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PROGRAM LENDING AS AN INSTRUMENT OF STATE STIMULATION OF THE AGRARIAN SECTOR

БАҒДАРЛАМАЛЫҚ КРЕДИТТЕУ АГРАРЛЫҚ СЕКТОРДЫ МЕМЛЕКЕТТІК ЫНТАЛАНДЫРУ ҚҰРАЛЫ РЕТІНДЕ

ПРОГРАММНОЕ КРЕДИТОВАНИЕ КАК ИНСТРУМЕНТ ГОСУДАРСТВЕННОГО СТИМУЛИРОВАНИЯ АГРАРНОГО СЕКТОРА

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Abstract. Program lending is one of the key instruments of state regulation and financial support for the agro-industrial complex, ensuring the sustainable development of agriculture and strengthening the country's food security. In the context of structural transformations in the agrarian sector, the effectiveness of existing targeted financing mechanisms, taking into account regional specifics, becomes particularly significant. *The objective* is to substantiate priority directions of the management system for concessional investment in agrarian business under conditions requiring increased investment attractiveness of the sector, expanded access of agricultural producers to borrowed funds, and growth of economic stability of the agrarian sector. *Methods* include content analysis of regulatory legal acts in considering the institutional foundations of credit programs, statistical data on the volume and structure of concessional investments to assess the dynamics of distribution of financial resources among economic entities, and monitoring of the state of agro-industrial production in studying institutional, budgetary, and organizational constraints of state support measures. *Results* – the main problems reducing the effectiveness of targeted lending services are identified, including lengthy approval periods, limited monetary limits, seasonality of farmers' incomes, insufficient level of process digitalization, low borrower awareness, and imperfection of credit risk control methods. Proposals are substantiated to simplify investment support procedures, increase the number of guarantee instruments, introduce a unified digital platform, online monitoring, and stimulate lending at the processing stage, as well as in supply chains of the agro-industry. *Conclusions* – the role of social-entrepreneurial corporations as regional operators of program lending is emphasized, along with the need to diversify funding sources, expand borrower coverage, and support innovative projects.

Аңдатпа. Бағдарламалық кредиттеу-ауыл шаруашылығының тұрақты дамуын және елдің азық-түлік қауіпсіздігін нығайтуды қамтамасыз ететін агроөнеркәсіптік кешенді мемлекеттік реттеу мен қаржылық қолдаудың негізгі құралдарының бірі. Аграрлық сектордың құрылымдық өзгерістері жағдайында өңірлік ерекшелікті ескере отырып нысаналы қаржыландырудың қолданыстағы тетіктерінің тиімділігі ерекше маңызға ие болады. *Мақсаты -* саланың инвестициялық тартымдылығын арттыру, ауыл шаруашылығы өндірушілерінің қарыз қаражатына қолжетімділігін кеңейту және аграрлық сектордың экономикалық тұрақтылығын арттыру қажеттігі жағдайында аграрлық бизнесті жеңілдетілген инвестициялауды басқару жүйесінің басым бағыттарын негіздеу. *Әдістер* – кредиттік бағдарламалардың институционалдық негіздерін қарау кезінде нормативтік құқықтық актілердің контент-талдауы, жеңілдетілген капитал салымдарының көлемі мен құрылымы

бойынша статистикалық деректер - шаруашылық жүргізуші субъектілер арасында қаржы ресурстарын бөлу динамикасын бағалау үшін, агроөнеркәсіптік өндірістің жай-күйінің мониторингі-мемлекеттік жәрдем шараларының институционалдық, бюджеттік және ұйымдастырушылық шектеулерін зерттеу кезінде. *Нәтижелер* - ұзақ келісу кезеңін, монетарлық лимиттердің шектелуін, фермерлер табысының маусымдылығын, процестерді цифрландырудың жеткіліксіз деңгейін, қарыз алушылардың хабардарлығының төмендігін және кредиттік тәуекелдерді бақылау әдістерінің жетілмегендігін қоса алғанда, атаулы кредитке қызмет көрсетудің нәтижелілігін төмендететін негізгі проблемалар көрсетілген. Инвестициялық қамтамасыз ету рәсімдерін оңайлату, кепілдік беру құралдары санының өсуі, бірыңғай цифрлық платформаны енгізу, онлайн-мониторинг және агроиндустрияны қайта өңдеу, тізбектер мен жеткізу кезеңін кредиттеуді ынталандыру жөніндегі ұсыныстар негізделген. *Қорытындылар* - әлеуметтік-кәсіпкерлік корпорациялардың өңірлік бағдарламалық кредиттеу операторлары ретіндегі рөлі және қаржыландыру көздерін әртараптандыру, қарыз алушыларды қамтуды ұлғайту және инновациялық жобаларды қолдау қажеттілігі атап өтіледі.

