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## ISO 9001:2015 QUALITY MANAGEMENT SYSTEM IN CREDIT GUARANTEE FUNDS

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#### **Abstract**

The article is devoted to the experience of implementation and application of the Quality Management System (QMS) for the management of credit and guarantee funds of developing countries (on the example of OJSC «Guarantee Fund» in the Kyrgyz Republic) in accordance with the requirements of the international standard ISO 9001:2015, as well as the construction of a process approach and implementation of risk-based thinking within the framework of the ISO 9001:2015 standard. This article describes the key points and important aspects of the ISO 9001:2015 standard and, in particular, the results of the implementation of this standard in OJSC «Guarantee Fund». The article proposes models for integrating the QMS into the business processes of credit guarantee funds.

**Keywords:** ISO 9001:2015; process approach; process; process owner; inputs; outputs; process diagram; quality indicators; Shewhart-Deming PDCA cycle.

# СИСТЕМА МЕНЕДЖМЕНТА КАЧЕСТВА ISO 9001:2015 В КРЕДИТНО-ГАРАНТИЙНЫХ ФОНДАХ

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#### Аннотация

Статья посвящена опыту внедрения и применения Системы менеджмента качества (СМК) по управлению кредитно-гарантийными фондами развивающихся стран (на примере ОАО «Гарантийный фонд» в Кыргызской Республике) в соответствии с требованиями международного стандарта ISO 9001:2015, а также построения процессного подхода и внедрения риск-ориентированного мышления в рамках стандарта ISO 9001:2015. В настоящей статье описаны ключевые моменты и важные аспекты стандарта ISO 9001:2015, в частности, результаты внедрения данного стандарта в ОАО «Гарантийный фонд». В статье предложены модели интегрирования СМК в бизнес-процессы кредитно-гарантийных фондов.

**Ключевые слова:** ISO 9001:2015; процессный подход; процесс; владелец процесса; входы; выходы; схема процесса; индикаторы качества; цикл Шухарта-Деминга PDCA.

## КРЕДИТТИК-КЕПИЛДИК ФОНДДОРУНДА ISO 9001:2015 САПАТ МЕНЕДЖМЕНТ СИСТЕМАСЫ

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#### Кыскача мүнөздөмө

Ушул берене ISO 9001:2015 эл аралык стандарттарынын талаптарына ылайык өнүгүп келе жаткан өлкөлөрдө кредиттик-кепилдик фонддорду башкаруу боюнча (Кыргыз Республикасындагы «Кепилдик фондусу» ААКсынын мисалында) Сапат менеджментинин системасын (СМС) ишке киргизүү жана колдонуу тажрыйбасына жана ошондой эле ISO 9001:2015 эл аралык стандартынын алкагында процесстик мамилени түзүүгө жана тобокелдикке багытталган ойлонууну калыптандырууга багытталды. Ушул беренеде ISO 9001:2015 эл аралык стандарттын негизги учурлары жана маанилүү аспектилери, ошол эле учурда «Кепилдик фондусу» ААКсына аталган стандартты киргизүүнүн жыйынтыктары баяндалды. Беренеде кредиттик-кепилдик фонддордун бизнес процесстерине СМСти интеграциялоонун моделдери сунушталды.

**Негизги сөздөр:** ISO 9001:2015; процессттик мамиле; процесс; процесстин ээси; кирүү; чыгуу; процесстин схемасы; сапаттын индикаторлору; Шухарта-Деминга PDCA циклы.

#### 1. Introduction

In order to assist entrepreneurs in obtaining the necessary amount of credit from banks with a lack of collateral, as well as to reduce the credit risk for banks, credit guarantee schemes (credit guarantee funds) were created. Credit guarantee funds contribute to expanding the access of micro-, small and medium-sized businesses (hereinafter referred to as MSMEs) to the finances of commercial banks and encourage the latter to soften lending conditions. A guarantee is a simple, cheap and convenient highly liquid financial instrument for securing a loan along with a pledge. The successful development of MSMEs makes it possible to provide a competitive environment, solve problems related to employment, increase tax revenues, introduce innovations, saturate their own market with locally produced goods and services, and create export-oriented industries.

