million tenge). Maximum amount: <ul style="list-style-type: none"> ▪ For investment projects of borrowers/groups of borrowers – up to 7 billion tenge; ▪ For other projects that are not investment projects, up to 5 billion tenge per borrower, up to 10 billion tenge per group of borrowers; ▪ Up to 10 billion tenge for credit cooperatives. | up to 8,000 MCI (Monthly Calculation Index). | Up to 5 million tenge |
| Interest rate | | Maximum interest rate – 22% per annum (APR – from 22% per annum), with subsidized interest rate – 6% per annum. | 6% per annum (APR – from 6% per annum). For members of low-income and/or large families – 4% per annum (APR – from 4% per annum). | 2.5% per annum (APR – from 2.5% per annum) |

| | KEN DALA | Agribusiness | Isker | Microcredit for young people |
|---------------------|---|---|--|---|
| Collateral security | <ul style="list-style-type: none"> ▪ In accordance with the requirements of: ▪ Credit Cooperative; ▪ Microfinance Organizations; ▪ Second-tier Banks; ▪ Regional Investment Centers. ▪ Until March 1 of the year following the year of financing. | Collateral: Movable/immovable property | Movable/immovable property. | Movable/immovable property. |
| Loan term | Until March 1 of the year following the year of financing. | <ul style="list-style-type: none"> ▪ Up to 120 months; ▪ For working capital replenishment – 48 months. | <ul style="list-style-type: none"> ▪ For all projects: up to 60 months; ▪ For livestock projects: up to 84 months. | <ul style="list-style-type: none"> ▪ For livestock development up to 7 years, ▪ other business areas up to 5 years. |

APPENDIX 8. SUBSIDY FOR INTEREST RATE



APPENDIX 9. ИНВЕСТИЦИОННЫЕ СУБСИДИИ АВАНСОВЫМ ПЛАТЕЖОМ



APPENDIX 10. AGRICULTURAL INSURANCE

Livestock (Example Calculation of Insurance Payments)

Cost per head (breeding cattle):
650,000 KZT

Number of cattle:
100 heads

Insurance rate:
1.54%

Franchise:
2%

Insurance amount:
 $650,000 \text{ KZT} * 100 = 65,000,000 \text{ KZT}$

Insurance premium:
 $65,000,000 \text{ KZT} * 1.54\% = 1,001,000 \text{ KZT}$ (with subsidy: 500,500 KZT)

Insurance payout:
63,700,000 KZT

Crop Production (Example Calculation of Insurance Payments)

Product for lack of soil moisture

Area: 1000 ha (Normative cost):
40,000 KZT

Insurance rate:
4.8%

Insurance amount:
 $1000 \text{ ha} * 40,000 \text{ KZT} = 40,000,000 \text{ KZT}$

Insurance premium:
 $40,000,000 \text{ KZT} * 4.8\% = 1,920,000 \text{ KZT}$

Insurance premium per hectare:
1,920 KZT (with subsidy: 50% – 960 KZT)

Insurance payout for total crop loss:
19,200,000 KZT

Product for excess soil moisture during harvest

2,43%

$1000 \text{ ha} * 40,000 \text{ KZT} = 40,000,000 \text{ KZT}$

$40,000,000 \text{ KZT} * 2.43\% = 972,000 \text{ KZT}$

972 KZT
(with subsidy: 50% – 486 KZT)

8 000 000 KZT

2. ANALYZING UZBEKISTAN'S LAWS FOR ALTERNATIVE AGRICULTURAL FINANCING MECHANISMS

The Government of Uzbekistan plays a significant role in the agricultural financing system, reflecting its broader economic strategy and commitment to ensuring sector growth and sustainability. The agricultural sector is crucial for Uzbekistan, not only as a major source of employment but also for food security and export revenue. The government's role can be described in several key areas.

Political Framework and Regulation

The government establishes a regulatory framework that shapes the financing environment for agriculture. This includes setting interest rates on agriculture-specific loans, providing guidelines for loan distribution, and ensuring that financial institutions offer products tailored to the unique needs of farmers and agricultural enterprises.

Law on Farming: This law emphasizes the importance of long-term loans for building production facilities and acquiring production assets, as well as short-term loans for current farming activities. Preferential lending plays a key role in supporting farms, facilitating access to financial resources for expansion and modernization. Additionally, the law highlights the importance of insurance to mitigate risks associated with farming, providing the possibility to insure against various risks, including loss, shortage, or damage to production assets and products (*Law of the Republic of Uzbekistan «On Farming», No. 662-II dated August 26, 2004*).

Law on Dehkan Farming: This law expands dehkan farms' access to financial services, including loans, leasing, and insurance. Dehkan farms can attract financing on a voluntary basis using various types of collateral. The law also emphasizes the right of dehkan farms to acquire equipment, machinery, and tools through leasing, which is a significant tool for improving technological capabilities and enhancing agricultural production efficiency (*Law of the Republic of Uzbekistan «On Dehkan Farming», No. ZRU-680 dated April 1, 2021*).

Law on Agricultural Cooperatives (Shirkats): Based on this law, agricultural cooperatives have the opportunity to receive both long-term and short-term loans for building production facilities and acquiring necessary production assets. A notable feature is the possibility of guarantees from solvent legal and physical entities, as well as from the cooperatives themselves, which broadens access to credit resources. The law also emphasizes the importance of insurance for minimizing financial risks and provides measures for the recovery of cooperatives in case of economic difficulties (*Law of the Republic of Uzbekistan «On Agricultural Cooperatives (Shirkats)», No. 600-I dated April 30, 1998*).

Government-Funded Programs

The Government of Uzbekistan initiates and finances programs aimed at increasing the productivity and sustainability of agriculture. These programs often focus on implementing modern agricultural technologies, improving irrigation systems, and supporting the transition to high-value crops. By investing in these areas, the government seeks to enhance the sector's competitiveness and sustainability.

Under the Agricultural Development Strategy of the Republic of Uzbekistan for 2020-2030²⁹, some of the priorities include:

- Creating a favorable agribusiness climate and value chains, promoting market principles in the procurement and sale of agricultural products, developing quality control infrastructure, stimulating exports, and producing competitive high-value agro-food products for target international markets;
- Implementing mechanisms to reduce the role of the state and increase the investment attractiveness of the sector, aiming to increase private investment for modernization, diversification, and stable growth of the agro-food sector;
- Enhancing efficiency and gradually redistributing government expenditures through the development of sectoral programs aimed at increasing labor productivity on farms, improving product quality, and creating high added value.

These priorities will be implemented through the following measures:

- Allocating land plots on preferential terms to dehqan farms to stimulate activity expansion.
- Further stimulating investment in trade infrastructure and agro-logistics centers, food safety laboratories, and necessary equipment and inventory.
- Attracting grants and technical assistance funds from international financial institutions to modernize the material and technical base of research institutes in seed production and horticulture.
- Implementing pilot investment programs to support the development and diversification of small businesses in the agricultural sector.
- Improving mechanisms for financial support to agricultural producers by the state, including subsidizing interest rates on commercial loans allocated for producing strategically significant agricultural products.
- Enhancing mechanisms for lending and insurance in accordance with strategic priorities and the needs of the agro-food sector.
- Improving the activities of the State Fund for Entrepreneurial Support under the Ministry of Economic Development and Poverty Reduction.
- Introducing a «warehouse receipt» mechanism for lending to agricultural producers.
- Developing transparent partnership mechanisms by introducing additional mechanisms and financial instruments, and ensuring equal access for market participants.
- Abolishing the practice of providing resources and services through preferential loans.
- Improving the mechanism of using land use rights as collateral by revising the procedure for market valuation of land lease rights.
- Developing an investment program to ensure targeted attraction of credit lines from international financial institutions.
- Improving mechanisms for commercial banks' support in providing credit resources for dehqan farms and household landowners.
- Developing specific measures to reduce the tax burden on agricultural producers.

²⁹ Decree of the President of the Republic of Uzbekistan, dated 23.10.2019 № UP-5853 "On approval of the Strategy for the development of agriculture of the Republic of Uzbekistan for 2020 - 2030".

TABLE 3. KEY LEGISLATIVE ACTS RELATED TO THE STATE AGRICULTURAL SUPPORT FUND

| № | Regulatory legal act | Content |
|---|---|---|
| 1 | Presidential Decree No. UP-98 dated June 19, 2023, «On Ensuring the Continuity of Financing for State Agricultural Support.» | The Ministry of Economy and Finance has allocated \$250 million from the Reconstruction and Development Fund to the State Agricultural Support Fund for a period of 12 months, interest-free, to finance expenses related to state agricultural support. Measures were also taken to extend the repayment period of loans provided by commercial banks to cotton-textile clusters for financing cotton cultivation in 2022, amounting to \$250 million, by up to 12 months. |
| 2 | Presidential Decree No. UP-205 dated December 12, 2023, «On Additional Measures for Further Development of Free Market Relations in Agriculture.» | <p>Starting in 2024, a new financing scheme for the cultivation, harvesting, and purchase of raw cotton has been implemented through the credit resources of the State Agricultural Support Fund. According to this scheme:</p> <ul style="list-style-type: none"> ▪ Producers and seed-growing entities that have signed futures contracts for raw cotton cultivation will receive annual loans up to 60% of the cotton's value at 10% per annum (including a 2% bank margin) for 14 months with a 12-month grace period. <p>Clusters will receive loans:</p> <ul style="list-style-type: none"> ▪ Up to 80% of the raw cotton's value for final settlement of its purchase at 10% per annum (including a 2% bank margin) for 10 months with a 6-month grace period and a requirement to repay in equal installments over 4 months. ▪ Up to 60% of the raw cotton's value for its cultivation on leased land at 10% per annum (including a 2% bank margin) for 24 months with an 18-month grace period and a requirement to repay in equal installments over 6 months. ▪ Up to 20% of the raw cotton's value for its harvesting from leased land at 10% per annum (including a 2% bank margin) for 12 months with a 3-month grace period and a requirement to repay in equal installments over 9 months. <p>Payment for 80% of the raw cotton's value under futures contracts is made within three working days after its receipt, with the remaining 20% paid by December 31 of the financial year.</p> <p>Suppliers of goods, works, and services for agro-technical activities, except for seed cotton, are chosen by producers voluntarily and financed from loan funds.</p> <p>Producers, clusters, and seed-growing entities submit loan applications electronically through the «Agroplatform» information system of the Ministry of Agriculture.</p> |

Credit Opportunities

Access to credit is critically important for farmers who need capital to invest in their operations. The government of Uzbekistan, often through state banks or specialized agricultural banks, provides specialized credit opportunities with favorable terms, such as lower interest rates and longer repayment periods. These opportunities are designed to be accessible to both small and large agricultural producers.

