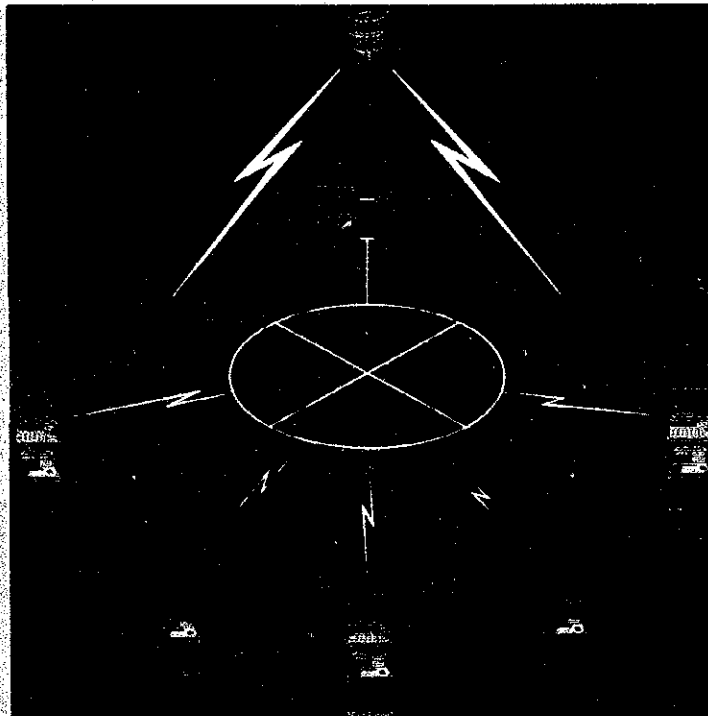


**STUDY ON IMPROVEMENT
OF
PAYMENT SYSTEM
IN
THE KYRGYZ REPUBLIC
(SUMMARY)**



FEBRUARY, 1995

**UNICO INTERNATIONAL CORPORATION
SAKURA INSTITUTE OF RESEARCH**

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1 US\$ = 100.0 Yen

1 Som = 10.0 Yen

**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
NATIONAL BANK OF KYRGYZSTAN**

**STUDY ON
IMPROVEMENT
OF
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THE KYRGYZ REPUBLIC
(SUMMARY)**

FEBRUARY 1995

**UNICO INTERNATIONAL CORPORATION
SAKURA INSTITUTE OF RESEARCH**

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Preface

In response to a request from the Government of the Kyrgyz Republic, the Government of Japan decided to conduct a Study on Improvement of Payment System in the Kyrgyz Republic and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Kyrgyz a study team headed by Mr. Nobuo Aihara, UNICO International Corporation, and composed of members of UNICO International Corporation and SAKURA Institute of Research three times between January 1994 and November 1994.

The team held discussions with the officials concerned of the Government of Kyrgyz, and conducted field surveys at the study area. After the team returned to Japan, further studies were made and the present report was prepared.

I hope that this report will contribute to the promotion of the program and the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Kyrgyz Republic for their close cooperation extended to the team.

February 1995



Kimio Fujita

President

Japan International Cooperation Agency

February 1995

Mr. Kimio Fujita
President
Japan International Cooperation Agency
Tokyo, Japan

Dear Mr. Kimio Fujita

Letter of Transmittal

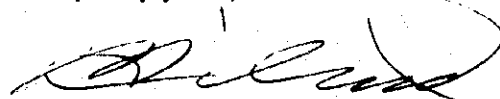
We are pleased to submit to you the study report on Improvement of Payment System in the Kyrgyz Republic.

The report presents the development strategies for improvement of financial and payment system in the Kyrgyz Republic upon our scrutinized analysis on its present status. With regard to the payment system, in particular, the report contains the preliminary design for the construction of payment system with computerized network throughout the country as well as plan of installation, maintenance and management of the projected system. Proposals for realization of the project together with its overall evaluation are also presented.

In view of the urgency of the improvement of payment system in the Kyrgyz Republic and of its the resultant extensive contribution to socio-economic development of Kyrgyz as a whole, we recommend that the esteemed government of the Kyrgyz Republic implement this Project as a top priority.

We wish to take this opportunity to express our sincere gratitude to your Agency, the Ministry of Foreign Affairs. We also wish to express our deep gratitude to the National Bank of Kyrgyzstan and other authorities concerned of the Government of the Kyrgyz Republic for the close cooperation and assistance extended to us during our investigations and study.

Very truly yours,



NOBUO AIHARA, Leader

Study Team on Improvement of Payment System
in the Kyrgyz Republic

TABLE OF CONTENTS

	Page
Preface	
Letter of Transmittal	
EXECUTIVE SUMMARY.....	1
Chapter 1 Introduction.....	1-1
Chapter 2 Background and Objectives of the Study	2-1
1. Background of the Study	2-1
2. The overall Objectives of the Study	2-2
3. Methodology of Carrying Out the Study	2-2
Chapter 3 Present Situation of Kyrgyz Economy and Establishment of Socio- economic Framework with Year 2000	3-1
1. Present Situation of Kyrgyz Economy	3-1
2. Future Prospects of Kyrgyz Economy.....	3-1
3. Establishment of Socio-economic Framework with Year 2000 as Its Target Year	3-3
Chapter 4 Present Situation of Financial System and Development Strategy	4-1
1. Historical Background of Financial Structure	4-1
2. Current State of the Financial Management System	4-1
3. Current State of Financial Institutions.....	4-2
4. Present Situation and Problems.....	4-2
5. Future Targets and the Development Strategy of Financial System.....	4-11
6. The Framework of the Financial System to be Established by the Year 2000	4-13

Chapter 5 Present Situation of the Payment System in the Kyrgyz Republic and Plans on Improvement of the Computerized Network Systems for the Payment System	5-1
1. Participants in the Payment System	5-1
2. Types of Payment and Number of Payments.....	5-3
3. Present Situation of Computer Payment System	5-8
4. Present Problems of the Payment System	5-10
5. Formulation of Development Strategy for the Payment System and Determination of the Policy for Improvement of the Payment Systems..	5-14
6. Forecasts of the Varieties and Number of Payment Transactions	5-25
7. Basic Requirements Regarding the Development Plan	5-29
8. Outline of the Optimum System	5-30
Chapter 6 Computer System and Preliminary Design of Network	6-1
1. Designing Policy	6-1
2. Preliminary Design of Software.....	6-1
3. Preliminary Design of Hardware.....	6-20
4. Preliminary Design of the Network Systems.....	6-28
Chapter 7 Plan of Installation, Maintenance and Management Plan	7-1
1. Policy for Procuring Hardware and Software Products	7-1
2. Items to be Considered in Software Development.....	7-2
3. Plan for Installation, Maintenance and Management of the System.....	7-2
Chapter 8 Plan for Action Program, Organization and Management for Implementation Works	8-1
1. Plan for Implementation Program.....	8-1
2. Plan for Organization and Management.....	8-5
Chapter 9 Calculation of Project Costs.....	9-1
1. Basis of Calculation.....	9-1

2. Cost of Hardware and Software and Initial One-time Cost	9-1
3. Cost Estimates	9-1
4. Maintenance, Administration and Operating Expenses.....	9-3
 Chapter 10 Economic and Financial Analysis	10-1
1. Economic Analysis	10-1
2. Financial Analysis	10-9
 Chapter 11 Overall Evaluation and Proposals	11-1
1. Overall Evaluation.....	11-1
2. Proposals	11-8

Study on Improvement of Payment System in the Kyrgyz Republic

Study Period: November, 1993 – December, 1994

Counterpart: National Bank of Kyrgyzstan

EXECUTIVE SUMMARY

1. Background

- (1) Since its independence in 1991, the Kyrgyz Republic has been trying to re-construct its economy by transiting from the planned economic system of the Soviet era to a market economy. Due to the disorder of the transition period, however, the economy has unavoidably undergone a serious retrogression.
- (2) One of the reasons that the changeover to a market economy is not going smoothly is the inadequacy of the financial system. One part of this system, the payment system, is particularly backwards. As a result, funds transfers and payments require a long time, and the economy as a whole is adversely affected.
- (3) Improving the payment system is thus a matter of urgent importance.