Credit guarantee funds are relatively new financial institutions. Implementation of the international quality management system standard ISO 9001:2015 (hereinafter – QMS) for the management of loan and guarantee funds will allow to apply the experience of advanced and successful organizations in managing the organization, namely the application of the process approach and the introduction of risk-oriented thinking as a management tool will increase the effectiveness and success of corporate governance. The application of advanced integrated management will help to optimize processes and improve the quality of services provided by credit and guarantee funds, which will lead to an increase in the number and quality of guarantees provided, an increase in the volume of the guarantee portfolio by 3-4 times, the introduction of new guarantee instruments. Provision of services according to international standards will have a positive impact on the confidence of potential investors in credit and guarantee funds, including international financial institutions, which will enable credit and guarantee funds to enter the IPO.

This article describes the results and features of the implementation of the international standard ISO 9001:2015 in credit guarantee funds on the example of its implementation in OJSC «Guarantee Fund», the Kyrgyz Republic.

The positive experience of implementing ISO 9001:2015 in OJSC «Guarantee Fund» can be used in other credit and guarantee funds.

#### 2. General overview of credit guarantees funds

The system of credit guarantee funds operates in more than 100 countries, and successfully helps the development of entrepreneurs to obtain a loan with insufficient collateral. There are more than 2,250 different models of credit guarantee funds.

MSMEs are not always able to get loans from banks for the following main reasons:

- the activities of MSMEs are risky, especially during periods of market fluctuations and crises;
- lack of collateral to obtain the required loan amount;
- lack of credit history or the presence of not very positive credit history.

The problem of insufficiency of the necessary collateral for loans is successfully solved by credit guarantee funds [1]. The effectiveness of supporting MSMEs through the introduction of guarantee

support mechanisms has been proven by world experience. Credit guarantee funds, providing guarantees to MSMEs, assume the risks associated with the inability of borrowers to pay part of the obligations under the loan agreement, the need to recognize losses on the corresponding amount of the principal debt of the borrower and reduce credit risk of banks.

International experience in the operation of credit guarantee schemes shows that they are designed to provide comprehensive support to both micro-small and medium-sized businesses. Credit guarantee funds are an integral mechanism for stimulating significant sectors of the economy. Below is a list of the most effective and efficient credit guarantee funds:

- Japan Credit Guarantee Corporations provided guarantees to more than 40% of entrepreneurs out of their total number, and the amount of guarantees amounted to 10-14% of the total loan portfolio of financial and credit institutions in Japan. The Credit Guarantee Corporations (CGC) are a combination of a credit guarantee system and a credit insurance system operated by the Japan Finance Corporation (JFC), owned by the national government. The combination of these two systems is often referred to as the supplementary credit system [2];
- Since 2020, the guarantee portfolio of the KODIT Credit and Guarantee Fund of South Korea is more than USD 50 billion. The main activities of «KODIT» are services for:
- guaranteeing loans for infrastructure, which played a significant role in providing financing for private investment corporations that do not have loans secured, but have acceptable creditworthiness and development prospects;
  - reimbursement of financial losses caused by insolvency or default of the buyer;
  - management consulting [3].
- In the US, the federal small business support agency is the Small Business Administration (SBA), and in 2021 the loan and guarantee portfolio reached USD 713 billion, supporting 855,000 jobs [4];
- Turkey's Credit Guarantee Fund (KGF) with a capital of USD 106 million, had lent more than USD 60 billion in concessional terms by the end of 2020, and by 2021 the loan guarantee portfolio was USD 68.6 billion. In its activities, KGF uses risk-sharing guarantees (through lenders), portfolio guarantees and SME financing support programs [5].
- OJSC «Guarantee Fund» is a relatively young organization in the Kyrgyz Republic since 2016 has increased the initial capital from USD 4 million to USD 80 million by the end of 2021, i.e. over the five years of successful operation of OJSC «Guarantee Fund», the confidence of shareholders has increased, and the capital has increased by 20 times. The capital increase allowed for the issuance of more than 2,700 guarantees worth more than USD 50 million on loans worth more than USD 175 million, creating about 4,000 new jobs. The successful activity of OJSC «Guarantee Fund» allowed replicating the experience in neighboring countries. Thus, in the Republic of Tajikistan, a credit guarantee fund was created based on the Kyrgyz model of a credit guarantee fund.