State Agricultural Support Fund

To stimulate sustainable growth in the agricultural sector, enhance crop productivity, and create an effective and interconnected financing system in agribusiness at all levels and stages, aimed at state procurement, as well as to radically update and improve the equipment of agribusiness producers with modern and highly efficient machinery, the State Agricultural Support Fund was established³⁰.

³⁰ Указ Президента Республики Узбекистан от 27 июня 2017 года № УП–5095 "О создании фонда государственной поддержки сельского хозяйства при Министерстве финансов Республики Узбекистан"

Since 2021, funds from the state budget of Uzbekistan have been allocated to the Fund for financing:

- Losses due to exchange rate fluctuations on foreign loans.
- Subsidies to cover part of the interest rate on commercial loans provided to agricultural enterprises for cotton harvesting.
- Negative differences between interest rates on funds raised to cover financial deficits, including budget loans, and resources placed in commercial banks for financing agricultural production costs.

Fund for Supporting Farmers, Dehkan Farms, and owners of homestead lands

By the decree of the President of Uzbekistan No. PP-3680 dated April 26, 2018, the Fund for Supporting Farmers, Dehkan Farms, and Owners of homestead lands was established under the Council of Farmers, Dehkan Farms, and owners of homestead lands of Uzbekistan.

The Fund supports a wide range of financial measures to develop the agricultural sector. These measures include providing loans and grants, leasing activities, and supporting projects under public-private partnership terms. Main funding areas cover horticulture, viticulture, lemon growing, livestock, fish farming, beekeeping, and other agricultural industries.

The Fund places funds in commercial banks for further lending to farmers and dehkan farms, as well as to LLC “Tomorka Xizmati” and agricultural cooperatives. Loans are provided for up to 3-7 years, including grace periods, with interest rates ranging from 7% per annum to rates depending on the refinancing rate of the Central Bank of Uzbekistan.

As part of its activities, the Fund also services loans and advances received from the World Bank and other international financial institutions, and provides grants to support farmers, dehkan farms, and owners of homestead lands.

One key area of the Fund's work is financing the construction and development of infrastructure for processing agricultural products, including vegetable and fruit drying plants, cold storage facilities, livestock and greenhouse complexes. The Fund helps create value chains in the agribusiness complex by providing technical and material support to production.

To support educational initiatives, the Fund provides subsidies for organizing training courses and developing training centers aimed at improving skills and knowledge of agricultural sector workers.

Legislative foundations for microfinancing in Uzbekistan, which underpin the Fund's activities, are actively developing, thereby enhancing support for local farming and home gardening.

Subsidies and Grants

To support the agricultural sector, the government of Uzbekistan provides various subsidies and grants aimed at reducing the financial burden on farmers. These subsidies can cover a wide range of needs, including but not limited to, the purchase of seeds, modern equipment, and fertilizers. Grants may also be available for innovative agricultural projects or for farmers using sustainable and efficient farming methods.

Risk Management and Insurance

To mitigate risks associated with agricultural production, such as adverse weather conditions or pest outbreaks, the government may offer or facilitate access to insurance products. These insurance schemes help protect farmers' incomes and ensure stability in the agricultural sector.

International Cooperation

The government is also involved in international cooperation to improve the agricultural financing system. This includes attracting funds from international financial institutions, development partners, and foreign governments for various agricultural projects. Such cooperation can also promote the transfer of knowledge and technologies.

International financial institutions, such as the World Bank and the International Fund for Agricultural Development (IFAD), play a key role in providing financial resources for Uzbekistan's agricultural sector. For instance, the World Bank is involved in several projects aimed at developing sustainable, market-oriented livestock farming and modernizing Uzbekistan's agricultural landscape by improving service delivery, access to technologies, and sector competitiveness. Similarly, IFAD focuses on increasing rural well-being and improving the living conditions of small producers by enhancing resilience, productivity, and access to food systems and agricultural markets.

The government of Uzbekistan has initiated large-scale reforms to improve the agricultural financing system. These reforms are comprehensive and include land reform in agriculture, the development of advisory services for farmers, digitization of the sector, and investment in agrilogistic infrastructure and services. All these measures are aimed at enhancing the sector's competitiveness both domestically and internationally. The reforms highlight a strategic shift from focusing on cotton and wheat production to stimulating the production of other agricultural products, in line with the demands of new export markets.

Despite these initiatives, there are internal issues within Uzbekistan's agricultural financing system. Small farmers often face significant barriers, including limited access to credit, land, and irrigation water, lack of productive assets, good infrastructure, and modern technologies. These challenges underscore the need for ongoing reforms and innovations in financing mechanisms and supporting structures available to the agricultural sector.

Research and Development (R&D)

Investments in research and development in agriculture are another critical area where the government contributes. By financing R&D, the government supports the creation and dissemination of new agricultural technologies and practices that can improve yield, efficiency, and sustainability.

As part of additional financial support measures for agricultural production, in October 2022, the government decided to allocate an additional budget loan of 200 billion sums to the Fund for the Development of Horticulture and Greenhouse Farming at an annual 10% interest rate for 12 months, including an 11-month grace period, from funds designated for state support of the fruit and vegetable sector.

These funds are allocated as follows:

- For agricultural enterprises: to supply seeds, fertilizers, fuel, and plant protection products for growing fruits, grapes, potatoes, vegetables, melons, greens, medicinal plants, legumes, and oilseeds.
- For processing, storage, and export enterprises: to replenish working capital needed to purchase produced agricultural crops.

In this regard:

- Loans for growing agricultural crops are provided up to 150 million sums without collateral.
- Interest payments on loans are set at 14% per annum (including a 3% bank margin), with loans provided for up to 12 months with a grace period of up to 6 months.

- Up to 50% of the allocated loan amount may be provided in cash upon the borrower's request.
- Funds from the Fund for the Development of Horticulture and Greenhouse Farming can be used as collateral for the loans.

Under this decree, an insurance policy for loan repayment risk or crop insurance against risks can be accepted as collateral for loans provided to agricultural producers and used to repay loans. Also, 50% of the expenses for crop insurance in 2023 and subsequent years are covered by the State Agricultural Support Fund.

On April 20, 2022, the Law “On Non-Bank Credit Organizations and Microfinance Activities” was adopted³¹. According to this Law, non-bank credit organizations include pawnshops, microfinance firms, and mortgage refinancing organizations.

This Law provides provisions aimed at:

- Expanding funding sources for non-bank credit organizations.
- Increasing accessibility to financial services, including creating a legal framework for microfinance organizations to provide Islamic finance services.
- Establishing the possibility of testing new financial services within a «regulatory sandbox».
- Reducing regulatory burdens through proportional regulation of non-bank credit organizations.
- Improving consumer protection for non-bank credit services – specifically, the amount of interest, fees, and penalties cannot exceed 50% of the loan amount per year.
- In November 2023, a Presidential Decree was adopted “On additional measures to increase the role and share of microfinance services in the development of entrepreneurial activity.”

According to this Decree, in 2024-2026, the program to increase the accessibility of microfinance services aims to achieve the following target indicators:

- Increase the microfinance market size by at least 5 times.
- Cover more than 1 million business entities with microfinance services.
- Double the amount of funds attracted from individuals in the resource base of microfinance organizations.
- Assist approximately 500,000 citizens without official income in self-employment and business development through microfinance services.

Starting January 1, 2024, it is also planned that:

- The maximum size of microloans will increase from 50 million sums to 100 million sums;
- Non-bank credit organizations will be established in the form of joint-stock companies or limited liability companies;
- Microfinance organizations will be allowed to attract borrowed funds from non-residents and provide financial services to legal entities in foreign currency;
- Borrowed funds from participants (shareholders) – individuals, not exceeding twice the amount of the contribution to the charter fund (charter capital) or the nominal value of shares owned by them, will be permitted;

³¹ Law of the Republic of Uzbekistan, dated 20.04.2022, No. ZRU-765 "On Non-Bank Credit Organisations and Microfinance Activities" (<https://lex.uz/ru/docs/5972413>)

- Microfinance organizations will be entitled to operate as payment organizations after obtaining the relevant license;
- The requirement for prior permission from the Central Bank for physical and legal persons to acquire a share in the charter capital of a non-bank credit organization will be relaxed by increasing the established 10% share to 20%.
- If the acquired share is between 10% and 20%, a notification procedure to the Central Bank will be introduced;
- When microfinance organizations attract credit resources from commercial banks or entrepreneurs receive microloans from microfinance organizations, the possibility of providing guarantees from JSC “Entrepreneurship Development Company” (Insert box) will be created;
- Commercial banks will have the right to accept the rights of microfinance organizations to claim for microfinance services as collateral when providing loans to microfinance organizations.

INSERT

JSC Entrepreneurship Development Company (EDC), established by the Ministry of Economy and Finance, was created by the Presidential Decree of the Republic of Uzbekistan dated November 10, 2023, No. UP-193 «On Measures to Improve the Financial Support System for Small and Medium-Sized Businesses» by transforming the State Fund for Supporting Entrepreneurship.

One of the primary activities of the Company includes extensive support for the implementation of «green» and energy-saving technologies, as well as renewable energy sources in the service, production, and cultivation sectors.