Аннотация. Программное кредитование – один из ключевых инструментов государственного регулирования и финансовой поддержки агропромышленного комплекса, обеспечивая устойчивое развитие сельского хозяйства и укрепление продовольственной безопасности страны. В условиях структурных преобразований аграрного сектора особую значимость приобретает эффективность действующих механизмов целевого финансирования с учетом региональной специфики. *Цель* - обоснование приоритетных направлений системы управления льготным инвестированием аграрного бизнеса в условиях необходимости повышения инвестиционной привлекательности отрасли, расширения доступа сельхозпроизводителей к заемным средствам и роста экономической стабильности аграрного сектора. *Методы* – контент-анализ нормативных правовых актов при рассмотрении институциональных основ кредитных программ, статистические данные по объёмам и структуре льготных капиталовложений - для оценки динамики распределения финансовых ресурсов между субъектами хозяйствования, мониторинг состояния агропромышленного производства - при исследовании институциональных, бюджетных и организационных ограничений мер государственного содействия. *Результаты* - показаны основные проблемы, снижающие результативность адресного ссудного обслуживания, включая длительный период согласования, ограниченность монетарных лимитов, сезонность доходов фермеров, недостаточный уровень цифровизации процессов, низкую осведомлённость заёмщиков и несовершенство методов контроля кредитных рисков. Обоснованы предложения по упрощению процедур инвестиционного обеспечения, рост числа гарантийных инструментов, внедрению единой цифровой платформы, онлайн-мониторинга и стимулированию кредитования этапа переработки, цепей и поставок агроиндустрии. *Выводы* – отмечается роль социально-предпринимательских корпораций как региональных операторов программного кредитования и необходимость диверсификации источников финансирования, увеличения охвата заёмщиков и поддержки инновационных проектов.

Keywords: agro-industrial business, program lending, investment policy, state support, social-entrepreneurial corporations, sustainable development, economic efficiency.

Түйінді сөздер: агроөнеркәсіптік бизнес, бағдарламалық кредиттеу, инвестициялық саясат, мемлекеттік қолдау, әлеуметтік-кәсіпкерлік корпорациялар, орнықты даму, экономикалық тиімділік.

Ключевые слова: агропромышленный бизнес, программное кредитование, инвестиционная политика, государственная поддержка, социально-предпринимательские корпорации, устойчивое развитие, экономическая эффективность.

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Introduction

The practice of recent years demonstrates that program-based lending has become the most effective instrument of state support, ensuring a balance between social objectives, business interests, and the stability of the financial system (Yevniev A.K., Ardabayeva A.E.) [1].

The primary objective of program-based lending is to create conditions for the long-term development of agribusiness, stimulate modernization, and enhance the competitiveness of domestic producers. In this regard, the mechanism of program-based lending performs not only a financial but also a social function, as it contributes to job preservation, the development of rural areas, and the of regional food security. In Kazakhstan, program-based lending is implemented through a system of specialized development institutions. The most significant among them are: «Agrarian Credit Corporation» JSC (concessional loans and microloans for farmers); the «Entrepreneurship Development Fund «Damu» JSC (guarantee support and interest rate subsidization); «Kaz AgroFinance» JSC (machinery and equipment provided under leasing arrangements); and «Social-Entrepreneurial Corporation» JSC (SEC), which implement regional programs for financing and supporting agribusiness.

Each of these organizations operates in accordance with approved state and regional programs, among which the following are of key importance: the State Program for the Development of the Agro-Industrial Complex of the Republic of Kazakhstan for 2021–2027; Concept of the Development of the Agro-Industrial Complex of the Republic of Kazakhstan for 2021-2030; and the Program for Supporting Regional Entrepreneurship through «Social-Entrepreneurial Corporation» JSC (SEC) and «Entrepreneurship Development Fund «Damu» JSC.

These programs provide a comprehensive set of measures, including interest rate subsidization, the provision of state guarantees on loans, partial reimbursement of costs under leasing agreements, as well as support for investment projects in agriculture.