The issue of institutional development and the quality of the guarantees provided, allowing the development of export-oriented production, the creation of import-substituting industries and, what is important, the adoption of preventive measures to prevent the occurrence of obligations under the issued guarantees is a critical issue for a more successful operation. One of the solutions to this issue can be the implementation of the Quality Management System ISO 9001:2015. QMS is a system that uses a process management model and risk-based thinking. Especially in times of crisis, it is the process approach, that is the key to success, and not the focus on innovation and results. After all, it is a frequent phenomenon when companies suddenly appear with innovations, develop rapidly and just as quickly disappear when the market situation changes or when the first success declines. In favor of the process model of organizational management, to quote Mr. Otsubo from Bridgestone Tire Co. who argued that «it was process-oriented thinking» that allowed Japanese industry to gain a competitive advantage in global markets [6, p. 52].

# 3. Application of QMS in organizations

# 3.1. A brief overview of the application of QMS in the world

The QMS is designed to continuously enhance institutional development and performance improvement to enhance the competitiveness of the organization in the domestic and global markets. Without ISO certification, it is difficult to imagine a successful enterprise not only in the developed countries of the world, but also in developing countries. This system is a recognized standard for a correct and modern approach to work, production and customer service, adopted throughout the world. Investors, knowing that the company is ISO 9001:2015 certified, can be almost sure that you have a reliable partner in front of you.

The growth of international trade stimulated the development of internationally recognized quality standards, which led to the establishment of the International Organization for Standardization (ISO). The abbreviation ISO stands for International Organization for Standardization (International Organization for Standardization). Today it is an independent non-governmental organization whose members are organizations in the field of standardization from more than 160 member states. ISO is a set of international standards developed for the first time in the 1980s and used to describe and standardize QMS for enterprises. These norms, despite constant changes, are accepted as a starting point in almost all countries of the world.

The ISO 9001 system describes all stages of the production cycle – from the purchase of components and raw materials to the logistics of finished products. The ISO series standardizes not only the parameters of products or services, but also the quality of the system of its work, forms a list of processes and activities, ensuring a sufficient level of quality for the functioning of the enterprise. At the same time, ISO 9001 standards do not directly describe the procedure for monitoring the quality of products and works, and do not focus on improving the quality of the products directly manufactured by the company [7]. ISO 9001 standards are designed to create a reliable, clearly articulated and described quality management system in an organization, and the main task facing manufacturers of products and services is complete customer satisfaction [8].

In the mid-1920s, Walter Shewhart incorporated processes into the quality of finished products. He acknowledged that processes provide valuable data that can be analyzed using statistical methods to determine optimal performance and improvement. To this day, this principle continues to play a key role in any QMS.

The ISO 9001 standard provides an excellent management tool for measuring the ongoing effectiveness and success of corporate governance activities in an organization. There are seven quality management principles that form a solid foundation for achieving goals:

- leadership;
- interaction of workers:
- process approach;
- **■** improvement;
- relationship management;
- consumer orientation;
- evidence based decision making.

The ISO 9001 compliant QMS is an excellent management tool for measuring and monitoring the ongoing effectiveness of an organization's corporate governance activities. The seven key provisions of ISO 9001 allow you to bring the main functions of corporate governance into compliance with the requirements set out therein (Fig. 1). The introduction of such a QMS creates opportunities to measure the success or failure of corporate governance activities.

The statistician, William Edwards Deming, sometimes referred to as the «father of quality management», emphasized the importance of the close relationship between research, design, production, and sales. Deming's concept of the continuously spinning wheel spread to all levels of management and the four phrases of turning the wheel (Plan, Do, Check, Act) came to be seen as specific management actions. Japanese managers redesigned the Deming wheel and called it the PDCA cycle, which is reflected in Fig. 2.

Figure 1. Relationship between key provisions of ISO 9001:2015 and corporate governance functions

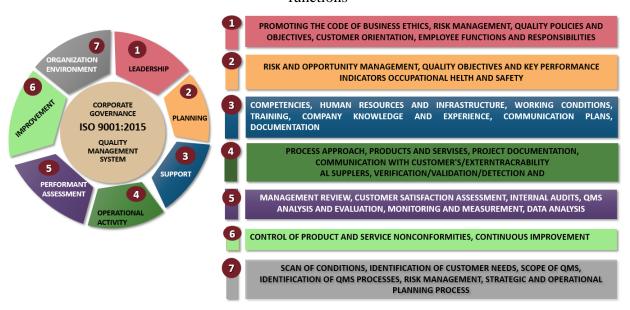
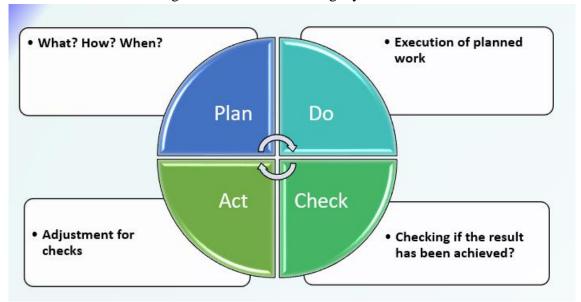


Figure 2. Shewhart-Deming Cycle PDCA



The PDCA cycle is a series of actions aimed at improvement and is applicable to any stages and situations. Risk based thinking should be applied at all stages of the PDCA cycle [6, p. 91].