Starting from March 1, 2024, the Company is expected to provide a range of support measures to small and medium-sized enterprises, including:

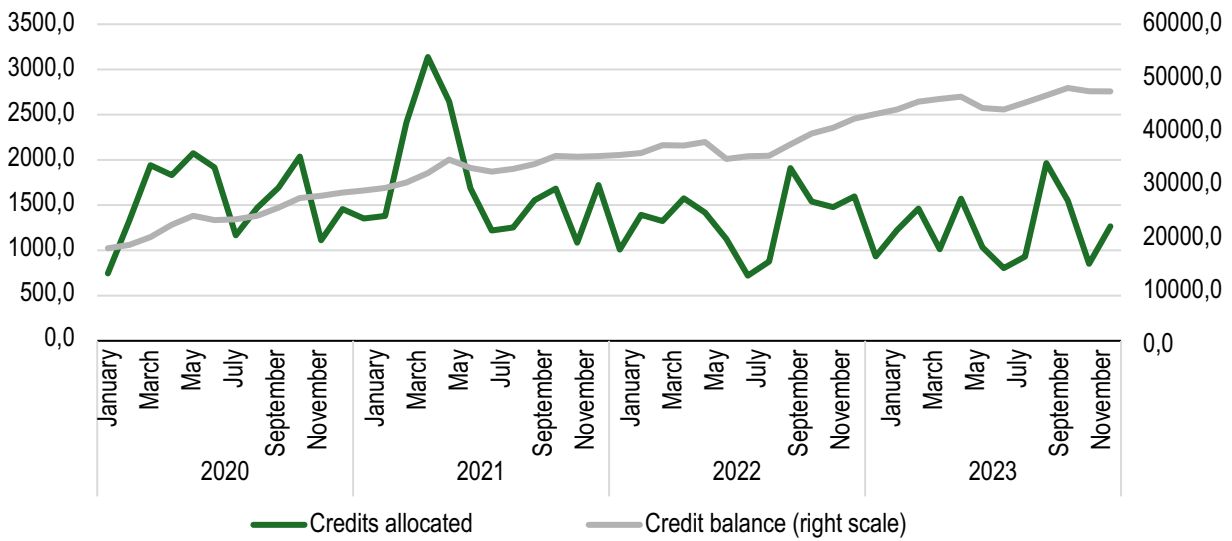
- Placement of financial resources in national and foreign currency in commercial banks, microfinance, and leasing organizations for the allocation of loans (leasing);
- Provision of guarantees totaling up to 5 billion UZS for loans, leases, bank guarantees, and letters of credit provided in national and foreign currency by commercial banks, microfinance, and leasing organizations;
- Provision of guarantees (portfolio guarantees) for loans within the limit, overall amount, and conditions established based on intermediary agreements on the use of the Company's funds, concluded with commercial banks;
- Provision of compensation to small businesses in 2024-2026 amounting to up to 40% of the Central Bank's prime rate for a period of no more than 3 years for loans up to 5 billion UZS, allocated in national currency at a rate exceeding the prime rate by 4 percentage points and not exceeding 1.75 times the prime rate. The Company provides compensation according to the «1+2» principle: initially only for the first year of the loan (leasing), and to obtain it for an additional two years, the borrower must fulfill the plan for creating new jobs and increase sales revenue by at least 15%..

2.1. ASSESSMENT OF LICENSED MICROFINANCE INSTITUTIONS IN UZBEKISTAN FOR FINANCING GREEN AGRICULTURAL TECHNOLOGIES

An analysis of the total volume of loans allocated by commercial banks in Uzbekistan to agriculture from 2020 to 2023 showed that the highest volume was allocated in 2021, totaling 21,133.2 billion UZS (with April being the peak at 3,137.6 billion UZS). This period was a recovery phase following the COVID-19 pandemic, and substantial support was required for agriculture, which was provided by the government through commercial banks.

Financial support for agricultural production in Uzbekistan is crucial for the sustainable development of this sector of the economy. Given the high demand for additional financial

FIGURE 3. LOANS ALLOCATED TO AGRICULTURE, BILLION UZS



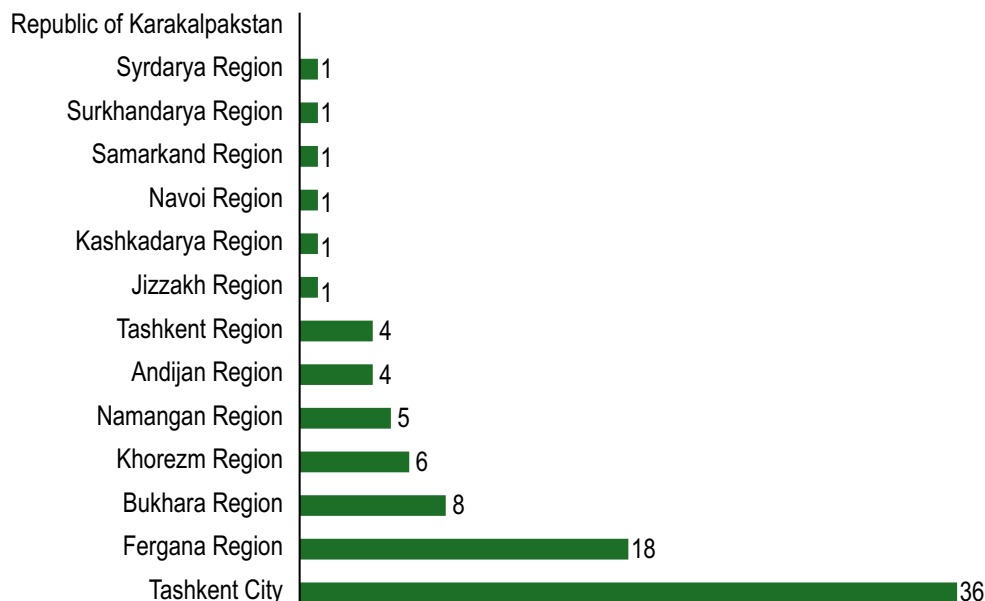
Source: data of the Central Bank of the Republic of Uzbekistan.

resources in this industry, primarily due to the seasonality and cyclicity of agricultural production, there is a need to develop alternative sources of financing.

However, in Uzbekistan, the most developed types of financing have been state subsidies, loans, and credits provided by the government through commercial banks. Unfortunately, other financial organizations are generally reluctant to finance agricultural production due to its high-risk nature, which includes factors such as natural phenomena, livestock and plant diseases, weather conditions, etc.

As of March 14, 2024, there were 87 microfinance organizations operating in Uzbekistan (see Appendix 11). The earliest of these were registered in 2007. Nearly 60% of all active microfinance organizations were established in the last 5 years, starting from 2019.

FIGURE 4. DISTRIBUTION OF MICROFINANCE ORGANIZATIONS BY REGISTRATION REGION



Source: data of the Central Bank of the Republic of Uzbekistan.

The number of functioning microfinance organizations in the republic indicates that the sector is underdeveloped, as it is insufficient for a market with a population of nearly 37 million people.

More than 41% of all microfinance organizations are registered in Tashkent City. 20.7% or 18 microfinance organizations are located in the Fergana Region. In several regions (Jizzakh, Kashkadarya, Navoi, Samarkand, Surkhandarya, and Syrdarya regions), only one microfinance organization is registered, and there are none in the Republic of Karakalpakstan.

Muhammad Yunus, author of «Banker to the Poor», identifies three zones of microfinance organization functioning. The first zone, the «green zone», includes MFOs that operate correctly, with their rates exceeding the cost of attracted resources by 10%. If the excess is 10-15%, it is considered the «yellow zone», where the MFOs' activities comply with norms. If the excess is 15% or more, the MFO is classified as being in the «red zone» also known as the «loan shark» zone. The market for microfinance often starts in the «red zone» with a gradual transition to a healthy functioning zone as positive trends develop.

Microfinance organizations in Uzbekistan offer microloans and leasing at annual rates starting from over 30%. A limited number of microfinance organizations offer their services to businesses, while most prefer to specialize in microloans for individuals.

Thus, due to the interest of microfinance organizations in quickly recouping their loaned funds and the resulting establishment of high interest rates, this type of financing is currently not suitable for farmers and agricultural producers. However, it is crucial to evaluate the readiness and competence of microfinance organizations and institutions in Uzbekistan for the pilot implementation of revolving funds and other instruments, as well as mechanisms focused on utilizing «green» and energy-efficient technologies in the agricultural sector.

A revolving fund is a financial instrument designed to support projects through the allocation and return of resources. In the context of the agricultural sector, revolving funds can finance projects aimed at improving the efficiency of natural resource use and reducing environmental impact. Additionally, such funds support the introduction of new technologies, which can increase yields and reduce costs, and provide financing for small and medium-sized farmers who often struggle to obtain loans.

To assess the readiness and competence of microfinance organizations and institutions in Uzbekistan to manage revolving funds and other financial instruments focused on «green» and energy-efficient technologies in the agricultural sector, several key aspects should be considered.

1. Legislative and Regulatory Framework. It is important to examine how Uzbekistan's legislation supports or restricts the use of microfinance for financing green technologies. For example, some countries offer incentives or subsidies for MFIs providing «green» loans.

The Law of the Republic of Uzbekistan “On Non-Banking Credit Organizations and Microfinance Activities” (No. ZRU-765 dated April 20, 2022) includes several key aspects that may affect the readiness and competence of microfinance institutions (MFIs) for piloting revolving funds focused on green and energy-efficient technologies in the agricultural sector.