2. Objectives

The Study has three major objectives which are based on the goal of introducing a new payment system by the year 2000.

- (1) To establish a strategy for building an effective financial system.
- (2) To formulate a plan for improving and developing the current bank payment system based on computer network.
- (3) To conduct technical transfers to Kyrgyz through carrying out the Study activities.

3. Outline of the Plan

(1) Establishment and improvement of the Financial System

The task here is to rapidly reorganize and improve the financial system by, among other things, putting commercial bank management on a sound footing (above all, enhancing deposits), reorganizing and developing the various financial markets, and diversifying the financial system (promoting loans to small and medium-sized companies, as well as medium- and long-term loans). Improving the backwards payment system is an especially urgent task.

(2) Propositions for the plan of Improving the payment System

- 1) Enabling to process customer remittances quickly and safely.
- 2) Enabling to transfer payments in real time between the current accounts of the commercial banks in NBK. That is, to construct a payment system with the finality of NBK.
- 3) Improve the system's foundations for bank operations and expand bank services such as CDs, salary transfer, automatic transfers, etc. and connect each bank's internal processing system.

(3) Contents of the Plan

- 1) The structure of the new payment system is as shown in Fig. 1.
- 2) Network Structure

The head and branch offices of commercial banks, NBK head and branch offices, and the Regional Clearing Center will be connected to each other as shown below.

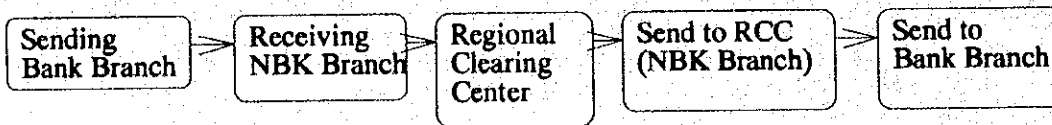
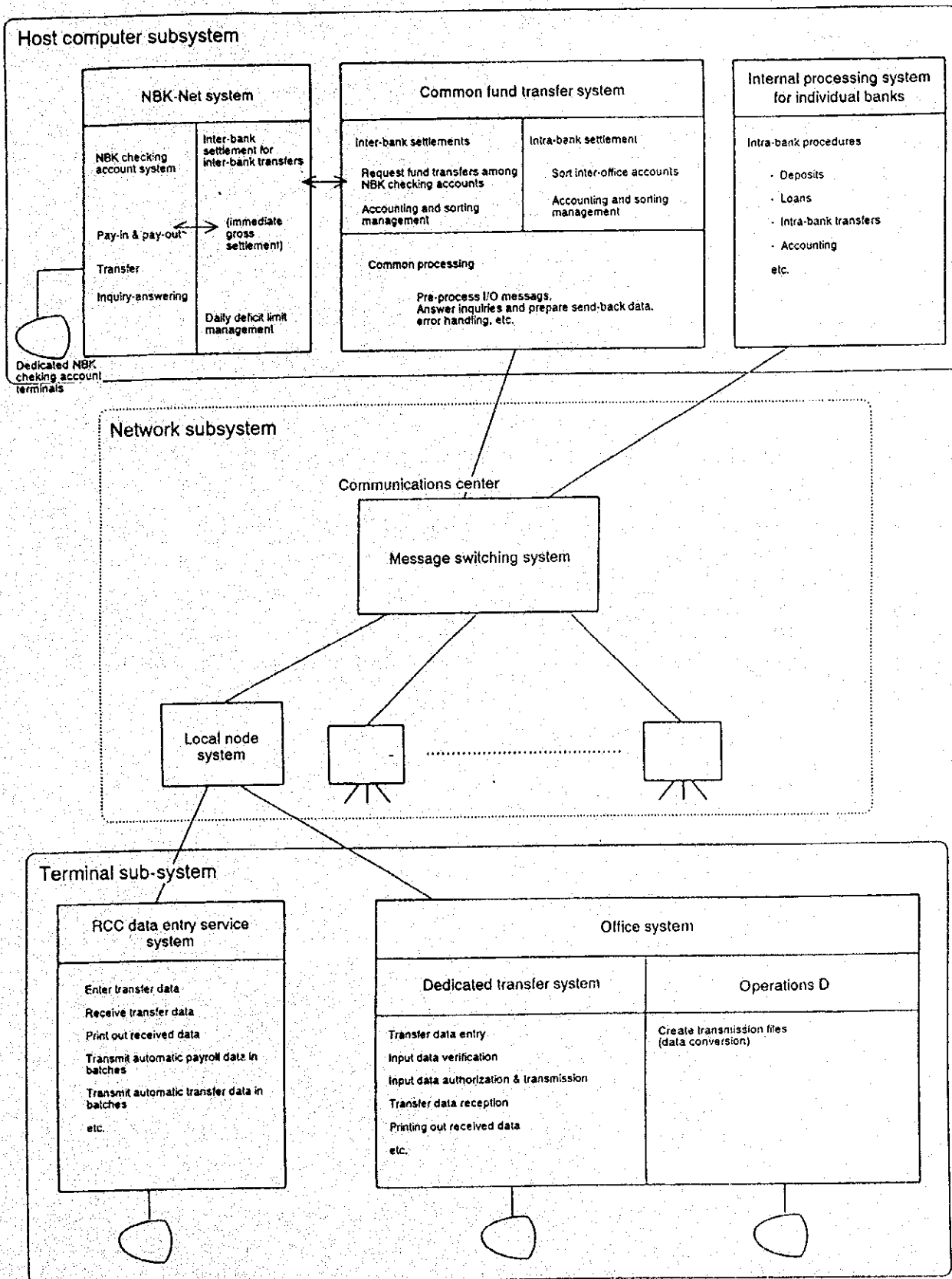


Figure 1 Structure of the New Payment System



Computers to be installed (units)

Medium-sized computers	19	(Bishkek 9, regions 10)
Small-to-medium-sized comps.	11	(Bishkek 6, regions 5)
Personal computers	62	(Bishkek 44, regions 18)
Peripherals	19	(Bishkek 14, regions 5)
Terminal system (Personal computers)	300	300
Total	411	

4. Systems Installation Plan and Management Organization

(1) Installation Policy

- 1) Since the scale of the planned system will be large, it will be developed and introduced by dividing into two phases, for which an order of priority will be established.
- 2) The six regions will be divided into three groups, and the system will be installed into the groups one at a time.
- 3) As it would currently be difficult to develop the software in Kyrgyz, its development will be commissioned abroad.
- 4) As the hardware is unavailable in Kyrgyz, it will be imported from overseas.