The key requirements of the ISO 9001:2015 standard are:

- Approval of the QMS Policy;
- Defining the scope and setting goals;
- Establishment of performance indicators (key indicators);
- Establishment sequence and interaction of processes;
- Implementation of the process approach;
- Formation and application of risk-based thinking;
- Creation of internal knowledge and accumulation of experience;
- Ensuring that the resources and information needed to support the operation and oversee processes are available;
- Taking measures necessary to achieve planned results and continuous improvement of processes.

## **Key components and activities** of the strong structure of the QMS are:

- a) encouraging and enforcing the code of conduct and values;
- b) risk management;
- c) service continuity;
- d) ensuring occupational health and safety;
- e) ongoing staff development;
- f) providing timely and accurate reporting to direct/top management, including governance structures and constituent bodies;
  - g) providing input to the strategic and operational planning process.

## What gives credit-guarantee funds the transition to QMS?

First, the transformation of strategic goals into personal production tasks and the development of plans for their solution using a systematic (process) approach.

Secondly, ensuring an understanding of the capabilities of credit guarantee fund and identifying existing resource constraints before starting to take action.

Thirdly, built-in means of activity monitoring in processes and support for improvements.

Fourth, increased ability to anticipate internal and external risks by applying the principles of risk-based thinking, allowing you to identify factors leading to deviations in QMS processes or hindering the achievement of planned results, as well as the use of preventive measures and controls to minimize negative consequences and as much as possible wide use of emerging opportunities.

Fifth, identifying interdependencies and analyzing the impact of changes in individual processes on the system as a whole. Consider cross-functional issues not in terms of dispute resolution, but rely on cooperation.

Sixth, promoting the development of teamwork and encouraging cooperation between performers. As a result, a corporate culture is being created in which everyone has the opportunity to speak openly about unresolved issues of both one functional unit and several at once.

Seventh, ensuring the exchange of information, knowledge and experience within the credit guarantee fund and the creation/accumulation of internal knowledge.

## 3.2. Status of the QMS in the Kyrgyz Republic

To date, only about 20 enterprises in Kyrgyzstan have certificates according to international ISO standards. The number of certified organizations in the Kyrgyz Republic includes – JSC «Bishkeksut» (company «Wimm-Bill-Dann»), LLC «Avtomash-radiator», LLC «Certification Center», Center for Advanced Studies and Professional Retraining of NISM KR, «Kyrgyz petroleum company», «AkTel» LLC (Fonex), National Institute of Standards and Metrology of the Kyrgyz Republic «Kyrgyzstandart», «BiMoCom Ltd.» LLC (MegaCom), «Coca-Cola Bishkek Bottlers» CJSC, Mailuu-Suu Electric Lamp Plant, «Kant Cement Plant» JSC and others. OJSC «Guarantee Fund» is the first financial organization that has implemented a Quality Management System in accordance with the international standard ISO 9001:2015. For comparison, there are more than 56,000 organizations in Russia, 4,500 in Kazakhstan, and more than 1,000 enterprises in Uzbekistan certified according to ISO standards.

# 4. Implementation of ISO 9001:2015 in the Credit Guarantee Fund of the Kyrgyz Republic

The management of OJSC «Guarantee Fund» made a strategic decision to implement the QMS based on the international standard ISO 9001:2015. The implementation of the QMS was carried out in several stages:

- i) preparatory;
- ii) design;
- iii) implementation;
- iv) conducting a self-assessment.

## i. Preparatory stage for the implementation of the QMS

In order to build «business models» of OJSC «Guarantee Fund» a structural unit responsible for organizing the activities of the QMS was created – this is the Sector for the development and implementation of the QMS. The preparatory stage is reflected in Fig. 3.