Regulatory Sandbox. The law introduces a regulatory sandbox that allows testing new financial operations, technologies, and services in a controlled environment. This may

TABLE 4. EXAMPLES OF FINANCIAL SERVICES OFFERED BY MICROFINANCE ORGANIZATIONS IN UZBEKISTAN

| Name of Microfinance Organization | Financial Services Offered |
|--|--|
| RENESANS Mikrokredit Tashkiloti Limited Liability Company | <p>Microcredit</p> <ul style="list-style-type: none"> ▪ annual interest rate from 56% ▪ period of 3 to 36 months ▪ maximum loan amount up to 300 million <p>Leasing</p> <ul style="list-style-type: none"> ▪ annual interest rate from 56% ▪ period of 3 to 36 months ▪ maximum loan amount up to 600 million |
| Limited Liability Company «Fortuna Business microcredit tashkiloti» | <ul style="list-style-type: none"> ▪ Microcredit ▪ For self-employed persons and entrepreneurs period of 3 to 48 months from 0.15% per day (from 54% p.a.) maximum loan amount up to 300 million soums ▪ Leasing ▪ For business entities period of 3 to 48 months from 0.15% per day (from 54% p.a.) For acquisition of fixed assets maximum loan amount up to 300 million soums |
| HAYOT INVEST MIKROKREDIT TASHKILOTI | <p>Microcredit</p> <p>COLLATERAL: JEWELRY maximum loan amount up to UZS 300 million</p> <ul style="list-style-type: none"> ▪ Up to 24 months ▪ Per month from 3.25% (from 39% p.a.) <p>COLLATERAL: MOTOR VEHICLES maximum loan amount up to 300 million</p> <ul style="list-style-type: none"> ▪ Up to 24 months ▪ Per month from 2.7% (from 32.4% p.a.) <p>COLLATERAL: REAL ESTATE maximum loan amount up to 300 million</p> <ul style="list-style-type: none"> ▪ Up to 24 months ▪ Per month from 2.7% (from 32.4% p.a.) <p>Leasing maximum loan amount up to UZS 600 million from 2.7% per month (from 32.4% p.a.) Up to 24-x months</p> |
| MIKROMOLIYA TASHKILOTI OASIS CREDIT | <p>Without Collateral 43-55% annual rate Amount: 50 – 100 million UZS Term: 6 – 36 months Payment: annuity (equal instalments)</p> <p>With 75% Collateral Annual interest rate 36% Amount: 100 – 200 million sums Term: 6 – 36 months</p> <p>With 100% Collateral Annual interest rate 32%-36% Over 200 million sums Term: 6 – 36 months Payment: annuity (equal installments)</p> |

Source: websites of microfinance organisations

promote the implementation of innovative financial mechanisms, such as revolving funds for green technologies.

Licensing and Regulation. Non-bank financial institutions, including MFIs, are subject to strict licensing and operational regulations, ensuring their financial stability and compliance.

Capital Requirements. The law specifies minimum capital requirements for various types of financial institutions, ensuring they have adequate financial reserves to engage in new types of financial activities, including potentially risky and innovative funds like those focused on green technologies.

Risk Management and Reporting. MFIs are required to adhere to strict risk management practices and provide detailed financial reports. This helps assess their ability to manage and support new financial instruments, such as revolving funds.

Support for Innovation. The law includes provisions for ongoing evaluation and potential legislative support for successful financial innovations tested under special legal regimes. This can encourage the continued adoption of successful green financing models developed by MFIs.

Overall, the legal framework in Uzbekistan appears to create a supportive environment for MFIs to engage in innovative financing, including piloting revolving funds aimed at enhancing the use of green and energy-efficient technologies in agriculture. Regulation ensures the stability and competence of these institutions while encouraging innovation and adaptation to new financial technologies.

2. Financial Stability and History of MFIs. Assessing the current financial state of microfinance organizations and their experience in managing specific funds includes analyzing their balance sheets, profitability, default levels, and experience in managing targeted loans.

The consolidated balance sheet of microfinance organizations in Uzbekistan shows the dynamics of their financial condition based on several asset and liability categories (*Table 5*).

An increase in the volume of loans and microleasing indicates active expansion of the MFI credit portfolio, which may suggest growing demand for financial services in the microfinance sector.

A high share of loans and microleasing in the total assets highlights the importance of these areas in the activities of microfinance organizations and indicates their ability to manage a large volume of credit operations.

A significant increase in these assets over the year is a positive indicator, showing an increase in lending and possibly successful introduction of new credit products, including those focused on green and energy-efficient technologies.

An increase in cash on hand indicates growth in liquidity, which is a positive factor for managing revolving funds, as it provides the necessary resources for rapid response to financial needs of projects.

A significant increase in retained earnings indicates improved financial performance of microfinance organizations and effective income management. The growth in retained earnings may suggest higher profitability and the ability of organizations to capitalize on their income.

The high share of retained earnings in the total assets shows that microfinance organizations are accumulating substantial funds, which can be invested in further development, including the financing of «green» and energy-efficient technologies.

TABLE 5. CONSOLIDATED BALANCE SHEET OF MICROFINANCE ORGANIZATIONS

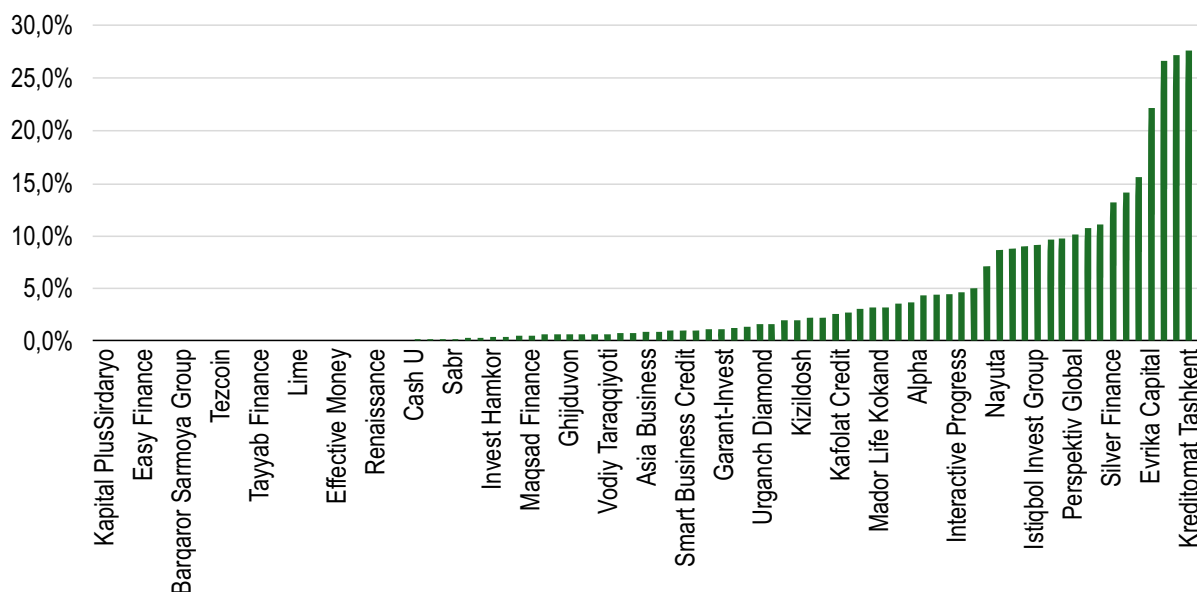
| Name of indicators | 01.04.2023 | | 01.04.2024 | | Increase, |
|--|------------|------------|------------|------------|-----------|
| | mIn UZS | % of Total | mIn UZS | % of Total | |
| Assets | | | | | |
| Cash and other payment documents | 27 257 | 1.2% | 44 581 | 0.9% | 63.6% |
| Receivables from banks | 91 967 | 3.9% | 118 967 | 2.3% | 29.4% |
| Net loans and microleasing | | 87.8% | 4 601 281 | 89.4% | 122.8% |
| Net fixed assets | 50 383 | 2.1% | 89 279 | 1.7% | 77.2% |
| Accrued interest receivable | 68 397 | 2.9% | 115 073 | 2.2% | 68.2% |
| Other assets | 49 392 | 2.1% | 179 869 | 3.5% | 264.2% |
| Total assets | 2 353 010 | 100.0% | 5 149 050 | 100.0% | 118.8% |
| Liabilities | | | | | |
| Loans (borrowings) and leasing payable | | 93.1% | 2 528 841 | 77.9% | 125.8% |
| Accrued interest payable | 22 517 | 1.9% | 47 287 | 1.5% | 110.0% |
| Accrued taxes payable | 5 675 | 0.5% | 15 493 | 0.5% | 173.0% |
| Other liabilities | 54 695 | 4.5% | 656 250 | 20.2% | 1099.8% |
| Total liabilities | 1 202 964 | 100.0% | 3 247 871 | 100.0% | 170.0% |
| Equity | | | | | |
| Authorized capital | 625 560 | 54.4% | 890 185 | 46.8% | 42.3% |
| Reserve capital | 44 179 | 3.8% | 60 496 | 3.2% | 36.9% |
| Retained earnings | 480 307 | 41.8% | 950 499 | 50.0% | 97.9% |
| Total equity | 1 150 046 | 100.0% | 1 901 180 | 100.0% | 65.3% |

Source: data of the Central Bank of the Republic of Uzbekistan.

The nearly twofold growth in retained earnings over the year is a very positive signal, highlighting the resilience and growth of organizations even in the face of potential economic challenges.

The low level of NPL (non-performing loans) at most MFIs indicates good experience in managing loan portfolios, especially in regard to targeted loans. This may involve the effective use of analytics for creditworthiness assessment, adequate risk pricing, and active management of post-loan servicing.

FIGURE 5: PROBLEMATIC LOANS OF MFIS IN UZBEKISTAN (AS OF 01.04.2024)



Source: Calculations based on data of the Central Bank of the Republic of Uzbekistan.

However, the high level of NPL at certain MFIs may also indicate the need for additional efforts to improve credit analysis processes, implement advanced borrower assessment methods, and manage overdue debt.