During the period from 2021 to 2024, the total volume of preferential loans issued to the agricultural sector exceeded 1 trillion tenge, with a significant portion allocated to livestock and processing projects.

At the same time, the repayment rate of funds within the framework of program-based lending exceeds 95%, indicating its sustainability and effectiveness.

The effective functioning of the program-based lending system for agribusiness largely depends on how rationally and in a coordinated manner the management mechanisms of this process are structured. Program-based lending management represents a set of organizational, economic, and financial instruments aimed at ensuring the targeted use of credit resources, increasing their efficiency, and minimizing default risks (Sultanova Z.H., Abdulova T.G., Dyusembekova G.S.) [2].

Literature review

Issues of state financial support and program lending of the agro-industrial complex are widely reflected in domestic and international scientific research. In the context of agrarian reforms in the Republic of Kazakhstan, researchers emphasize that access to affordable credit resources remains one of the determining factors for ensuring economic stability and competitiveness of agricultural enterprises.

Evniev A.K. and Ardabayeva A.E. [1] analyze the issues of creditworthiness of agro-industrial complex entities and conclude that high financial risks, insufficient collateral base and instability of farmers' incomes significantly limit the effectiveness of program lending mechanisms in Kazakhstan. Sultanova Z.H., Abdulova T.G., Dyusembekova G.S. [2] consider directions for improving the credit system of the agro-industrial complex, highlighting the importance of institutional regulation and state-supported concessional lending instruments.

Structural and economic characteristics of the agro-industrial complex are examined by Syzdykbayeva N.B., Turysbekova R.K., Asanova Zh.I. et al. [3], who note that uneven development of agricultural sectors and limited investment activity necessitate strengthening state financial support, including targeted credit programs. Financial modeling approaches proposed by Altaibayeva Zh., Aiguzhinova D., Shelomentseva V. et al. [4] demonstrate that effective program lending enhances investment planning and financial sustainability of agricultural enterprises, particularly in capitalintensive areas such as livestock production.

Innovation-driven development of the agro-industrial complex is analyzed by Karymsakova Zh.K., Kerimova U.K., Deliana Y. [5], who emphasize that access to credit resources is a critical prerequisite for the introduction of modern technologies, modernization of production processes and increasing productivity in agriculture. Similar conclusions regarding the role of financial mechanisms in supporting employment and economic stability in rural areas are presented by Narynbayeva A.S., Nurbaeva G.E., Shakhman E.T. [6], Kalmakova D.T., Sagieva R.K., Radwanski R. [7] examine current trends in rural management, underlining the growing role of digital and analytical tools supported by state financing mechanisms.

The strategic framework for state support of the agro-industrial complex is defined in the Concept of the Development of the Agro-Industrial Complex of the Republic of Kazakhstan for 2021–2030, which identifies program lending as a key instrument for stimulating agricultural production, processing industries and rural development (Қазақстан Республикасының агроөнеркәсіптік…) [8]. Overall, the literature indicates that despite the availability of various program lending instruments, their practical implementation remains constrained by financial, institutional and organizational barriers, which determines the relevance of further research aimed at improving state-supported credit mechanisms for agrarian business.

Materials and methods

The research employs a combination of qualitative and quantitative methods to ensure a comprehensive assessment of program lending mechanisms in the agro-industrial complex. The methodological framework includes content analysis of regulatory legal acts governing state support and program lending in the agro-industrial complex of the Republic of Kazakhstan, which allows identifying key institutional features affecting the implementation of credit programs.

Statistical analysis was conducted using official data from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhs to assess the dynamics, structure and scale of program credit allocation, as well as trends in financing agricultural enterprises across regions. Comparative analysis was applied to evaluate existing credit and subsidy programs, enabling the identification of their strengths and limitations in terms of accessibility and efficiency.

Analytical and economic-statistical methods were used to examine key financial indicators and assess the effectiveness of state-supported credit mechanisms in agrarian business development. In addition, synthesis and generalization methods were employed to systematize research findings and formulate evidence-based conclusions.

A systematic approach was applied to analyze sector-specific characteristics of agriculture, including seasonality and investment risks, which made it possible to develop practical recommendations aimed at improving the system of program lending.