(2) Implementation Plan

- 1) Systems development period: 5 years (1995-2000)
 - Start of development
(installation of equipment and start of development) 1995
 - Start of operation: Phase I 1998
 - Start of operation: Phase II
and completion of development 2000
- 2) Implementation processes plan

Development Stage	Phase I			Phase II		
	1995	1996	1997	1998	1999	2000
Installation of development equipment	■					
Installation of operating equipment		■			□	
Testing of devices and circuits			■			
Grade up of circuits					□	
Software development	■			□		
General testing			■		□	
Transition preparation			■		□	
Start of operation				■		□

(3) Management Organization

From the standpoint of the system's public nature, safety, and efficiency, it is considered that, in the project's development stage and in the initial stage of its implementation, NBK would be the most appropriate organization to act as its managing body (an independent, profit-making entity within NBK). The Study Team expects that the matter of the managing body be reviewed after the management of the project gets on track or at the time of procuring the reinvestment capital that is, in 2007, when the project will face the ending period of the first project life.

5. Project Costs

(Note) All costs expenses have been calculated and expressed in U.S. dollars according to the following exchange rates: U.S.\$1 = 10 Som; 1.0 Som = 10 yen.

(1) System Development Costs (Unit: U.S.\$ million)

	Total
Hardware (including auxiliary costs)	7.8
Software (including testing and transition costs)	15.3
Other expenses (including contingencies)	5.6
Total	28.7

(2) Operating Expenses

1) Depreciation Method

For the investment capital, 10-year fixed-installment depreciation is used.

2) Financing

Two possible methods of financing for the project were studied and analyzed.

Case I: All of the development and investment capital, U.S.\$28.7 million, is obtained through either equity or government contributions.

Case II: Thirty percent of the development and investment capital is obtained through equity, and 70% long-term soft loan from overseas.

3) Balance on Operation (Unit: \$1,000)

	Case I			Case II		
	1998	1999	2000	1998	1999	2000
Income (commissions, etc.)	3,535	3,796	4,016	3,535	3,796	4,016
Outgo (maintenance, management)	2,706	2,706	3,020	2,706	2,706	3,020
Profit before depreciation	819	1,090	996	819	1,090	996
Depreciation	2,281	2,281	2,281	2,429	2,429	2,429
Profit/loss after depreciation	-1,462	-1,191	-1,285	-1,610	-1,339	-1,433
Long-term loan interest				489	489	489
Cumulative loss	-1,462	-2,653	-3,938	-2,099	-3,927	-5,849

6. Project Evaluation

(1) Economic Effects

1) Direct Effects

The following are direct effects that can be grasped quantitatively.

- a) With the new payment system, there will be same-day payment. This will make it possible to promptly use almost all of the uncollected funds (floating funds) that, under the current system, are held at the bank for a lengthy period of time. Accordingly, the opportunity cost of the floating funds will be saved, the amount saved being the benefit of this project.
 - b) Payment by computer network will reduce costs. (For example, it will eliminate "Avizo" (payment classification tables) and lessen the work involved in confirming remitted payments.)
- 2) Indirect Effects (Qualitative Analysis)
- By making payments faster, more certain and more risk-free, the system will facilitate the flow of money, the improving of corporate management and the growth of financial markets, thus helping the economy recover. In addition, it will contribute to strengthening savings, diversifying financial services, accelerating computerization, expanding and supporting the service and information industries, fostering computer-related industries, and other wide-ranging improvements in the national economy.

(2) Economic and Financial Analysis

1) Prepositions

- a) Considering the obsolescence of the system's hardware and software that technical innovations are sure to bring about, and the limits of the system's capacity for handling what will be an increasing volume of payments, it is estimated that the life of the system (the life of the project) will be 10 years (1998-2007).
- b) The project will be managed by an independent, profit-making entity inside the organization of NBK.

2) Results of Economic Analysis

Taking the "Direct Economic Effects" of aforementioned 1) as the economic benefits of the project, and the development and investment capital required for the project as its economic cost, the rate of return from the project during its 10-year life (1998-2007) was calculated to be an extremely high 32%. It is thus believed that the project will be one with enormous economic effects.

3) Results of Financial Analysis

- a) In the instance of Case I, where the amount of the initial investment is

procured through equity, it is expected that before depreciation profit will be recorded throughout the period of the project (1998–2007), so that there will be no cash–flow problems. With regard to financial profitability: at the end of 2007, the non–depreciated assets will be no greater than 6% of the total depreciable assets, the accumulated loss will remain 42% of equity, and net assets will amount to \$16 million. Moreover, if, at the end of the project period, Kyrgyz can develop the software unassisted, it will be possible, it is believed, to reduce the amount of the reinvestment necessary for renewing the project to half or less of the original investment, so that, after 2007, it will be possible to continue the project nearly without any additional investment.

- b) In Case II, where 30% of the initial investment is procured through equity and 70% through long–term loans from abroad, it is forecast that maintaining financial profitability will be difficult even with a favorable loan interest rate (3%). Accordingly, it was necessary to study overall profitability – that is, to take into account the second and third investments, whose loan periods will extend from 2007 through 2027. When this was done, it is expected that, starting from the second investment, profitability can be expected to improve, provided that commission income continues to increase and Kyrgyz can develop the software unassisted.

(3) Overall Analysis

The new payment system will produce wide–ranging benefits in terms of the growth of the national economy. Its EIRR during its 10–year life under the first investment will be an extremely high 32%, so that, together with its indirect effects, it will contribute greatly to the economic growth resulting from the changeover to a market economy. Financially, in Case I, where all of the initial investment is procured through either equity or government contributions, it will be possible to provide the reinvestment capital in 2007, after the project is completed, provided Kyrgyz can develop the software by itself.

In Case II, where part of the investment (70%) is procured through long–term loans, the 10 year first investment will prove to be the most difficult one in financial term. However, if the entire 30–year loan period is taken into account, profitability can be expected to improve, and it should be possible to renew the system with second and third investments.

7. Proposals for Construction of a New Payment System through Computer Networks and its Materialization

- (1) Necessity of cooperation by including both Government and the Central Bank to prevail perception that the preparation of an improved system is a subject of national economy and should persuade and appeal all the persons concerned sharing such awareness with all of them.
- (2) Preparation of telecommunication circuits and preferential use
- (3) Legal preparation relevant to electronic documents
- (4) Positive participation in payment system by the Central Bank
- (5) Establishment of promotion organization in the Central Bank
- (6) Organization of the "Improved Payment System Committee" (Participation of the commercial banks in some formation desired)
- (7) Cooperation from commercial banks (not only in the systems development stage but have interface with each bank during the implementation)
- (8) Operation through self-help efforts by charging fees to the beneficiaries
- (9) Efforts on procurement of introduction funds (Funds raising to overseas due to the limited domestic funds raising)

Chapter 1 Introduction

Chapter 1 Introduction

JICA Study Team commenced their research work for the Study on Improvement of Payment System in the Kyrgyz Republic at the end of November, 1993, in accordance with the Scope of Work signed on August 3, 1993 at Bishkek between National Bank of Kyrgyzstan (NBK) and Japan International Cooperation Agency (JICA).

The Team has conducted the First Field Survey from January 6, until March 6 and the Second Field Survey from June 26 to August 25, and the Third Field Survey from November 6, 1994 for the period of 15 days. Progress Report, Interim Report and Draft Final Report have been lodged with NBK and JICA by the Study Team in February, August and November 1994 respectively. Between the periods of these Field Surveys, the Team has continued their analytical study work in Japan.