Microfinance organizations and institutions in Uzbekistan demonstrate significant readiness and competence for piloting a revolving fund and other financial instruments aimed at supporting «green» technologies in the agricultural sector. They possess the necessary legislative support, financial stability, and innovative potential for the successful implementation and development of these initiatives. However, to ensure the successful piloting of the revolving fund and other financial instruments aimed at «green» and energy-efficient technologies, microfinance organizations and institutions should focus on strengthening risk management and credit analysis to minimize potential challenges associated with financing high-risk projects.

1. Enhancing Professional Qualifications: It is necessary to systematically raise the level of knowledge and skills of employees in the field of environmentally sustainable technologies and management of revolving funds through specialized training programs and workshops.

2. Improving Technological Infrastructure: It is important to use modern IT systems and analytical tools for accurate assessment and monitoring of financial flows and the effectiveness of supported projects.

3. Developing Partnerships with Governmental and International Organizations: Active cooperation with these organizations will help attract additional resources and expertise, as well as provide access to government subsidies and benefits.

4. Standardization of Processes and Methodology Development: It is necessary to develop and implement standards and methodologies for assessing the environmental impact of projects funded by revolving funds, which will improve their effectiveness and sustainability.

5. Credit Risk: Methods of credit analysis and borrower assessment should be improved to minimize the likelihood of defaults, especially in new and innovative projects.

6. Market Risks: Possible changes in legislation and market conditions that may affect the cost and demand for «green» products should be considered.

7. Operational Risks: It is necessary to ensure the reliability of information systems and the efficiency of management processes to avoid losses and errors in fund operations.

8. Environmental and Social Risks: Careful assessment of the potential impact of projects on the environment and society should be conducted, and strategies should be developed to minimize possible negative effects.

2.2. TAX EXEMPTIONS FOR FARMERS UTILIZING GREEN AGRICULTURAL TECHNOLOGIES: ALTERNATIVES FOR LAND AND WATER TAX RELIEF

The installation of «green» alternative technologies and the implementation of water-saving irrigation technologies in Uzbekistan's agricultural sector is a key step toward sustainable and energy-efficient development. This includes various technologies such as solar panels, automated subsurface drip irrigation systems, and others.

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Insert Uzbekistan's geographical location, far from oceans and seas, contributes to its continental climate, which is reflected in the duration of sunlight. In the northern regions of Uzbekistan, sunlight reaches 2,500-2,800 hours, while in the southern regions it reaches 3,000-3,100 hours per year. The average solar radiation in the northern part of the country is 130 kcal, and in the south, it is 160 kcal per square centimeter of surface per year.

Therefore, the issue of developing such an important area as generating energy from renewable energy sources (hereinafter referred to as RES) is very relevant in the case of Uzbekistan – solar energy, given the high level of solar radiation. The government has set a goal to increase the share of RES in the total production of electricity to 30% by 2030³². Currently, nine large solar and wind power plants with a total capacity of 1.6 GW have been put into operation in Bukhara, Jizzakh, Kashkadarya, Navoi, Samarkand, and Surkhandarya. Six large and small hydropower plants with a capacity of 183 MW have been commissioned in the Andijan, Samarkand, Surkhandarya, and Tashkent regions.

Additionally, solar panels with a total capacity of 457 MW have been installed on social sector facilities, enterprises and organizations, offices, and in residents' apartments. This has helped generate an additional 5 billion kWh of environmentally friendly electricity and save 1.5 billion cubic meters of gas.

Uzbekistan's population is constantly growing, and the demand for electricity increases by 5.3% every year. To meet this demand, electricity generation needs to be increased by 1.7 times compared to the current volume.

Thus, the «Uzbekistan 2030» Strategy outlines the task of increasing electricity production to 120 billion kWh. At the same time, the share of renewable energy sources should be at least 40%.

State support in Uzbekistan in the form of tax incentives and subsidies plays an important role in encouraging agricultural producers to adopt «green» alternative technologies. This support includes exemption from property tax for renewable energy installations and land tax for plots occupied by these installations (with a nominal capacity of 0.1 MW or more) for ten years, which significantly reduces operating costs and encourages the implementation of such technologies in agricultural activities³³. In addition, a Cabinet of Ministers resolution³⁴ established regulations for connecting renewable energy sources to the unified energy system, facilitating their integration. Furthermore, a decree³⁵ by the President of the Republic of Uzbekistan provides compensation to legal entities, including farms, for covering interest expenses on loans for purchasing renewable energy installations, further encouraging their use in the agricultural sector.

In recent years, the government of Uzbekistan has taken additional measures to enhance the adoption and use of RES. In 2022, the President of the Republic of Uzbekistan issued a decree³⁶, according to which the amount of state compensation, depending on the capacity of the mini-station, will be:

- from 0.5 to 1 kW – 2.1 million soums (\$185);
- from 1 to 1.5 kW – 3 million soums (\$264);
- from 1.5 to 2 kW – 4.5 million soums (\$396);
- more than 2 kW – 6 million soums (\$528);

³²Decree of the President of the Republic of Uzbekistan dated 02.12.2022 № PP-436 "On measures to improve the effectiveness of reforms aimed at transition of the Republic of Uzbekistan to a "green" economy until 2030".

³³Law of the Republic of Uzbekistan "On the Use of Renewable Energy Sources" №ZRU-539 of 21.05.2019.

³⁴Decree of the Cabinet of Ministers of the Republic of Uzbekistan, dated 22.07.2019, No. 610 "On approval of the Regulations on connection to the unified electric power system of business entities producing electricity, including from renewable energy sources".

³⁵Decree of the President of the Republic of Uzbekistan, dated 22.08.2019 № PP-4422 "On accelerated measures to improve energy efficiency of economic sectors and social sphere, introduction of energy-saving technologies and development of renewable energy sources".

³⁶Decree of the President of the Republic of Uzbekistan No. UP-220 dated 09.09.2022 "On additional measures on introduction of energy saving technologies and development of renewable energy sources of small capacity".

- **more than 5 kW** (for new land development and power supply for water pumps installed on vertical wells) – **15 million soums.**

This decree introduced a mechanism to incentivize citizens and businesses to install mini-stations for their own consumption, thereby expanding the use of RES.

A presidential decree adopted in 2023 envisages the commissioning of RES with a total capacity of 4,300 MW, including large solar and wind power plants with a capacity of 2,100 MW, solar panels installed on buildings and structures of social sector facilities and businesses, and households with a capacity of 1,200 MW, and small photovoltaic stations built by entrepreneurs with a capacity of 550 MW.

A total of \$15.4 billion will be allocated for these purposes, including \$100 million from the state budget. The plan is to install small RES installations at 20,000 social sector facilities and government institutions.

It should be noted that in areas where new land is being developed, more significant costs are often required to connect to the general power grid. However, with the existing incentive system, unfortunately, this practice has not yet spread rapidly.

For example, an express monitoring of RES application in the production of fruit and vegetable products in Uzbekistan showed that there are very few real working examples:

1. Jizzakh Region, Bakhmal District, LLC «Bakhmal Fruit Growing»: 20 hectares of intensive orchards. The farm installed a 3 kW wind generator and 5 kW solar panels (6-7 years ago). The type of mini-station is autonomous. After the farm was connected to the general electricity grid, the RES mini-stations were not used (for the last 2.5-3 years).

2. Bukhara Region. Greenhouse complex SP LLC «Bukhara-Varnet» (Turkey), located in the SEZ «Bukhoro-Agro»: tomato production on 40 hectares using hydroponic technology. 36 solar panels and 12 batteries of 120 Ah each are installed on a 10-acre plot.

Given the uninterrupted gas supply and that the entire complex is connected to the general power grid, the purpose of using RES is to reduce the load on the general power grid, as it is planned to expand the total area of the greenhouse complex to 113 hectares with separate housing for workers for every 10 or 20 acres of greenhouses.

3. Samarkand Region, Jambay District, LLC «Oxalik Oltin bog'i»: a nursery for the production of seedlings for intensive orchards and strawberry plantations – a total area of 100 hectares. The farm installed 224 solar panels with a capacity of 60 kW, which are used to power the drip irrigation system.

The capacity of the RES mini-station is sufficient to irrigate about 100 hectares of the nursery. The mini-station is successfully used for garden irrigation from April to November each calendar year. The main advantage is independence from electricity supply from the general grid, where outages and temporary disconnections may occur, especially during the hot season. Considering that December to March is the non-irrigation season, and from 9 am to 4 pm during the irrigation season, electricity is used, there is a possibility of selling excess energy.

4. Jizzakh Region, Zaamin District, a farmer's farm: Solar panels with a capacity of 37 kW are installed for irrigation of an onion plantation (for pumps). According to the farmer, the problem of power outages on hot summer days is now resolved.

Analysis of the regulatory framework related to land and water resource taxation shows that, in terms of water resource tax, from January 1, 2024, the tax rate on the volume of water used for irrigation of agricultural land and fish farming has increased from 45 to 100 soums

per cubic meter without meters; with meters, a lowering coefficient of 0.7 can be applied to the rate.

It is provided that individuals and legal entities, including farmers and cooperative and agricultural enterprises, installing solar panels up to 100 kW, are exempt from property tax and land tax for the plots occupied by these installations.

However, subsidies from the state budget for electricity production using solar panels are provided under the «Solar Home» program, which aims to encourage the installation of small solar panels in households.

The introduction of water-saving irrigation technologies in Uzbekistan is critically important for ensuring the sustainable development of the agricultural sector under limited water resources. In recent years, Uzbekistan has taken significant steps to modernize its irrigation systems to improve water use efficiency and reduce losses.

Since 2022, subsidies for covering part of the costs of implementing water-saving irrigation technologies have been allocated to agricultural producers according to Table 6. The amount of the subsidy provided to cover part of the costs for implementing water-saving irrigation technologies is determined by multiplying its base calculation value by a coefficient determined based on the quality level of the technology.