Results

The effectiveness of program-based lending management is assessed using a combination of quantitative and qualitative indicators, including the level of budgetary fund utilization, the share of repaid loans, growth in production volumes and employment in the agrarian sector, as well as borrower satisfaction levels. To further improve the management system, it is advisable to implement a unified digital platform for all participants in program-based lending «Social-Entrepreneurial Corporation» JSC, banks, and the Ministry of Agriculture RK, expand the system of state guarantees for small farmers, strengthen feedback mechanisms with borrowers through advisory centers, and develop partnership programs with second-tier banks and microfinance organizations.

In the long term, program-based lending should transform into a flexible system of adaptive financing capable of accounting for the seasonal and regional characteristics of agriculture. In this context, the role of management should extend beyond control functions to include strategic support of agrarian projects, from the initial concept to the achievement of final results. Effective management of program-based lending is a key factor in the sustainable development of the agrarian sector, ensuring a balance between state and entrepreneurial interests, increasing access to financial resources, and stimulating regional economic growth (Hussain S., Sharma Sh., Sobti R. Ch. et al.) [9].

Despite the stable positive dynamics in the development of program-based lending in the agrarian sector of the Republic of Kazakhstan, the system continues to face a number of structural, institutional, and organizational-financial challenges that limit its effectiveness and restrict the coverage of potential borrowers.

The analysis of the activities of «Social-Entrepreneurial Corporation» JSC, combined with a comparison to nationwide practices, makes it possible to identify key bottlenecks that hinder the broader dissemination and sustainable functioning of program-based lending mechanisms.

The current regulatory and legal framework governing the activities of development institutions is not fully adapted to the specific characteristics of agriculture. Mechanisms for providing state guarantees, subsidies, and concessional lending often require lengthy approval procedures and do not always correspond to the conditions of regional markets. For instance, application review periods under SEC-administered programs may range from 30 to 90 days, leading to the loss of relevance of investment decisions and reducing the motivation of potential borrowers. Moreover, some programs impose excessive collateral requirements, limiting the participation of small farms that lack sufficient liquid assets. This contradicts the objectives of state policy aimed at integrating microenterprises and peasant farms into economic activity.

One of the major persistent issues is the insufficient volume of long-term financial resources available to development institutions. Despite relatively low interest rates (on average 4-6%), the volume of concessional financing does not always meet regional demand. The financial capacity of programs is constrained by budgetary limits, resulting in the postponement of some approved applications to subsequent fiscal years. This reduces the effectiveness of credit support measures and creates a temporary imbalance between the demand for and supply of financial resources (Smith K., Fearnley C.J., Dixon D. et al.) [10].

Another significant barrier to the effectiveness of program-based lending is the seasonality of cash flows in agriculture, which is driven by the specifics of the production cycle and the dependence of outcomes on natural and climatic factors. Most agrarian enterprises and farms receive their primary income during a limited period associated with crop sales or livestock slaughter, whereas expenditures - such as seeds, feed, fertilizers, fuel, and labor costs - are incurred continuously and evenly throughout the year. This imbalance between inflows and outflows generates liquidity gaps, reduces solvency during the off-season, and increases the risk of overdue debt.

Loan repayment performance is directly dependent on crop yields, market prices, and sales volumes. In years of poor harvests or declining prices for meat and grain, farmers' capacity to meet repayment obligations deteriorates sharply. This results in unstable payment schedules and compels credit institutions to apply restructuring mechanisms, grace periods, or loan extensions. Despite the availability of state support instruments in Kazakhstan - such as interest rate subsidies, crop insurance, and guarantee funds - the overall financial resilience of agrarian entities remains insufficient. According to sectoral analysts, up to 40% of agricultural loan borrowers experience cash flow gaps during the year.

A further critical issue is the low level of financial literacy among a segment of farmers, particularly in small and family-owned farms. The lack of skills in financial planning, income and expenditure analysis, and break-even calculations leads to errors in repayment scheduling, inefficient use of borrowed funds, and an increase in debt burden.

As a result, an accumulation of overdue obligations emerges, affecting not only individual borrowers but also the overall stability of the credit portfolios of state development institutions. This, in turn, reduces the investment attractiveness of the agrarian sector and limits opportunities for expanding concessional financing.

To mitigate the impact of seasonality and enhance loan repayment sustainability, a comprehensive set of measures is required, including:

- the introduction of flexible repayment schedules aligned with production cycles;
- the use of financial planning and income forecasting based on previous production cycles;
- the development of financial literacy programs and advisory support for borrowers;
- the implementation of digital liquidity management tools, including reminders via CRM systems or Telegram bots.