"GUARANTEE FUND" THE PREPARATORY STAGE OF CREATING A QUALITY SYSTEM REWENIE ABOUT DEVELOPMENT QMS SWOT -Analysis of the analysis requirements for Development: the QMS, the DESIGNING A QMS Publication of study of internal Quality policies the order on regulatory in accordance the beginning Building a documents with the Strategy of the top-level and the definition Quality objectives development of organizational process map of a QMS Using a riskand based approach methodological Basic training approaches to the of responsible formation of the employees **OMS** 

Figure 3. Preparatory stage

The construction of the QMS business model began with a SWOT analysis to determine the positive and negative impact of external and internal factors on the implementation of the process approach.

Special attention was paid to the training of responsible employees to the requirements of the international standard ISO 9001:2015. After completing the training, the employees held introductory seminars and trainings for all employees of the OJSC «Guarantee Fund».

Employees of the responsible department analyzed the requirements for ISO 9001:2015 for the QMS, identified organizational and methodological approaches to the formation of the QMS and modeled the processes.

When modeling processes:

- interactions of processes with processes of external parties are defined;
- system-forming (main) and auxiliary processes are highlighted.

To visualize business processes, a process map was built (Fig. 4).

Based on the process map, business processes were decomposed into processes and subprocesses and process owners were identified [9]. Questionnaires and research were conducted with process owners to identify gaps in business processes, brainstorming sessions, the results of which were discussed at working meetings, and according to the decisions taken at those sessions, changes were made to the IRD and optimization of activities was carried out, eliminating duplicative actions and documents. The organizational structure of the QMS was determined, presented in Fig. 5.

#### QMS policy and goals to achieve them

In accordance with the requirements of the international standard ISO 9001:2015, the Policy was developed in accordance with the Regulations on internal regulatory documents of OJSC «Guarantee Fund» and approved by the Senior Management – the Board of Directors of OJSC «Guarantee Fund». The Policy defines – the goals and objectives of the QMS, the role of the QMS based on the Mission and Vision of OJSC «Guarantee Fund» and includes the commitment of the management of OJSC «Guarantee Fund».

In accordance with the requirements of the international standard ISO 9001:2015, on the basis of the QMS Policy, specific goals were developed to achieve them by the end of this year, and approved by the Management Board of the OJSC «Guarantee Fund».

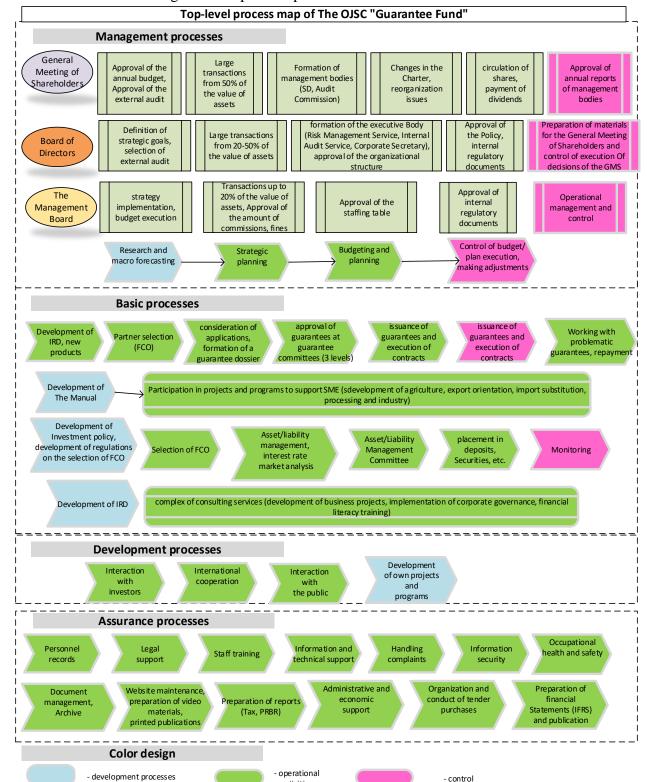


Figure 4. Map of the processes of OJSC «Guarantee Fund»

Note: Responsibility for the implementation of the processes is assigned to the structural subdivisions of OJSC «Guarantee Fund».