TABLE 6. SUBSIDIES TO COVER PART OF THE COSTS OF IMPLEMENTING WATER-SAVING IRRIGATION TECHNOLOGIES, THOUSAND SOUMS PER 1 HECTARE

| Type of Water-Saving Irrigation System | Cotton | Grain Crops | Vegetable Crops and Potatoes | Gourds | Fodder, Oilseeds, Legumes, and Medicinal Plants | Fruit Crops | Grapes |
|--|--------|-------------|------------------------------|--------|---|-------------|--------|
| Drip Irrigation | 8000* | x | 8 000 | 1 300 | 2500*** | 6 000 | 8 000 |
| Wide-Coverage and Mobile Irrigation | x | 8000** | 8 000 | x | 2 500*** | x | x |
| Sprinkler System | x | 8 000** | 8 000 | x | 2 000*** | x | x |
| intermittent-flow irrigation | 4 000 | x | x | x | x | x | x |

* The technology of drip irrigation, implemented in cotton fields in the Republic of Karakalpakstan and Khorezm region, is set at 12,000 thousand UZS.

** For wide-coverage irrigation systems and sprinkler systems implemented in grain cultivation areas in the Republic of Karakalpakstan and Khorezm region, it is set at 9,000 thousand UZS.

*** For drip irrigation technologies, wide-coverage and mobile irrigation systems, and sprinkler systems implemented by livestock farms in fodder fields, it is set at 8,000 thousand UZS.

A resolution by the President of the Republic of Uzbekistan³⁷ introduced **new measures to improve water management and increase the efficiency** of its use in agriculture. In particular, water conservation subsidies will be paid out in an expedited manner.

Starting in 2025, tax incentives for the adoption of water-saving technologies will be introduced for farmers. The tax base on water resource usage for agricultural producers who

³⁷ Decree of the President of the Republic of Uzbekistan No. PPP-5 of 5 January 2024 "On measures to improve the water resources management system and increase the efficiency of water use at the grass-roots level".

do not implement water consumption volume accounting systems by 2024 will be calculated at twice the established limit.

From 2025, when implementing water-saving irrigation technologies and calculating water intake volumes for irrigation based on meters, **a reducing coefficient of 0.5** will be applied to the tax rate. If one of the listed requirements is met, the tax rate will include **a reducing coefficient of 0.7**.

For the absence of water-saving technologies and the failure to establish the volume of water intake for irrigation, the water tax rate will be calculated with **an increasing coefficient of 1.5**.

State subsidies to cover part of the costs of water-saving technologies will be fully allocated to agricultural producers in the year the technology is implemented. Previously, it was possible to receive only 50% of the subsidy amount in the same year, with the remainder being paid out the following year.

In the coming three years, the practice of subsidizing 15% of the cost of agricultural machinery and 30% of the cost of laser levelers will continue. By 2026, laser leveling must be completed on all cultivated areas. After 2026, land and water taxes on areas without laser leveling will be significantly increased. Over 250 billion UZS will be allocated from the state budget in 2024 for the implementation of drip and sprinkler irrigation.

Starting in 2024, agricultural producers will begin receiving five-year loans with a two-year grace period **at an interest rate of 14%** per annum for the implementation of water-saving technologies. Meanwhile, **in Karakalpakstan and the Khorezm region, farmers will pay only 10%** per annum, with the remaining 4% covered by the state budget.

From February 1, 2024, the issuance of loans will be organized through the suvkredit.uz platform, developed by Agrobank, for the implementation of water-saving technologies and will include the following stages:

- **Application Submission** – registered using the legal entity's electronic digital signature (EDS), the application is completed and submitted;
- **Scoring Analysis** – the system analyzes the applicant's main account number in Agrobank, overdue credit debt, and tax obligations (duration – 1 minute);
- **Verification by the State agency 'Water Supply Service'**– signs the conclusion in electronic form after verifying the presence of necessary conditions for implementing water-saving technologies at the applicant's site (duration – 1 working day);
- **Supplier Selection** – the applicant selects a supplier through the 'Agrozamin O'zimizniki' platform and signs the contract;
- **Signing of Bank Documents** – documents necessary for the loan recovery file are signed electronically (credit committee decision, loan agreement, insurance contract, insurance policy);
- **Loan Issuance and Initial Payment** – the bank automatically creates a loan application form. Based on the applicant's payment order, the advance amount will be transferred to the supplier's account;
- **Project Implementation** – the supplier carries out construction and installation works. In this case, the work must be completed by May 15 on cotton fields, by November 15 on grain fields, and by May 1 on other fields;
- **Monitoring** – the head of the State Water Supply Service, the Applicant, the Supplier, and the Bank Manager control the correct installation and commissioning of technologies and sign the corresponding conclusion in electronic form;

- **Final Payment** – based on the applicant's payment order in the system, the final funds will be transferred to the supplier's account as specified in the contract.

Thus, the state has already developed a mechanism for financing farms to implement energy and water-saving technologies.

However, given that tax incentives are not yet being effectively applied, it is proposed to consider **replacing them with subsidies** when implementing new resource-saving technologies. At the same time, **it is essential to establish the effectiveness of the technology** application (increase in production, improvement in yield, reduction in resource consumption, including those affecting the cost of production, such as fertilizers) as the determining factor for obtaining subsidies, **rather than simply the presence of the technology**. It is also important to consider **that the mechanism 'the higher the effectiveness, the higher the subsidy'** should be applied.

For example, when implementing high-tech pulse (subsurface) drip irrigation systems, it is advisable to set criteria for subsidy allocation based on results such as increasing the yield of agricultural crops grown on the given plot and reducing the use of fertilizers on this plot. In this case, for instance, if the yield increases by 10%, the subsidy amount may equal 30% of the costs incurred for implementing the technology. If the yield increases by 5%, the potential subsidy is proportionally reduced and may amount to 15% of the costs incurred for implementing the technology.

This mechanism will encourage agricultural producers to apply new technologies not just for their presence but to focus on the results of using new technologies.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Currently, in Uzbekistan's practice, the most developed types of financing for agricultural activities are government subsidies, loans, and credits provided by the state through programs via commercial banks.

Non-governmental financial organizations are almost unwilling to finance agricultural production, as it is highly risky due to factors such as natural phenomena, livestock and crop diseases, weather conditions, etc.

The microfinance sector in Uzbekistan is poorly developed. There are only 87 microfinance organizations operating in the country, which is insufficient for a market with a population of nearly 37 million people. Most microfinance organizations prefer to specialize in microloans for individuals, and only a limited number offer services for businesses. With microfinance organizations being keen on quickly recovering their credit funds, and consequently setting high-interest rates, this type of financing is currently entirely unsuitable for farmers and agricultural producers.

However, with the necessary legislative support, financial stability, and innovative potential, microfinance organizations and institutions in Uzbekistan have the capability to pilot revolving funds and other financial instruments.

Small farmers in Uzbekistan often face significant barriers, including limited access to credit, land, and irrigation water, lack of productive assets, good infrastructure, and modern technology. The implementation of the «Horticulture Development Project in Uzbekistan» by the World Bank has also shown that demand for credit in the horticulture sector is very high but limited by liquidity constraints in the banking sector.

To implement energy- and water-saving technologies in agricultural production, the Government has already developed a financing mechanism for farms. However, given that tax incentives are not yet being effectively applied, it is also necessary to review the proposed support system.

Recommendations

Expanding and improving the use of financial instruments and mechanisms:

1. Improving access to microfinance. Introducing new products, such as microloans with lower interest rates and simplified loan application procedures, can ease the financing of ongoing activities and the development of production capacities. It is also recommended to expand the possibilities for using Islamic finance, which can attract additional investment into the sector.

2. Developing agricultural cooperatives. Strengthening the legal framework to support agricultural cooperatives through preferential crediting and subsidizing risk insurance will help reduce financial barriers to joining cooperatives and strengthen them as an important tool for improving productivity and market competitiveness.

3. Introducing new insurance products. Developing and implementing insurance programs covering a wide range of risks, including climate change, plant and animal diseases, and price fluctuations, will provide additional protection for farmers.

4. Expanding the use of leasing. Improving leasing conditions for equipment and technologies, including introducing tax incentives for companies providing agricultural machinery leasing.

5. Creating guarantee funds. Establishing state or public-private guarantee funds that could provide partial credit guarantees for the agricultural sector, reducing risks for lenders and encouraging credit provision.

6. Stimulating investments. Attracting private and foreign investments by improving the investment climate, including simplifying procedures for registering land rights, reducing the tax burden, and providing additional incentives for agribusiness.

7. Innovative and digital technologies. Promoting the adoption of innovative technologies and digitalization in the agricultural sector through financial instruments and state support for projects aimed at enhancing technological capacity and productivity.

Improving the efficiency of the support system for agricultural producers to promote the adoption of «green technologies»:

- Consider replacing tax incentives with subsidies when introducing new resource-saving technologies, but it is essential to establish the effectiveness of technology application (increased production, higher yields, reduced resource consumption, including impacts on product cost such as fertilizers) as the key factor in receiving such subsidies. It is also important to consider that the mechanism «the higher the effectiveness, the higher the subsidy» is more appropriate.
- For example, when introducing high-tech pulsed (subsurface) drip irrigation systems, it would be advisable to set criteria for subsidy allocation based on results such as increased yield of agricultural crops grown on the specific plot and reduced use of fertilizers on that plot. If, for instance, yield increased by 10%, the subsidy amount could be equal to 30% of the costs incurred in implementing the technology. If yield increased by only 5%, the potential subsidy would be reduced proportionally and could amount to 15% of the costs incurred in implementing the technology.

This mechanism will encourage agricultural producers to adopt new technologies not just for their existence but to focus on the results obtained from using new technologies.