The seasonality of cash flows in agriculture represents a structural financial risk, necessitating a transition from traditional lending approaches to adaptive models focused on sustainability and the individualized financial capacity of agricultural producers.

One of the key internal factors limiting the effectiveness of program-based lending implementation is the absence of a unified digital interaction platform among the main participants in the process - namely, «Social and Entrepreneurial Corporation» JSC, «Entrepreneurship Development Fund «Damu» JSC, «Agrarian Credit Corporation» JSC, and secondtier banks. At present, each development institution operates its own information systems, resulting in data fragmentation, duplication of functions, and a slowdown in document circulation.

For example, financing applications are often submitted in paper form, while approval procedures are conducted manually through multiple institutions. This increases the average loan application review period from a potential 15–20 working days to 45–60 days, especially when subsidies and guarantees require coordination across different organizations.

Moreover, the lack of digital integration complicates several critical processes:

* online monitoring of application status, leaving borrowers without transparent information on the progress of their projects;

* automated verification of borrowers' financial conditions and credit histories, which increases the workload of specialists;

* risk analytics and forecasting, as data are stored in disparate formats and are not synchronized across institutions;

* the generation of consolidated reporting, which requires manual processing and reduces the accuracy of managerial decision-making.

As a result, an information gap emerges between state institutions and the end participants of credit programs - farmers, cooperatives, and processors. The absence of a unified digital framework reduces process transparency, slows the flow of financial resources, and creates administrative barriers to the implementation of state support programs.

To address this problem, it is necessary to introduce a single integrated digital platform that encompasses all stages of the process -

from application submission to project implementation monitoring. Such a system should include: a unified registry of borrowers and projects; an automated risk assessment (scoring) system; interagency data exchange tools; electronic approval of subsidies and guarantees; and dashboards and reporting panels for management bodies and analytical units.

The experience of similar digital solutions - such as AgroCredit Digital in Uzbekistan and AgriFinTech platforms in European Union countries - demonstrates that interagency integration can reduce application processing times by 40–50%, increase borrower satisfaction, and lower administrative costs associated with servicing credit programs. The absence of a unified digital platform should therefore be regarded as a systemic internal barrier constraining the implementation of program-based lending. The introduction of a comprehensive digital infrastructure may become a key direction for enhancing the efficiency of public and corporate governance in the agrarian financial sector.

In addition, a high share of manual document processing persists in the monitoring of credit projects, reducing the responsiveness of managerial decision-making and limiting analytical capabilities. The weak development of credit risk assessment mechanisms and the absence of automated rating models further complicate default probability forecasting and reduce portfolio transparency (Avagyan A.B.) [11].

Another serious challenge is the low level of awareness among farmers and agricultural cooperatives regarding the opportunities available through program-based lending. Despite the presence of official websites, informational brochures, and rural forums, a significant proportion of potential borrowers are either unaware of program participation conditions or lack sufficient knowledge to prepare the required documentation. The main barriers to the development of program-based lending are summarized in table 1.

Table 1 - Key challenges in the development of program-based lending in the agricultural sector

Group of problems	Content	Consequences	Possible solutions
Institutional	Insufficient flexibility of the regulatory framework and lengthy approval procedures.	Delays in project approval and reduced rates of fund utilization.	Simplification of procedures and reduction of application review timelines.
Financial	Limited budget financing ceilings and seasonality of farmers’ incomes.	Shortages of working capital and increased levels of overdue debt.	Expansion of guarantee mechanisms and interest rate subsidies.
Organizational	Absence of a unified digital platform and lack of accounting automation.	Duplication of functions and high staff workload.	Implementation of a digital monitoring and data exchange system.
Informational	Low awareness of agricultural producers about available programs.	Underutilization of the potential of concessional loans.	Expansion of advisory services and agri-financial education.
Managerial	Insufficient analytics and inadequate credit risk assessment.	Increased default risks	Development of a risk-rating model and digital KPIs.
Note: compiled by the author based on the research			

The conducted analysis shows that the key challenge lies not so much in the volume of allocated financing as in the quality of management and the organization of interaction among participants in the program-based lending system. To address the identified problems, it is necessary to reorient the management system from an administrative model to an innovative, risk-oriented, and digital model, where the emphasis is placed on transparency, efficiency, and performance (Mensah J.) [12].