#### i. Design

At the design stage of the QMS, work was carried out to develop documentation in accordance with the requirements of the international standard ISO 9001:2015. By the time the QMS was introduced, OJSC «Guarantee Fund» had a sufficient base of developed internal regulatory documents (hereinafter referred to as IRD) in all areas of the fund's activity (more than 180 documents). It was

only necessary to integrate the requirements of the international standard ISO 9001:2015 into them. To this end, the responsible structural unit carried out studies of gaps in IRD. During the study, duplicating / repetitive actions and documents were identified, thereby an operational audit was carried out. Based on the recommendations of the results of the gap studies, some processes were optimized, as well as adjustments were made to the IRD and new IRFs were developed. In addition, a procedure for working with QMS documentation was developed as a guide for working with documentation and a model QMS document was proposed.

The scheme of the QMS design process is clearly illustrated in Fig. 6.

ORGANIZATIONAL STRUCTURE OF THE MANAGEMENT SYSTEM QUALITIES OF JSC "GUARANTEE FUND" "GUARANTEE FUND" Determination of the QMS Policy, decision-making on fundamental issues of QMS development **Board of Directors** Strategic planning, determination of the QMS Policy, decision-making on the development, implementation, effective functioning and improvement of the QMS Board Organization, Organization, coordination and control coordination and control of the implementation of the implementation of the QMS of the QMS Process owners Head of responsible department for QMS Development, Development, implementation and implementation and improvement of QMS, improvement of OMS. development of IRR. Audit, evaluation development of IRR, analytical work and of activities for analytical work and documentation compliance documentation Department responsible for QMS Internal audit Process participants Implementation of work on the QMS Structural units

Figure 5. Organizational structure of the QMS of OJSC «Guarantee Fund»

In the process of describing the elements required by ISO 9001:2015 in the standard QMS documents, the principle of the process approach, as reflected in Fig. 7, was observed [8].

The QMS standard document provided for the mandatory reflection of all process elements required by the international standard ISO 9001: 2015: process owners, process maps/diagrams, Inputs, Outputs, key indicators (performance indicators), risks (factors) and opportunities and response measures to them.

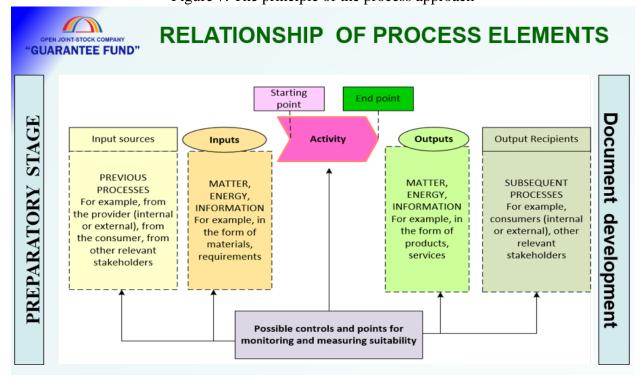
Particular attention was paid to the construction of interconnected processes, the measurement and evaluation of quality indicators, scenarios for the development of threats and opportunities and

measures to respond to them. Measures taken in relation to risks and opportunities should be proportionate to their possible impact on the conformity of products and services [10].

"GUARANTEE FUND" QUALITY SYSTEM DESIGN Analysis of existing documentation QMS PREPARATORY STAGE Development of **Detailing QMS** requirements for Development of a processes the design and DOCUMENTATION hierarchy of content of QMS (I-II levels) documentation documentation Definition of the process Development of a management system of system and **Deploying Goals** indicators for appointment of measurement and responsible monitoring persons

Figure 6. QMS design process diagram

Figure 7. The principle of the process approach



For risk-based management, a model was introduced in which the staff has a risk-based thinking and, on the basis of this, the risk management system is integrated into all functions of the business processes and activities of the organization [11].

Risk assessment is a generalized process of risk identification, analysis and calculation [8], (Fig. 8).

RISK ASSESSMENT

Defining the context

Risk assessment

Risk identification

Monitoring and review

Risk handling

Figure 8. Risk assessment

In order to introduce risk-based thinking, structural units have been equated to Risk Owners and are considered as the First Line of Defense, with the primary responsibility for managing risks associated with daily operations and ensuring:

- ✓ Identification of all risks accompanying business processes;
- ✓ risk identification:
- ✓ Risk analysis and assessment;
- ✓ Application of control procedures and response measures;
- ✓ Compliance with the legislation, regulatory legal acts of the National Bank of the Kyrgyz Republic and IRD of OJSC "Guarantee Fund";
  - ✓ Bringing information about the identified risk to the Risk Management Service.

In order to minimize risks, OJSC «Guarantee Fund» uses such methods as diversification, limiting, reserving. The developed risk response measures have determined the readiness of OJSC «Guarantee Fund» to act in predictable situations.