APPENDIX

Microfinance organizations in the Republic of Uzbekistan as of 14.03.2024

| N | License Date | Organization Name | TIN | Legal Address |
|----|--------------|---|-----------|--|
| 1 | 12.01.2007 | Limited Liability Company «RENESANS Mikrokredit Tashkiloti» | 300515648 | Tashkent Region, Yukori Chirchik District, RAC Kumovul, Bektemir Avenue, House 196 |
| 2 | 26.05.2007 | Limited Liability Company «EHTIROM PLUS MIKROKREDIT TASHKILOTI» | 300391954 | 150700, Fergana Region, Kokand City, Turkistan Street, 6-B |
| 3 | 24.08.2007 | Limited Liability Company «Sabir Mikrokredit Tashkiloti» | 300066954 | 140105, Samarkand Region, Samarkand City, Uzbekistan Street, 74 |
| 4 | 29.09.2007 | Limited Liability Company «Kapital Plus Mikrokredit Tashkiloti» | 206918168 | Tashkent City, Yakkasaray District, Shota Rustaveli Street, 59 |
| 5 | 18.10.2007 | Limited Liability Company «KAFOLATLI SARMOYA MIKROMOLIYA TASHKILOTI» | 300469626 | 200118, Bukhara Region, Bukhara City, Samarkand Street, 95 |
| 6 | 03.11.2007 | Limited Liability Company «AI Barot Mikrokredit Tashkiloti» | 300556415 | Fergana Region, Fergana City, B. Marginoniy Street, House 58 |
| 7 | 03.11.2007 | Limited Liability Company «BARAKAT Mikrokredit Tashkiloti» | 300471474 | 190112, Surkhandarya Region, Termez City, Umida Street, 4B |
| 8 | 26.01.2008 | Limited Liability Company «Oltin Yulduz Plus Mikrokredit Tashkiloti» | 300522379 | Fergana Region, Kokand City, Movaynakh Street, 49a |
| 9 | 26.01.2008 | Limited Liability Company «GARANT-INVEST MIKROMOLIYA TASHKILOTI» | 206933435 | 100097, Tashkent City, Chilanzar District, Bunyodkor Avenue, Building near houses 63, 64 |
| 10 | 10.05.2008 | Limited Liability Company «Alfa Mikrokredit Tashkiloti» | 206952475 | Tashkent City, Chilanzar District, Almazar Street, 15/2 |
| 11 | 29.11.2008 | Limited Liability Company «TRAST INVEST Mikrokredit Tashkiloti» | 206973402 | 160100, Namangan Region, Namangan City, Nodira Street, 3 |
| 12 | 18.12.2008 | Limited Liability Company «BV FINANS INVEST Mikrokredit Tashkiloti» | 300945381 | 200104, Bukhara Region, Bukhara City, Mustaqillik Street, 12 |
| 13 | 18.01.2009 | Limited Liability Company «YENGIL KREDIT MIKROKREDIT TASHKILOTI» | 206976595 | 111218, Tashkent Region, Kibray District, RAC «Salar», T. Malika Street, Building of Samandar-Yunus PE |
| 14 | 16.05.2009 | Limited Liability Company «Delta Mikrokredit Tashkiloti» | 301031980 | Tashkent City, Uchtepa District, MKAD 6-A |
| 15 | 23.01.2010 | Limited Liability Company «Qamashi Kapital Invest Mikrokredit Tashkiloti» | 301255955 | 180500, Kashkadarya Region, Kamashi City, Nodira Street, 15 |
| 16 | 17.04.2010 | Limited Liability Company «Chirchiq Kredit Mikrokredit Tashkiloti» | 301362704 | 111722, Tashkent Region, Chirchik City, Microdistrict №2, 5-A |
| 17 | 24.07.2010 | Microcredit Organization LLC «EVRIKA KAPITAL» | 301549422 | 220100, Khorezm Region, Urgench City, Buston Street, House 2/7 |
| 18 | 24.08.2010 | Limited Liability Company «ISTIQBOL INVEST MIKROKREDIT TASHKILOTI» | 207080699 | 100042, Tashkent City, Shaykhantakhur District, MKAD 9/2 |

| N | License Date | Organization Name | TIN | Legal Address |
|----|--------------|--|------------|--|
| 19 | 08.06.2013 | Limited Liability Company «SIRDARYO MIKROKREDIT TASHKILOTI» | 302079604 | 120100, Sirdarya Region, Gulistan City, Gulistan Street, 1 |
| 20 | 21.09.2013 | Limited Liability Company «ISHONCH EFFEKT KREDIT Mikroredit Tashkiloti» | 302126663 | 130114, Jizzakh Region, Jizzakh City, Sh. Rashidova Street, 290 |
| 21 | 16.05.2015 | Joint-Stock Company «IMKON FINANS Mikroredit Tashkiloti» | 302096393 | 170100, Andijan Region, Andijan City, Amir Temur Avenue, 44a |
| 22 | 25.07.2015 | Limited Liability Company «VODIY TARAQQIYOT KREDIT Mikroredit Tashkiloti» | 303056949 | 151900, Fergana Region, Buyayda District, RAC Yangiqirg'hon, Yangiqirg'hon Street, 2 |
| 23 | 12.09.2015 | Limited Liability Company «ISHONCHLI MABLAG' MIKROKREDIT TASHKILOTI» | 302572940 | Fergana Region, Kokand City, Istiqlol Street, 18 |
| 24 | 27.02.2016 | Limited Liability Company «KELAJAK UMIDI MIKROMOLIYA TASHKILOTI» | 303348971 | Fergana Region, Rishtan District, Ar-Rashidoni Street, House 156, 1/30 |
| 25 | 25.04.2016 | Limited Liability Company «AZIYA Biznes Mikroredit Tashkiloti» | 3034445812 | 160100, Namangan Region, Namangan City, N. Koriyev Street, House 8 |
| 26 | 28.12.2016 | Microcredit Organization JV LLC «ZOODPAY» | 303409318 | Tashkent City, Mirzo Ulugbek District, SSG Sayram, Yassi Street, 19/3 |
| 27 | 22.04.2017 | Limited Liability Company «BIZNES FINANS MIKROMOLIYA TASHKILOTI» | 207135350 | Tashkent City, Yashnabad District, Botkin Street, House 8A |
| 28 | 14.04.2018 | Limited Liability Company «HAMROH KREDIT Mikroredit Tashkiloti» | 302167748 | 151900, Fergana Region, Buyayda District, RAC Yangiqirg'hon, Bogi-Eram Street |
| 29 | 14.04.2018 | Limited Liability Company «Interaktiv Progress Mikroredit Tashkiloti» | 304811142 | Tashkent City, Shaykhantakhur District, Zulfiya Khanum Street, 12 |
| 30 | 14.04.2018 | Limited Liability Company «Microcredit Organization Qizildash» | 302106165 | 220110, Khorezm Region, Urgench City, Ma'rifatchi Street, 78 |
| 31 | 12.05.2018 | Limited Liability Company «Fortuna Biznes Mikroredit Tashkiloti» | 303863499 | 150100, Fergana Region, Fergana City, B. Marginoniy Street, House 12 |
| 32 | 18.08.2018 | Limited Liability Company «BUXORO DARVOZASI INVEST MIKROKREDIT TASHKILOTI» | 304904453 | 200100, Bukhara Region, Bukhara City, A. Gijduvoniy Street, House 4 |
| 33 | 18.08.2018 | Limited Liability Company «Betta Gamma Invest Mikroredit Tashkiloti» | 303569372 | 200104, Bukhara Region, Bukhara City, B. Naqshband Street, 5 |
| 34 | 15.12.2018 | Limited Liability Company «MICROFIN MIKROMOLIYA TASHKILOTI» | 304463924 | Fergana Region, Fergana City, A. Navoi Street, House 41, Apartments 31, 32 |
| 35 | 16.02.2019 | Limited Liability Company «Pulman Mikroredit Tashkiloti» | 305762322 | Tashkent City, Shaykhontohur District, A. Navoi Street, near House 30A |
| 36 | 13.04.2019 | Limited Liability Company «INVEST HAMKOR PLUS Mikroredit Tashkiloti» | 305837307 | 150700, Fergana Region, Kokand City, General Uzakov Street, House 113, Apartment 19 |

| N | License Date | Organization Name | TIN | Legal Address |
|----|--------------|---|-----------|--|
| 37 | 13.04.2019 | Limited Liability Company «Olmaliq Zamin Kredit Mikroredit Tashkiloti» | 305909080 | 110100, Tashkent Region, Almalyk District, A. Temur Street, House 10/26 |
| 38 | 13.04.2019 | Limited Liability Company «MADOR LIFE KOKAND Mikroredit Tashkiloti» | 305930785 | 150700, Fergana Region, Kokand City, Sarboz Street, House 17 |
| 39 | 13.04.2019 | Limited Liability Company «Baraka Madad Finans Mikroredit Tashkiloti» | 305918767 | 160136, Namangan Region, Namangan City, Babur Avenue, House 24/5 |
| 40 | 18.05.2019 | Limited Liability Company «Chust Rir Mikroredit Tashkiloti» | 305747885 | Namangan Region, Chust District, Chust City, RAC Birlik, Chustiy Street |
| 41 | 22.06.2019 | Limited Liability Company «Yorqin Kelajak Mikroredit Tashkiloti» | 305122414 | 151900, Fergana Region, RAC Yangikurgan, A. Tukay Street, House 3 |
| 42 | 22.06.2019 | Limited Liability Company «CLEVER MIKROKREDIT TASHKILOTI» | 306365847 | 100069, Tashkent City, Almazar District, Sagban Street, Dead End 30, House 6 |
| 43 | 22.06.2019 | Limited Liability Company «CASH U MIKROMOLIYA TASHKILOT» | 306365973 | 100069, Tashkent City, Almazar District, Sagban Street, Dead End 30, House 9 |
| 44 | 13.07.2019 | Limited Liability Company «URGANCH DIAMOND Mikroredit Tashkiloti» | 305731899 | 220100, Khorezm Region, Urgench City, Yodgu Street, House 13, Apartment 38 |
| 45 | 13.07.2019 | Limited Liability Company «AVTOGAZ FINANS LYUKS Mikroredit Tashkiloti» | 306360933 | Fergana Region, Fergana City, RAC Shodlik, Al-Fergani Street, House 206 |
| 46 | 13.07.2019 | Limited Liability Company «G`IJDUVON Mikroredit Tashkiloti» | 306397174 | 200500, Bukhara Region, Gijduvon District, RAC A. Kakhhar, A. Kakhhar Street, House 95 |
| 47 | 03.08.2019 | Limited Liability Company «SARMISHSOY PLYUS INVEST Mikroredit Tashkiloti» | 306114540 | Navoi Region, Navoi City, Block 10, A. Navoi Street, House 38B/Block 6/Apartment 28 |
| 48 | 03.08.2019 | Limited Liability Company «ISHONCH MIKROFINANCE MIKROMOLIYA TASHKILOTI» | 306349675 | 100077, Tashkent City, Mirzo Ulugbek District, Buyuk Ipak Yuli Street, House 139 |
| 49 | 24.08.2019 | Limited Liability Company «FINANCE PARTNER Mikroredit Tashkiloti» | 306446168 | 150300, Fergana Region, Besharik District, RAC Fayziabad, Oltin Vodiy Street |
| 50 | 09.11.2019 | Limited Liability Company «HAYOT INVEST MIKROKREDIT TASHKILOTI» | 207135715 | Tashkent City, Mirabad District, Shakhrisabz Street, House 11/4 |
| 51 | 09.11.2019 | Limited Liability Company «KAFOLAT KREDIT GROUP MIKROKREDIT TASHKILOTI» | 306771169 | 100105, Tashkent City, Mirabad District, Fargona Yuli Street, House 222/7 |
| 52 | 23.11.2019 | Limited Liability Company «GRAND MAX GOLD MIKROKREDIT TASHKILOTI» | 306185880 | 151900, Fergana Region, Buwayda District, RAC Yangikurgan, Bogi-Eram Street, House 3 |
| 53 | 21.12.2019 | Limited Liability Company «Danweek Funding Mikroredit Tashkiloti» | 306612784 | Tashkent City, Mirabad District, Nukus Street, House 79a, Apartments 1-2 |
| 54 | 03.03.2020 | Limited Liability Company «KREDITOMAT TASHKENT Mikroredit Tashkiloti» | 306870963 | 100029, Tashkent City, Mirabad District, Yakkachinor Street, House 4, Apartment 54 |