This Report represents the Final Report for the Study on Improvement of Payment System in the Kyrgyz Republic, the Major Components of which are summarized as follows:

- (1) The present situation of the macro economy, the financial system and the payment system in Kyrgyz are reviewed and its main problems and policy issues are subsequently taken up and analyzed respectively.
- (2) The social and economic framework which would be built up in the target year of 2000 is designed.
- (3) On the basis of the results of the above analysis, the future volumes of the payment transactions up to the years of 2000 are forecasted according to the diversification of types and means of transactions.
- (4) Coincidentally, the development strategies of the financial system in the Kyrgyz Republic are formulated together with the forecast of the financial framework which is expected to be built up in the year of 2000.
- (5) Finally, the computer network payment system to be developed up to the year of 2000 is formulated, together with

- Formulation of plans and implementation programs for the development strategy for the payment system using a computer network
- Preliminary design of the proposed hardware, software and network of computer plan
- Plan for introduction, operation and maintenance, etc.
- Preliminary cost estimation
- Economic & financial analysis on the Study
- Overall evaluation and proposition as mentioned above

Three Seminars were held during the period of three Field Surveys by having lectures on "Financial and Payment System and Introductory Process of Systems Development in Major Countries", "The Present Conditions and Future Image of the Financial and Payment System in Kyrgyz", and "Realization of the Payment System Improvement Program". Upon the Third Field Survey, personal computer-based demonstration on payment system was presented during the Seminar.

Chapter 2 Background and Objectives of the Study

Chapter 2 Background and Objectives of the Study

1. Background of the Study

Kyrgyz is presently exerting their uttermost efforts to promote structural reform of the economy in order to effect a smooth transition from the central planning used during the Soviet Union era to a market economy, invigorating economic activities in the course of that process. The improvement of the environment to enable adoption of a market economy system is the most pressing task for Kyrgyz at present.

It is understood that since attaining independence, the government of the Kyrgyz Republic, by such means as establishment of the central bank, proclamation of the Banking Law and introducing a national currency, is seeking to invigorate and reconstruct the national economy by shifting to a market economy regime, and strongly wishes to both build a modern financial system and improve the efficiency of the payment system through computerized network system.

In this country at the present time, the insufficient provision of financial system is a major obstacle to invigorate the national economy and has caused a negative effect on economic activity resulting in the economic stagnation in this country.

No doubt, the financial system constitutes the most essential so-called software infrastructure in the free market economy system.

In particular, the retarded development of the payment system had lengthened the duration of time needed to transfer money and accomplish payments, and because emphasis is placed on payment in cash, the turnover (velocity) of funds is low, and the problem of hindrance to money flow to production, distribution and the consumer market has arisen. It is believed that by building a efficient, high-productivity bank payment system, it will be possible to facilitate the supply of capital to areas where it is needed through improving the flow of funds, in addition to contributing to more effective control of money supply.

It is not too much to say that the success in the shift to the market economy and subsequent vitalization of the Kyrgyz national economy should inevitably rely upon the improvement of the Financial System including Bank Payment System.

Under the circumstances, in response to the official request of the Kyrgyz Republic, Japan International Cooperation Agency (JICA) nominated UNICO International Corporation (UNICO) and Sakura Institute of Research (SIR) to undertake "The Study on Improvement of Payment System in the Kyrgyz Republic" (the Study). The objectives and scope of the Study are followings.

2. The Overall Objectives of the Study

The overall objectives of the Study are:

- (1) firstly to formulate a development strategy to establish a more modern and efficient financial system by the year 2000,
- (2) secondly to formulate the subsequent improvement plan of the payment system by use of a computer network system and,
- (3) thirdly to accomplish a transfer of the technology to the Kyrgyz counterparts throughout our joint Study Work and seminars to be organized in Bishkek three times in total.

3. Methodology of Carrying Out the Study

- (1) Current macroeconomic situation in Kyrgyz were studied. In addition, the Study Team established the contours of the social economic situation in Kyrgyz in the year 2000. These contours will be derived from approximations of Kyrgyz's population, industrial structure, GDP, balance of payments structure, the number, size and managerial methods of its corporations, its employment situation, etc., in the year 2000. Based on this predicted social economic situation, the number of financial transactions and payments in the year 2000 were estimated for each type of transaction. At the same time, the computer payment system which is the most appropriate for Kyrgyz will be established.
- (2) In collecting local data, the Study Team did not stop with not only collecting official statistics, but also visited relevant ministries and agencies – primarily NBK, also the Ministry of Finance, the Ministry of Industry, Ministry of Communication, Goskomstat, Goskominvest, etc. – as well as all the commercial banks and various local corporations, and had them all fill out questionnaires.

(3) Three seminars that included study and training regarding payment systems were held. In so doing, the Study Team were able to survey the opinions of people involved with local financial and payment systems. In addition, the Team conducted technical transfers by means of a demo model of a payment system that used personal computers.

(4) The study was undertaken by the following approaches:

1) Work in Japan

- Analysis of existing materials and collection of related information
- Preparation for the first workshop

2) First Field Study

- Obtaining an understanding of the social & culture aspects of the background
- Obtaining an understanding of present conditions of the economy, industry & trade
- Obtaining an understanding of regional characteristics & relation of region
- Survey of present conditions of the financial system
- Analysis of results of efforts at development of the financial system
- Review of development strategy for the financial system
- Holding of the first workshop

3) First Phase of Analytic Work in Japan

- Determination of key problems of the financial system
- Analysis of constraints & priorities in development of the financial system
- Forecast of the number & scale of financial transactions & settlements
- Drafting of a scenario for development strategy for a bank payment system
- Preparation for the First Seminar

4) **Second Field Study**

- Formulation of the socio-economic framework
- Formulation of development strategy for the financial system
- Formulation of the framework for the financial system
- Formulation of development strategy & planning for the bank payment system
- Holding of the First Seminar

5) **Second Phase of Analytic Work in Japan**

- Formulation of development strategy & implementation program for the financial system
- Formulation of the basic program for improvement of the payment system
- Formulation of plans & implementation programs for the development strategy for the financial system, and development strategy for a payment system using a computer network
- Preparation for the Second Seminar