# ii. QMS implementation

Following the preparatory and design stages, updated IRDs were put in place, taking into account the results of the gap studies, the process approach and risk-based thinking. The updated IRDs streamlined the sequence of actions and contributed to:

- ensuring effective planning;
- implementation and management of processes;
- defining the means of managing the identification, storage, protection, retrieval, and timing of record retention and retrieval;
  - resource management;
  - management and provision of appropriate training;
  - repeatability and traceability;
  - management of measuring instruments for control and monitoring;

- discrepancy management;
- evaluating the effectiveness and continued suitability of the QMS.

The PDCA principle is implemented in all processes, Fig. 9.

BLOCK DIAGRAM OF THE PROCESS CONTROL ALGORITHM GUARANTEE FUND" start of process Process PLAN planning Process execution comments DO NO Does is satisfy CHECK requirements Yes Are Improvements ACT improvements measures NO end of process

Figure 9. Process control algorithm

The aligned, well-thought-out, standardized processes allowed line managers to streamline work in their departments, establish cross-functional communications and achieve planned targets.

The responsible structural unit began monitoring the approved performance indicators and providing periodic reporting to the management of the fund.

In order to demonstrate commitment to the principles of the international standard ISO 9001:2015, the management of OJSC «Guarantee Fund» has taken responsibility and issued a commitment in the form of the statement below.

## Statement of the management of OJSC «Guarantee Fund»

In order to increase the competitiveness of OJSC «Guarantee Fund», to meet the requirements and expectations of consumers to the maximum extent possible, investment attractiveness, as well as to expand the scope of activities, the management of OJSC «Guarantee Fund» undertakes to:

- ensure stable compliance with the requirements of the international standard ISO 9001:2015, legislative and regulatory requirements for the activities of OJSC «Guarantee Fund» and consumer expectations;
- ensure that all employees of the OJSC «Guarantee Fund» comply with the requirements governing the activities of the OJSC «Guarantee Fund» and the expectations of consumers;
  - provide all the necessary resources to achieve the objectives;
  - annually analyze the activities of OJSC «Guarantee fund» to achieve the set goals;
- review the Quality Management System Policy at OJSC «Guarantee Fund» to improve and enhance the activities of OJSC «Guarantee Fund», as well as reward personnel for relevant achievements.

The management statement was published on the website of OJSC «Guarantee Fund» on June 07, 2022 [12].

### iii. Results of implementation of the QMS in the OJSC «Guarantee Fund»

It should be noted with satisfaction the results of the activities carried out for the development, implementation and realization of the QMS policy. In particular, the results of the activities:

- ✓ The goals and Quality Policy are communicated to all employees of the Fund, which is confirmed by the Familiarization Sheet. The personnel of the OJSC «Guarantee Fund» shares the mission, vision and policy in the field of quality, carried out by the management. The goals set for 2021-2022 have been fulfilled in full. The provisions of the quality policy are being implemented. Approved QMS documents and their precise implementation allow the Fund to ensure the quality of services provided and to regulate the provision of services in the legal field of the legislation of the Kyrgyz Republic.
- ✓ The management of the fund pays special attention to the issues of staff training. A structural subdivision responsible for the development and implementation of the QMS was created in OJSC «Guarantee Fund». The employees of this unit underwent appropriate training at seminars on ISO 9001:2015, and then, the employees conducted adapted trainings and training seminars for all employees of the OJSC «Guarantee Fund».
- ✓ The PDCA cycle is harmoniously entrenched and applied in all stages of activity by all structural divisions.
- ✓ At the time of implementation of the QMS in the OJSC «Guarantee Fund», 5 principles out of 7 were applied in accordance with the requirements of the international standard ISO 9001:2015. Namely:
- Leadership in the person of the Chairman of the Board, showing by his personal example the way leading to prosperity and success;
- Planning the Department of Strategic Development, responsible for the development of the Development Strategy, was created and successfully operates in the OJSC «Guarantee Fund»;
- Involvement of staff employees of the OJSC «Guarantee Fund» actively participate in the activities and public life of the fund;
- Orientation to the consumer the fund's products are reviewed for relevance, new demanded types of services are being developed, OJSC «Guarantee Fund» provides after-sales service in the life and activities of its customers, assists in the development of business projects, the introduction of corporate governance, advises, provides assistance in introduction of accounting principles, as well as replication of experience;
- Evidence-based decision-making OJSC «Guarantee Fund» makes effective decisions based on analysis and evaluation of data and information.