Improving management should ensure more effective use of financial resources, expansion of the borrower base, minimization of credit risks, and the formation of a sustainable financial infrastructure for agriculture. Based on the analysis of the activities of «Social-Entrepreneurial Corporation» JSC and the generalization of domestic and international experience, several key directions for optimizing the program-based lending management system can be identified: institutional improvement, process digitalization, development of risk management, enhancement of financial literacy among agricultural producers, and the introduction of key performance indicators (KPIs) (Francesco F., Pattyn V., Salamon H.) [13].

A primary direction is the simplification of procedures and enhancement of transparency in interactions among participants in the program-based lending system. It is necessary to establish a unified regulatory framework that would accelerate the application approval process and reduce administrative barriers (Awan H.S., Nisar R.D. Chaudry T.A.) [14].

An additional important direction for improving the effectiveness of program-based lending management is the implementation of the “one-stop-shop” principle, which ensures end-to-end support for borrowers at all stages of interaction with development institutions - from application submission to the receipt and monitoring of credit funds. The essence of this approach lies in the creation of an integrated digital platform that consolidates the functions of several key participants in the process, including «Social-Entrepreneurial Corporation» JSC, «Entrepreneurship Development Fund «Damu» JSC, «Agrarian Credit Corporation» JSC, and second-tier banks.

Such a platform should operate on the basis of a single user interface, where applicants enter their data only once, while all required checks and approvals are carried out automatically in electronic form.

The implementation of the “one-stop shop” mechanism will make it possible to:

● reduce application processing times by an average of 40–50% through the elimination of duplicate procedures;

● increase process transparency, as all stages will be reflected in the borrower’s personal account;

● reduce the administrative burden on employees of development institutions and banks;

● improve communication among participants through real-time automated data exchange;

● enhance the trust of agricultural producers in the program-based financing system by eliminating subjectivity and human error.

International experience (for example, AgriFin Digital Services platforms in EU countries and the One-Stop Credit Portal in South Korea) demonstrates that the introduction of a digital “one-stop shop” leads to higher borrower satisfaction, reduced bureaucratic burden, and an increase in the number of submitted and approved applications.

For Kazakhstan, this approach represents not only a tool for digitalization but also a means of enhancing manageability and transparency of state credit programs. It contributes to the creation of a unified information space, the strengthening of trust between the state and business, and the improvement of financial discipline and borrower accountability (Durmanov A., Bartosova V., Drobyazko S. et al.) [15]. In the long term, the implementation of a «one-stop shop» system based on SECs JSC and integrated with eGov, the «Entrepreneurship Development Fund «Damu» JSC, and the «Agrarian Credit Corporation» JSC will make it possible to establish a national program-based lending platform, ensuring effective coordination among participants and the sustainable development of the agrarian sector. The main directions for improving program-based lending management and the expected outcomes are presented in table 2.

Table 2 - Key directions for improving the management of program-based lending and expected outcomes

Direction of improvement	Content of measures	Expected outcomes
Institutional optimization	Simplification of regulatory procedures and implementation of a “one-stop shop” mechanism.	Reduction of application processing times and increased access to credit.
Centralization of management	Creation of a unified database of borrowers and projects.	Elimination of duplication and enhanced transparency.
Organizational reform	Establishment of a consultation and information center within SEC.	Increased farmer participation in program-based schemes.
Enhanced monitoring	Introduction of regular KPIs for repayment and efficiency.	Improved manageability and accountability of structural units.
Strengthening coordination	Co-financing with the «Entrepreneurship Development Fund «Damu» JSC, and second-tier banks.	Expanded coverage and enhanced sustainability of the financial system.
Note: compiled by the author based on the analysis of regulatory documents and scientific sources (Evniev A.K., Ardabayeva A.E.; Sultanova Z.H., Abdulova T.G., Dyusembekova G.S.; Durmanov A., Bartosova V., Drobyazko S. et al.) [1, 2, 15]		

Digitalization is a strategic direction for the development of the financial infrastructure of the agrarian sector. Under modern conditions, information technologies are precisely the tools that ensure transparency, efficiency, and accuracy of managerial decision-making.

For «Social-Entrepreneurial Corporation» JSC, the implementation of digital solutions will enable a transition from ex post analysis to proactive management of the credit portfolio. The main objectives of digitalization include:

■ the creation of a unified electronic platform for application submission, status tracking, contract signing, and reporting uploads;

■ integration of the SEC platform with the systems of the Ministry of Agriculture RK, the «Entrepreneurship Development Fund «Damu» JSC, «KazAgroFinance» JSC, and second-tier banks;

■ the introduction of an electronic borrower registry that allows tracking of credit history and payment discipline;

■ the use of analytical modules and dashboards for monitoring risks, repayment performance, and program effectiveness.