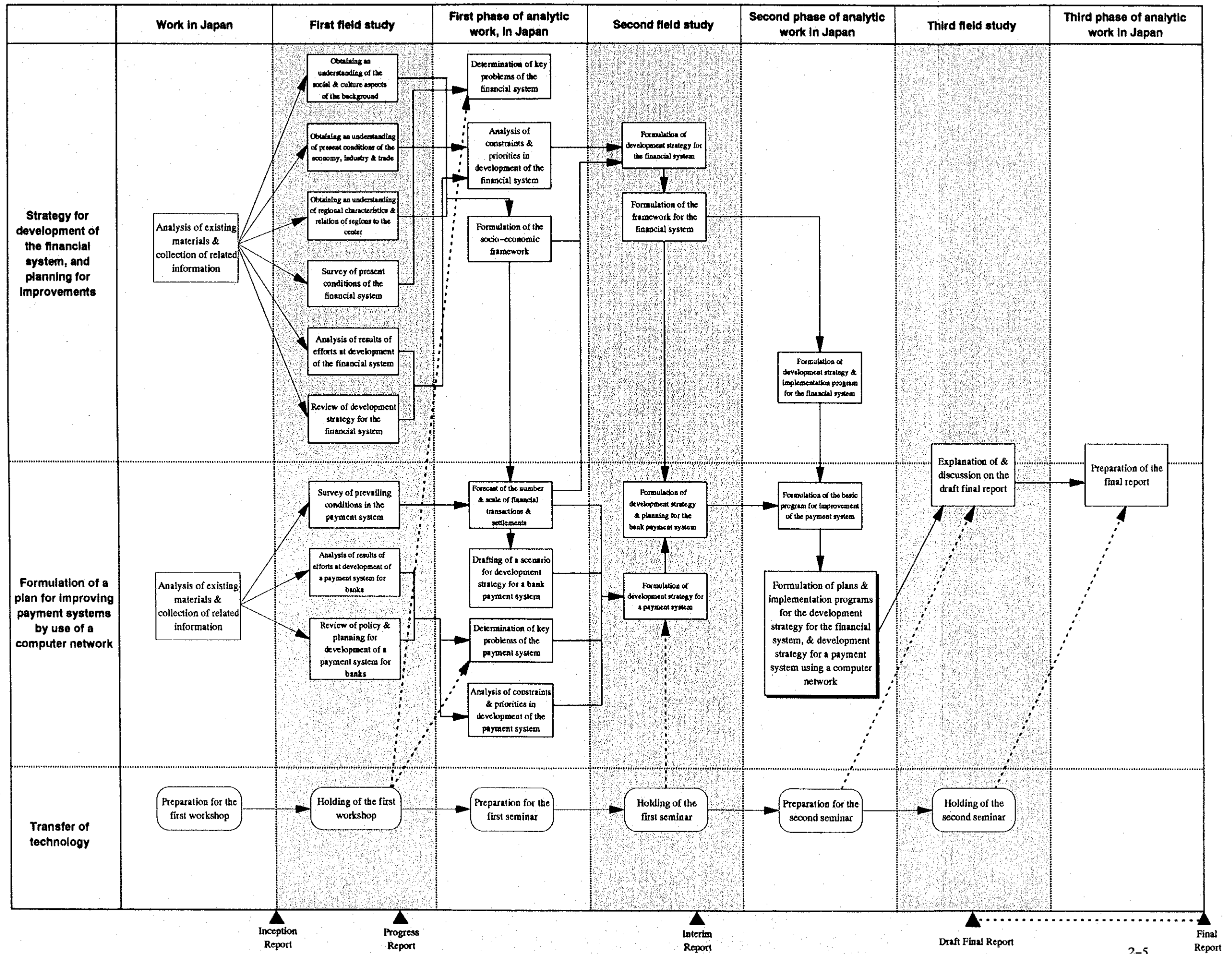
6) **Third Field Study**

- Explanation of & discussion on the draft final report
- Holding of the Second Seminar

7) **Third Phase of Analytic Work in Japan**

- Preparation of the Final Report

Figure 1 Outline of the Study Work Flow



**Chapter 3 Present Situation of Kyrgyz Economy and
Establishment of Socio-Economic Framework
with Year 2000**

Chapter 3 Present Situation of Kyrgyz Economy and Establishment of Socio-economic Framework with Year 2000

1. Present Situation of Kyrgyz Economy

In a state of shock incurred by drastic changes in both political and economic sides, namely "independence" and "transition to market economy," Kyrgyz economy is treading the path of deterioration. One major reason of the failure of the "transition to market economy" to produce anticipated effects so far seems to have stemmed largely from the failure to provide the financial sector and system in step with the progress of the market economy.

Financial sector and system are the key infrastructure of the market economy. Without the provision of the financial sector and system, not only it is not possible to draw upon the vitality of the market economy, but negative impacts associated with the market economy may at times be magnified. Price liberalization policy adopted without adequate financial infrastructure led to surging inflation rates because of the inability to exercise effective monetary policies. Privatization policy demands individual private enterprises to manage their operations by their own responsibility and at their own risks. These enterprises are expected to procure funds and avoid risk of insolvency on their own, but in reality they find themselves in a situation where they cannot hope to conduct adequate business activities due to the lack of liquidity and uncertainty of payments associated with the non-provision of the financial sector and system. This seems to represent one of the major causes of economic deterioration.

2. Future Prospects of Kyrgyz Economy

Although Kyrgyz economy is facing difficulties at present as mentioned above, with the pursuit of the strategy for the provision of the financial system which will be discussed in subsequent chapters, and the construction of reliable and efficient payment system together with the positive effects of other reform policies, there is a good possibility for the republic to overcome present difficulties and achieve high rate of economic growth unparalleled at any time during the socialist regime. It is also possible that the republic will achieve economy of good quality. There are many reasons other than those related directly to economic factors for such assessment including high standards of education of the people of the republic. Speaking of

economic factors alone, we can identify a large number of reasons for the above positive expectations as follows:

First reason is the commitment of the Kyrgyz government on transition to market economy. Price control and subsidies for most commodities have already been eliminated, allowing market mechanisms to adjust supply and demand. Enterprises are permitted to engage in domestic business activities freely. International trade and capital transfer are also deregulated. A large number of government enterprises are being privatized. Basic legislations essential for market economy such as the Bankruptcy Law are being promulgated.

Secondly, inflation is subsiding, and exchange rate of the Som against the U.S. dollar is strengthening thanks to an extremely tight monetary policy instituted by the National Bank of Kyrgyzstan (NBK). Monetary stability including that of prices and exchange rates is the key and essential foundation for the sustainable growth of the economy. Strengthening of these foundations is an extremely encouraging factor for Kyrgyz economy.

Thirdly, responding favorably to Kyrgyz government's aggressive efforts and commitment to reforms, and NBK's prudent monetary policies, international financial organizations such as IMF as well as foreign governments began extending diverse assistance and aid to the republic. Such support does not stop at mere financial aid, but includes provision of know-how to specific projects also.

Fourthly, reflecting the government's and NBK's policies as outlined above and foreign support, bright signs have begun surfacing in the private sector. Freedom of business activities permitted by "transition to market economy" stimulated business mind among the people of the Kyrgyz Republic. They began to aspire to make profits by selling quality products at reasonable prices. The budding entrepreneurship among its people is particularly promising for the future of the economy of the republic. Numerous small- and medium-sized enterprises were established for the purpose of realizing their aspiration. These enterprises and their activities have not yet been fully captured by statistics, but they have indeed been playing increasingly larger roles in the economy of the republic. Rather than concentrating in a particular industrial sector, the spheres of activities of these small businesses encompass a wide range of industries including agricultural products processing. In addition, the services industry such as tourism and banking which were given only an extremely small role in the socialist economy are also developing thanks to the "transition to the market economy". Large enterprises dating back to the old regime began managing their operations by their own responsibility and at their own risks as a result of privatization. Both managers and

employees of these enterprises are expected to make more serious endeavors to supply quality products at low prices.

Finally, implementation of the strategy for the provision of the financial system and improvement of the payment system which will be discussed in details in subsequent chapters are expected to have market economy demonstrate its excellent mechanisms as the most important infrastructure of the Kyrgyz economy during the transition period toward full-fledged market economy. Fully provided financial sector will be able to supply sufficient funds to promising enterprises. Because enhanced payment system will greatly reduce risks of suffering from non-payment for products sold, business enterprises will be able to market commodities and products to a broad range of customers including those abroad. In addition, because NBK will be able to utilize market mechanisms to its advantage in fully provided financial market even when it is forced to adopt stringent monetary policies to prevent inflation, it will be able to achieve its objective of monetary stability without imposing as heavy costs as it had to in the past on economic activities of business enterprises. Needless to say, to materialize the above-mentioned potential of Kyrgyz economy for development, diverse reforms which will be described later in the main text will have to be implemented in addition to the provision of the financial sector. Execution of reforms will inevitably accompany pain and hardship, but the people of the Kyrgyz Republic who have a high standard of education and the vigorous spirit of independence will certainly overcome such difficulties and construct democratic and prosperous economic society.