All of the above indicates that there is a sufficient basis for the implementation of the QMS in the OJSC «Guarantee Fund» and the integration of the principles of «process approach» and «continuous improvement». The introduction of an integrated approach to management and the principle of continuous improvement will improve the fund's processes, taking into account changes in the situation in the economy of the Kyrgyz Republic.

On the basis of the given data, it can be argued that the results of the self-assessment indicate the successful implementation of the QMS based on the international standard ISO 9001:2015 in the OJSC «Guarantee Fund». Thus, the OJSC «Guarantee Fund» is one of the leading organizations operating in accordance with the principles of international standards not only in the Kyrgyz Republic, but throughout Central Asia.

### 5. Applying the «Continuous Improvement» principle

Activity in the field of QMS is a continuous process, represented in Fig. 10.

Based on the principle of continuity of activity it is always possible to find a reason for improvement. The OJSC «Guarantee Fund» will adhere to this principle. As a consolidation of this principle, the validity period of all QMS documents is one year, thus the owners and participants in the processes annually review the documents for relevance.

"GUARANTEE FUND" THE PRINCIPLE OF CONTINUITY OF ACTIVITY Monitoring information Decision on compliance IMPROVEMEN (mea surement, analysis) Z ACHIVEME Providing a guarantee exit Corrective and preventive

Figure 10. The principle of continuous activity

#### 6. Conclusion

The implementation of the QMS in accordance with ISO 9001:2015 standards allowed the management of the OJSC «Guarantee Fund» to significantly improve management practices: to approve key performance indicators and obtain high results based on constant analysis and monitoring of key performance indicators.

In the process and as a result of the implementation of all the principles of the QMS in the OJSC «Guarantee Fund», the application of the process approach and maintaining a focus on meeting customer requirements, the following was achieved:

- in March 2022 the OJSC «Guarantee Fund» patented the trademark «Kyrgyz Model of the Guarantee Fund»;
- at the end of March 2022, one of the first in Central Asia to develop and implement a new guarantee product based on Islamic principles of financing;
- in April 2022 the OJSC «Guarantee Fund» was listed on the stock exchange of the Kyrgyz Republic;
- provision of guarantees taking into account the needs of users of the services of the OJSC «Guarantee Fund» contributed to the promotion of a new product – «portfolio guarantees», which made it possible to significantly increase the volume of the guarantee portfolio. For this, funds from the World Bank were attracted in the amount of USD 32 million.

The introduction of new guarantee products and the focus on consumer expectations contributed to changes in the Law of the Kyrgyz Republic «On Guarantee Funds in the Kyrgyz Republic». The amendments being made to the legislation will lead to expanding the access of small and mediumsized businesses to finance, increasing the scope and volume of credit and guarantee support, as well as taking advantage of various mechanisms and types of guarantees, including guarantees under the state mortgage programs to enhance the effectiveness of the Guarantee Fund's activities in supporting business entities.

In the long term, the improvement of the QMS principles and the further application of the integrated management system of the OJSC «Guarantee Fund» based on the international standard ISO 9001:2015 will create prerequisites for the expansion of the fund's capabilities to support MSMEs, increasing investment attractiveness and entering the IPO, which will provide an opportunity to attract funds from international and private financial institutions to the capital of the OJSC «Guarantee Fund».

In order to achieve real economic growth in the country, taking into account foreign experience in maintaining mortgage lending, the OJSC "Guarantee Fund" will participate in providing a guarantee for the down payment on mortgage lending to the population, which at the same time serves

to solve the social and economic problems of the country. It should be emphasized that maintaining confidence on the part of foreign financial institutions and the implementation of «transparent» activities according to international standards will help to increase the volume and quantity of the guarantee portfolio by 3-4 times.

Constant work of the management and all the staff of the OJSC «Guarantee Fund» on creation, development of the system of credit and guarantee funds, popularization and recognition of the Fund's activities allowed to introduce the Kyrgyz model of credit and guarantee fund in the Republic of Tajikistan. Following the principle of «continuous improvement», the JSC «Guarantee Fund» plans to expand its activities in the future, as well as the possible establishment of the Central Asian Credit Guarantee Fund.

The effective experience of QMS implementation based on ISO 9001:2015 in the OJSC «Guarantee Fund» is recommended for use in other credit guarantee funds.

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