| N | License Date | Organization Name | TIN | Legal Address |
|----|--------------|--|------------|---|
| 55 | 27.06.2020 | Limited Liability Company «PERSPECTIVE GLOBAL INVEST Mikrokredit Tashkiloti» | 306649800 | 100121, Tashkent City, Yakkasaray District, Kichik Halika Yuli Street, House 20, Apartments 1, 2, 3, 4, 5 |
| 56 | 23.07.2020 | Limited Liability Company «SILVER STONE STANDART» | 307457858 | 151900, Fergana Region, Buwayda District, RAC Dodkho, A. Navoi Street |
| 57 | 23.07.2020 | Limited Liability Company «EASY FINANS MIKROMOLIYA TASHKILOTI» | 307479728 | Tashkent City, Chilanzar District, MCG Beshyagach, Furkat Street, 191 |
| 58 | 22.08.2020 | Limited Liability Company «FAST FINANCING SERVICE MIKROKREDIT TASHKILOTI» | 307115451 | 220110, Khorezm Region, Urgench City, Tinchlik Street, House 31/2 |
| 59 | 22.10.2020 | Limited Liability Company «SMART BUSINESS KREDIT MIKROKREDIT TASHKILOTI» | 307596488 | Andijan Region, Kurgantepa City, Andijan Street, House 1 |
| 60 | 27.03.2021 | Limited Liability Company «MIKROKREDIT TASHKILOTI ELIT MIKROFINANS» | 306458477 | Tashkent City, Yunusabad District, Amir Temur Avenue, Block 2 |
| 61 | 01.05.2021 | Limited Liability Company «ISHONCH PLYUS HAMKOR Mikrokredit Tashkiloti» | 3082229751 | 200500, Bukhara Region, Gijduvon District, Yu. Khamadoniy Street, House 61 |
| 62 | 08.05.2021 | Limited Liability Company «PROFIT TREND MIKROKREDIT TASHKILOTI» | 308064674 | 220100, Khorezm Region, Urgench City, P. Makhmud Street, House 46a/10 |
| 63 | 10.07.2021 | Limited Liability Company «ASR MIKROMOLIYA TASHKILOTI» | 308276229 | 170100, Andijan Region, Andijan City, Amir Temur Avenue, (50)-36 |
| 64 | 10.07.2021 | Limited Liability Company «Mikrokredit Tashkiloti ZAMONDOSH KREDIT» | 308491476 | 150500, Fergana Region, Dangara District, Uvaysiy MCG, Tashkent Street |
| 65 | 07.08.2021 | Limited Liability Company «CENTRAL CAPITAL CREDIT Mikrokredit Tashkiloti» | 308339361 | 100017, Tashkent City, Yunusabad District, C-5, House 56, Apartment 4 |
| 66 | 09.10.2021 | Limited Liability Company «On Dinor Kredit Mikrokredit Tashkiloti» | 308576661 | 100135, Tashkent City, Chilanzar District, Block 16, House 17, Apartment 28 |
| 67 | 15.12.2021 | Microcredit Organization of Foreign Enterprise LLC «TASFINANCE MIKROMOLIYA TASHKILOTI» | 308873277 | Tashkent City, Chilanzar District, MCG Mehrjon, 18th Block, House 17, Apartment 61 |
| 68 | 20.01.2022 | Limited Liability Company «BARQAROR SARMOYA GROUP MIKROMOLIYA TASHKILOTI» | 308843424 | 100097, Tashkent City, Chilanzar District, Katartal Street, Block 6, House 21 |
| 69 | 14.05.2022 | Limited Liability Company «MABRUK FINANCE MIKROMOLIYA TASHKILOTI» | 309432982 | 100097, Tashkent City, Uchtepa District, Block 23, House 55, Apartment 4 |
| 70 | 09.06.2022 | Limited Liability Company «MAQSAD FINANCE MIKROMOLIYA TASHKILOTI» | 309464659 | 100135, Fergana Region, Kokand City, Tukkizubulak Street, House 9a |
| 71 | 18.06.2022 | Limited Liability Company «YANGI FINANCE MIKROMOLIYA TASHKILOTI» | 309612631 | 100060, Tashkent City, Mirabad District, Istiqlol Street, House 34 |
| 72 | 16.07.2022 | Limited Liability Company «ASIA INVEST MIKROMOLIYA TASHKILOTI» | 309268086 | 200107, Bukhara Region, Bukhara City, I. Karimov Street, House 3, 6 |

| N | License Date | Organization Name | TIN | Legal Address |
|----|--------------|---|-----------|---|
| 73 | 13.08.2022 | Joint Microfinance Organization LLC «SALAM FINANCE» | 309490975 | 220100, Khorezm Region, Urgench City, Feruz Mahalla, P. Makhmud Street, House 220 I |
| 74 | 13.08.2022 | Microfinance Organization of Foreign Enterprise LLC «MIKROMOLIYA TASHKILOTI OASIS CREDIT» | 308931085 | Tashkent City, Yunusabad District, Alay Market , dead end street, House 63 |
| 75 | 07.10.2022 | Joint Microfinance Organization LLC «TEZCOIN» | 309763555 | Tashkent City, Mirzo Ulugbek District, Asaka MCG, Street 1, House 7 |
| 76 | 08.11.2022 | Microfinance Organization LLC «NAYUTA» | 309553151 | Tashkent City, Mirabad District, Salar MCG, Nukus Street, House 29 |
| 77 | 08.11.2022 | Microfinance Organization LLC «SHAFFOF-MOLIYA» | 309888526 | Tashkent City, Mirzo Ulugbek District, Asaka MCG, Mustaqillik Street, 1/8 |
| 78 | 19.11.2022 | Limited Liability Company «MIKROMOLIYA TASHKILOTI SILVER FINANCE» | 309243047 | 170100, Andijan Region, Andijan City, Navoi Avenue, 35 |
| 79 | 19.11.2022 | Limited Liability Company «FAROVON HAYOT MIKROMOLIYA TASHKILOTI» | 309454987 | 160800, Namangan Region, Uychi District, Uychi City, Abu Rayhan Beruniy Street, 41, 4/1 |
| 80 | 19.11.2022 | Limited Liability Company «PUL BOR MIKROMOLIYA TASHKILOTI» | 309721132 | 200107, Bukhara Region, Bukhara City, O. Khojaev MCG, Piridastgir Street, 10 B |
| 81 | 19.11.2022 | Microfinance Organization LLC «PAYLATER» | 309776769 | 100015, Tashkent City, Mirabad District, Nukus Street, 16 |
| 82 | 15.12.2022 | Limited Liability Company «TAYYAB FINANCE MIKROMOLIYA TASHKILOTI» | 309942744 | Tashkent City, Sergeli District, Sergeli-8A Block, Ezgulik MCG, House 3, 2 |
| 83 | 12.08.2023 | Limited Liability Company «MIKROMOLIYA TASHKILOTI POYTAXT» | 310623065 | Tashkent City, Almazar District, Chustiy MCG, Beruniy Street, 2 |
| 84 | 12.08.2023 | Limited Liability Company «PULLOL BUSINESS MIKROMOLIYA TASHKILOTI» | 310430149 | Tashkent City, Yakkasaray District, Rakat Street, House 10, 18 |
| 85 | 06.02.2024 | Limited Liability Company «LIME MIKROMOLIYA TASHKILOTI» | 310847482 | Tashkent City, Sergeli District, Belarik Street, 715 |
| 86 | 06.02.2024 | Limited Liability Company «TASHDI» | 310781764 | Tashkent City, Yashnabad District, Parvoz MCG, Aviasozlar-1, 4/39 |
| 87 | 02.03.2024 | Limited Liability Company «APEX MOLIYA» | 311084436 | Tashkent City, Zangiata District, Gulbay MCG, Amir Temur Street, 2a |

Source: website of the Central Bank of the Republic of Uzbekistan