3. Establishment of Socio-economic Framework with Year 2000 as Its Target Year

We compiled forecasts on the following items which are relevant to the provision of basic data enabling forecast of types and volume of financial transactions and payments in the year 2000:

- 1) Forecast of population and employment, in particular forecast of the number of people in employment and unemployment rate;
- 2) Forecast of real and nominal GDP;
- 3) Forecast of industrial structure;
- 4) Forecast of the number of business enterprises; and
- 5) Forecast of import and export, and the balance of payments.

Forecasts were made by dividing assumptions into Plans A and B. Plan A is

premised on conservative assumption of potential growth of Kyrgyz economy, and forecasts that "present economic stagnation will continue for some time, and thereafter the economy will head toward slow recovery." The resultant figures are extremely close to those of the forecast for the year 2000 published by the State Economic Committee in July 1994.

In contrast, Plan B is premised on the assumption that possible economic growth of the republic will be translated into reality very smoothly, and forecasts that "Kyrgyz economy will regain its momentum sharply, and the republic will stage rapid economic growth." Under the latter assumption, it is forecasted that in the year 2000 the economy will recover to the level of all-time high recorded in 1990.

See table of comparison of socio-economic framework in 1993 and that in 2000 (including both Plans A and B, and the government forecast) as follows.

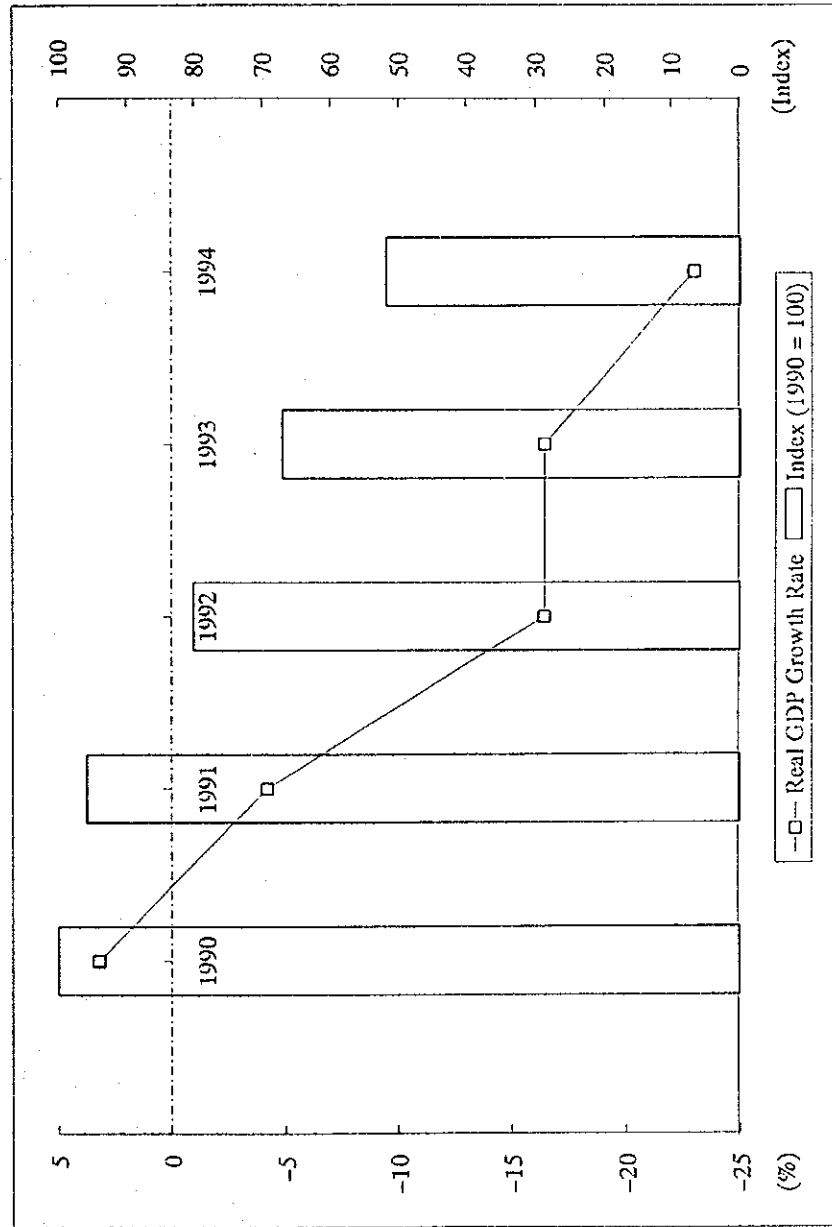
Table of Comparison of Socio-economic Framework in 1993 and that in 2000

	Unit	1993	2000		
			Plan A	Plan B	Government forecast
Population	Thousand	4,450	4,419	4,652	4,181
Working population	Thousand	2,303	2,438	2,454	2,591
Rate of unemployment	%	6.3	10.0	0.0	4.1
Real GDP (at 1992 prices)	Mil. som	676.7	690.4	1,092.4	780
Nominal GDP	Mil. som	5,720	42,779	70,555	48,680
Industrial structure					
Primary industry (agriculture)	%	27.1	30-35	30	n.a.
Secondary industry (mining and manufacturing)	%	43.3	30-35	35-40	n.a.
Tertiary industry (services)	%	29.6	30-40	30-35	n.a.
Number of enterprises					
Agriculture	Thousand	32.2	84.0	96.3	n.a.
Other than agriculture	Thousand	13.4	34.5	39.0	n.a.
Other than agriculture	Thousand	18.9	49.6	57.3	n.a.
Total foreign trade					
Exports	Mil. som	4,026	29,945	52,916	36,614
Imports	Mil. som	1,821	13,475	25,047	18,307
Balance of trade	Mil. som	2,205	16,470	27,869	18,307
Balance of trade	Mil. som	-384	-2,995	-2,822	0
Balance of payments	Mil. \$	-132	-22.4	-72.5	n.a.

Table 1 REAL GDP GROWTH RATE TRENDS IN THE KYRGYZ REPUBLIC (Reference)

	Actual				Estimate	
	1990	1991	1992	1993	1994	1994
Real GDP Growth Rate %	3.2	-4.2	-16.4	-16.4	-23.0	
Real GDP (Base 1992) Mil.Som	964	923	772	646	498	
Index (1990 = 100)	100	95.8	80.1	67.1	51.7	

Source: State Committee on Statistics, Numbers and index of Real GDP are calculated by the Study Team



Chapter 4 Present Situation of Financial System and Development Strategy

Chapter 4 Present Situation of Financial System and Development Strategy

1. Historical Background of Financial Structure

Under the former Soviet Union's financial system, Gosbank was only one central bank. The Kyrgyz Republic did not have its own central bank, and Gosbank operated its branch office. Gosbank was solely responsible for currency issue and monetary policy in the Soviet Union. In addition, it also assumed the function of credit allocation to all the industries.

In Kyrgyz, commercial banks were established in September 1989 and the central bank in December 1990, to create the original form of the current financial system. Then through the collapse of the Soviet Union and the independence of the Kyrgyz Republic in August 1991, the Law on the National Bank of Kyrgyzstan and the Law on the Banks and Banking Activities were enacted in December 1992, marking the establishment of the current two-tier banking system.

2. Current State of the Financial Management System

The financial management organization of the Kyrgyz Republic consists NBK that serves as the central bank and Ministry of Finance. NBK takes leadership in monetary policy and administration.

The Law on National Bank of the Republic of Kyrgyz was enacted and enforced on December 12, 1992. Consisting of 7 chapters and 27 articles, the law vests the central bank with the legal authority to perform its duties, and grants it fairly broad-based and powerful authority including independence from the bank and the fields of monetary policy and supervision of commercial banks. While its institutional framework can be considered to be reasonable in line with the basic policy related to transition to the market economy, its actual operation and management are facing and will face many obstacles.