Process automation will not only accelerate application processing but also improve the quality of analytics, minimize errors, and reduce corruption risks.

Risk management in the field of program-based lending should become an integral element of corporate strategy. To this end, it is necessary to implement a multi-level risk management system, which includes:

- assessment of borrowers' financial conditions using automated scoring models;
- development of a risk rating system with categories (low, moderate, high);
- insurance of credit risks with the involvement of specialized insurance companies;
- establishment of a reserve fund to cover unforeseen losses.

The adoption of a risk-oriented approach will enhance the sustainability of the credit portfolio, reduce the level of overdue debt, and ensure long-term financial stability (table 3).

Table 3 - Measures for digitalization and risk management development in program-based lending management

Direction	Specific measures	Implementation outcomes
Process digitalization	Implementation of a unified SEC information platform.	Reduced application processing time and increased transparency.
Electronic reporting	Automation of submission and verification of borrower reports.	Improved timeliness of control and data accuracy.
Analytical tools	Use of dashboards, digital KPIs, and early risk warning systems	Timely response to changes and reduced default rates.
Risk management	Introduction of scoring models for borrower assessment.	Lower credit risks and increased repayment rates.
Insurance and guarantees	Establishment of a co-insurance mechanism for loans.	Enhanced financial system resilience and investor confidence.
Note: developed by the author based on official statistical data and analytical materials (Bureau of National Statistics of the Agency…) [16]		

To enhance managerial controllability and staff motivation within Social-Entrepreneurial Corporation (SEC), it is necessary to introduce a Key Performance Indicator (KPI) system that reflects both the financial and social outcomes of activities. The primary indicators may include: the level of utilization of financing limits; the share of loans repaid on time; the number of new borrowers; and the proportion of projects generating a multiplier effect (such as job creation, exports, and processing activities). This system will enable an objective assessment of the performance of departments and managers, as well as the development of an incentive system based on performance results.

Another important factor in improving the effectiveness of program-based lending is the development of the financial competence of agricultural producers. It is necessary to conduct training seminars, workshops, and advisory sessions aimed at enhancing skills in financial planning, profitability calculation, and liability management.

SEC may introduce an «AgroFinance» training module - an online platform featuring simple payback calculators, business plan templates, and educational video materials. This approach will enable small farms to make informed choices when selecting credit programs and reduce the risk of inefficient use of financial resources (Bureau of National Statistics of the Agency…) [16].

Discussions

The improvement of program-based lending management should be aimed at creating a modern, digital, and transparent system in which financial flows are accompanied by continuous analytical monitoring, and decisions are made on the basis of accurate data and risk assessments. The implementation of the proposed measures will make it possible to:

* increase the efficiency of the use of budgetary and attracted resources;

* ensure stable loan repayment;

* increase the share of investment projects;

* expand the coverage of agricultural producers with concessional financing;

* enhance the level of trust in development institutions.

Taken together, these steps will create the conditions for the formation of a sustainable model of program-based lending capable of ensuring the long-term development of the agrarian sector and regional food security.

Program-based lending in the agrarian sector of Kazakhstan is gradually taking shape as a strategic instrument of financial support for agricultural producers. In the context of economic digitalization, structural changes in agriculture, and the growing role of development institutions, the prospects for its further development are directly linked to the improvement of managerial approaches, technological infrastructure, and the expansion of partnership-based interaction mechanisms.

Thus, one of the key factors in enhancing the effectiveness of program-based lending in the agrarian sector is the implementation of digital technologies and data management systems that ensure transparency, operational efficiency, and analytical support for decision-making.

Conclusion

In order to ensure the sustainable development of the agrarian sector through 2028, it is proposed to focus on the following strategic priorities:

1. Expanding access to concessional financing for farmers, peasant farms, and agricultural cooperatives, particularly in remote and rural areas.
2. Developing credit guarantee and insurance instruments to reduce default risks and enhance investor confidence.
3. Digital transformation of credit processes, including the establishment of a regional electronic lending platform.
4. Investing in innovation and processing, with priority lending for projects generating high value added.
5. Forming partnership-based models with second-tier banks, development funds, and international financial institutions.

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