3. Current State of Financial Institutions

(1) Commercial banks

As of January 12, 1994, there are 21 commercial banks (179 branches) registered in the Kyrgyz Republic. 2 banks went out of business thereafter, and 19 banks are in operation as of August 1, 1994. In terms of background related to ownership, they are classified into 3 major banks that have been privatized from government financial institutions in the former Soviet Union, medium- and small-sized banks established after the independence of the republic, and a savings bank which served as an a national organization to absorb savings in the former Soviet Union.

The Law on Banks and Banking Activities in the Kyrgyz Republic was enacted on December 11, 1992, and took effect on December 12. It consists of 6 chapters and 34 articles and stipulates regulations related to the organization and activity of domestic banks in consideration to harmony with banking laws in other countries. While the law grants independence to banks, licensing, operation and management under close supervision of NBK. Also, the law clearly endorses freedom of choice for bank customers and protects their interest, while clearly defining accountability of banks for their customers.

(2) Insurance companies

Insurance companies are licensed by National Insurance Supervision Committee. At present, 20 - 30 of them are operating and most of them are very small in size. They are allowed to sell a variety of products including life insurance, non-life insurance, and credit insurance, but life and non-life insurance businesses are virtually nonexistent due to little interest in insurance among citizens.

4. Present Situation and Problems

(1) Relationship between Financial and Industrial Capitals

In the Kyrgyz Republic, privatization of state enterprises progresses in the process of transforming itself to the market economy, and many private enterprises are established. Banks are often required to invest in these privatized enterprises or new enterprises because of serious shortage of domestic savings. At the same

time, enterprises have incentive to become shareholders of banks in order to obtain favorable treatment in loan and credit service. Mutual share holding between corporations and banks is widely observed, and it is often the case that major shareholders of commercial banks are major bank customers.

Banks collect large funds from many economic units and invest in diversified assets. This way, they are expected to improve a level of safety per lending unit. However, the wide spread mutual share holding of enterprises and banks seen in Kyrgyz results in insufficient risk spreading in loans, lowering the risk bearing capacity of banks. The limited risk bearing capacity may limit the choice of projects financed by banks and thus impede the development of much needed industries. Thus, the not-at-arms-length relationship between industrial capital and financial capital and other risk factors should be gradually removed.

(2) Issues Related to Long-Term Finance

The country has 19 banks operated under the Bank Law, which are called commercial banks. Commercial finance forms a central part of fund operation business, following the principle of commercial banking. The current state of banks in Kyrgyz, facing a high liquidity risk, makes it desirable to avoid long-term funds operation in a fixed form until the banking system reaches a maturing stage. Thus, the current policy direction to foster the banking system under the principle of commercial banking matches the current situation of financial and economic systems.

Clearly, the current banking system following the principle of commercial banking does not supply sufficient long-term funds that are indispensable in building industrial infrastructure.

(3) Issues Related to Public Finance

Previously, guidance policy finance has been made through refinance loans by NBK to commercial banks (special purpose credit), but it causes a serious financial problem as discussed in 4-5 "Current Monetary Policy and Major Issues" and has been discontinued. Now that government financial institutions are all privatized and the refinance loan program is not available, development of an appropriate instrument to provide guidance policy finance becomes a major issue.

(4) Issues Related to Small Business Finance

In the country where funds are in absolute shortage, private funds tend to flow to (1) large corporations with a relatively low credit risk, and (2) short-term loans in order to avoid the tying-up of funds. Obviously, it is difficult to expect smooth fund flow to the development of small businesses.

(5) Current State of Financial, Capital and Foreign Exchange Markets

Since there is no established financial market in Kyrgyz, there is no benchmark interest rate to determine loan and deposit rates for commercial banks. At present, NBK's credit auction rates are used as reference rates.

(6) Securities Market

The issuance of public bond on a regular basis is limited to 3-month TBs that are sold through the auction, and no corporate bond is issued. As a result, there is no medium- and long-term public and corporate bond market. Similarly, there is no securities market since shares of privatized state enterprises has been sold through private offering.

Generally speaking, in any country where private savings remain at a very low level, savings principally flow into financial assets offering high safety and liquidity, making it difficult to foster the capital market. Thus, growth of the capital market in Kyrgyz is not expected in the near future.

(7) Foreign Exchange Market

Foreign exchange transactions in Kyrgyz are primarily made through foreign exchange auctions (Table 4-3), which are held by NBK to sell foreign currency to commercial banks and money changers in the form of competitive bidding.

Although inter-bank trading of foreign currencies has been started, the volume of trade seems to be less than the auction.

(8) Overdraft

In principle, NBK does not accept overdraft for deposit accounts of commercial banks. In practice, however, many banks have accumulated deficits at their NBK deposits up to the reform in April 1994, which was generally referred to as overdraft in the country.

NBK, having recognizing the increasingly deteriorating condition that reaches a critical stage, adopted at its board of directors' meeting on April 1, 1994, a reform proposal entitled "Restructuring of Overdraft by Commercial Banks" that was prepared on the basis of IMF's recommendations.

Since the reform plan envisages that the overdraft problem is officially dealt with by transferring the existing overdrafts to an adjustment account, the following benefits to the financial market are expected:

- 1) Eliminating the overdrafts helps the price mechanism in the financial system to regain its normal functioning, which has been distorted by the penal interest rate.
- 2) Effectiveness of NBK's monetary policy measures to control credit supply through the credit auction will be boosted.
- 3) Increased participation by commercial banks in T/B and foreign currency auctions, previously excluded if they have overdrafts, will revitalize and unleash these markets to full-fledged growth.
- 4) Banks will be encouraged to operate in strict accordance with the self-accountability principle.

Yet, several problems will still remain unsolved. First of all, while the reform plan has eliminated the overdraft problem, commercial banks' debt still remain in the form of 3-year loans. For commercial banks which are expected to supply surplus funds to the money market in the future, repayment requirements should be taken into consideration as to how they limit fund supply.

Secondly, the present reform envisages that NBK's credit supply to commercial banks will be made solely through the credit auctions, which cannot be used as an

effective means of providing guidance policy finance. As a result, monetary policy may be intertwined with fiscal policy in a counterproductive way. Further consideration is needed to find a workable solution for the potential problem.

(9) Credit Auction

Credit auction is used to control the volume of currency or credit in circulation to stabilize the local currency and to allocate credit resources to banks in healthy financial condition. At present, credit auction is positioned as a temporary currency control instrument until open market operation using securities becomes full-fledged. In reality, it serves as the primary monetary instrument.

While credit auction plays a critical role in the country's monetary policy. To ensure its effective functioning, a major issue remains; separation of monetary policy and fiscal policy.

(10) TB Auction

TB auction is conducted by NBK, on the behalf of the government, to sell treasury bills to the public.

The secondary market for TBs is expected to play a leading role in fostering the short-term money market in the country. At the same time, it is expected to grow to the sufficient size allowing NBK's open market operation, with TB rates becoming benchmark rates. Thus, the development of TB auction into the future TB market is very important from the viewpoint of monetary policy.

(11) Other NBK Loan and Credit

NBK extended loans called special purpose credit which were discontinued after January 1994 to commercial banks. This was refinance loans to supply credit to commercial banks by specifying a borrower for the purpose of providing policy guidance finance, estimated to account for around 80% of NBK loans. Commercial banks lent the loan amount to private enterprises with a 3% margin.

Special purpose credit is the remnant of traditional credit allocation to enterprises under the Gosbank system, and has been criticized as inflationary by supply a large amount of credit.

IMF recommends that NBK loans should be extended through credit auction. If this is done, it is difficult to provide policy guidance finance.

(12) Current State of the Currency System and Major Issues

Although the value of Som has been relatively stabilized in 1994, after the rapid fall in 1993, currency stability requires structural adjustments toward the market economy and to establish and maintain macroeconomic balance. In particular, the following fundamental issues related to macroeconomic policy needs to be addressed and dealt with.

First of all, the government has to control inflation. The rapid increase in the money supply has deteriorated purchasing power of the currency appreciably. In the short term, the devaluation of Som following the theory of purchasing power parity seems to contribute greatly.

Secondly, the country has to improve its current account balance by achieving macroeconomic stability through the increase in domestic savings and export promotion. Economic development driven by a combination of excess investment in the private sector and budget deficits must be balanced by current account deficits. It is important to move out of absolute shortage of savings through economic management based on market mechanism and initiatives of the private sector.

(13) Current State of Banking Service and Major issues

Deposit Service

Deposits form the core of fund raising means of commercial banks. Commercial banks in Kyrgyz are handicapped by their very weak ability to absorb deposits from the public, particularly in rural regions.

If the bank lacks the ability to absorb deposits effectively and timely, therefore, its capability of long-term function operation will be deteriorated or liquid risk rises significantly. In the former case, investment funds required to construction or improve industrial infrastructure are not supplied to the industrial community. In the latter case, funds saved by individuals flow to liquid assets such as precious metals, thus used for nonproductive purposes. In a macroeconomic sense, this means that the smooth supply of savings funds to investment opportunities is impeded, thus preventing sound economic development.

The apparent weakness in depository function of Kyrgyz banks, in addition to the fact that banks have not considered personal deposits to be an important element of their business, seems to come from the fact that people have lost interest in deposits and financial assets due to the following factors:

- 1) Hyperinflation generates strong preference for physical assets.
- 2) The personal income level is low enough to keeps personal savings rate in macroeconomic terms at a very low level.
- 3) Most of payment made in daily life is done in cash, so that there is little demand for transaction through deposits.
- 4) Financial institutions often restrict customers from drawing their deposits due to the shortage of cash reserves.
- 5) Financial institutions are not trusted by the general public.

Under these circumstances, macroeconomic factors such as inflation and income level seem to play a critical role in overcoming the problem at this stage. Meanwhile, it is important to devise a financial system to attract personal deposits when the above factors are gradually improved.

Lending Service

The lack of ability to raise funds results in the chronic shortage of loanable funds. In addition, most of banks have non-performing funds due to the increase in bad loans and are not able to meet new loan demand.

At present, new credit supply has been terminated to stop further increase in bad loans. Nevertheless, commercial banks are facing difficulty in meeting demand for long-term funds because of liquidity risk, so that overdue loans may increase again in the future. Also, the shortage of loanable funds should be dealt with by reinforcing the depository function of banks.

Payment Service

Payment service is one of major services provided by banks. At present, payment transaction service offered by banks in Kyrgyz is limited to fund transfer. Payment by bills and checks, credit cards, and automatic transfer is rarely performed. Moreover, fund transfer service seems to remain at a very low level as seen from frequent occurrence of "vzaimazachet".

The most basic method of payment is cash. In a modern economy, however, it is increasingly important to allow people to make their payment through his bank deposit by using a variety of means, including bills, checks, credit cards, remittance, and transfer, for smooth payment. To ensure smooth payment through bank deposits, the following conditions need to be met before hand:

First of all, convertibility of bank deposits to currency (legal tender) with circulating power granted by law must be accepted by the economic circle and the society at large. For instance, commercial banks in Kyrgyz are often unable to meet the request for drawing by their customers due to the shortage of cash reserves. Clearly, deposits at these banks are not fully convertible to cash currency. Furthermore, "vzaimazachet" practiced by commercial banks significantly damage public confidence. Banks must make efforts to overcome the problem.

Secondly, Banks should form an inter-bank transaction network such as a clearinghouse and a cable remittance system, which serves as infrastructure to ensure simple and secured transfer of deposits. Such infrastructure, together with public confidence by meeting the first condition, creates a social norm that transfer of deposits is commonly accepted as completion of payment transaction between the debtor and the creditor (Note). Again, reality is opposite. Delay in payment seems to be a familiar scene due to physical or technical problems in the

payment transaction system. Thus, the basic and reliable inter-bank transaction system is called for.

Credit Creation Capability

Developing the inter-bank transaction system or enhancing fund transaction service through deposits, without relying on cash, is essential in not only streamlining payment transactions, but also strengthening the credit creation power of banks and promoting investment that is a primary engine for economic growth.

The role of banks is by no means limited to the transfer of savings held by surplus units to investment by deficit units. Rather it creates credit on the basis of savings by surplus units and multiplies investment funds in the process. To spur economic development in Kyrgyz where savings are in absolute shortage, it is important to utilize credit creation capability of banks to converge present as well as future savings into investment projects.

To improve the credit creation power of banks, first of all, to reinforce the liquidity creation capability of banks so as to ensure that savings of surplus units with a high degree of liquidity preference are retained by the banking industry as deposits, without diverting to precious metals and other fluidity assets.

Secondly, to improve the settlement system to ensure that settlement is done by using deposit currency and funds for settlement stay in the banking industry in the form of deposit. Through these measures, credit creation causes the rise in deposit yield (α) and the decline in cash holding ratio (c), thus to improve credit creation power.

Geographical Distribution of Branches

It is now clear that the rise in deposit yield is directly related to the improved credit creation power of banks, as much as credit creation accelerates economic growth. At the same time, developing branch networks is an important means of achieving the purpose, as important as developing the inter-bank transaction system, because accessibility of economic units to the banking system is proportional to availability of cash currency.

Savings banks and their presence in rural regions seem to be useful when considering a desirable way of fostering a nationwide network of financial institutions in the country. Characteristically, each branch of the savings banks supervises and incorporates several local units. As of July 1, 1994, there are 379 local units under 55 branches. Local units approved deposit and transfer services only, not handling loans, but they can be used as basic units to provide standardized fund transactions by using deposit currency. It should be noted, however, that the savings banks contract out fund transfer service to other banks, suggesting that they do not have sufficient transaction systems. This should be carefully checked and taken into consideration in the future plan.

5. Future Targets and the Development Strategy of Financial System

With improvement of the settlement system, considerable improvement should be possible regarding many of the problems presently occurring in the financial system.

(1) Effect of Backing Up the Transition to a Market Economy

Because of the undeveloped state of the settlement system in the Kyrgyz Republic up to now, it is difficult to have a clear idea of when fund settlement resulting from economic transactions is scheduled to be completed or when it has been completed, and that has even resulted in vagueness in the sense of responsibility to meet payment obligations. However, fair competition, the mainstay of the market economy, is possible only on the basis of trust between the parties to the transactions that the contracts will be faithfully performed. That being the case, should the settlement system be improved, thereby lowering the risk of transactions by making the state of settlement clear and making it possible to firmly establish business operations based on the concept of responsibility for one's actions, that should considerably invigorate business activity in the market economy and stimulate economic recovery.

(2) Making Bank Management Sound

Improvement of the settlement system will have the effect of disposing of arrears in settlement and establishing a sense of responsibility for one's actions in business management. In the course of improvement of the settlement system the former vagueness of failure to meet payment obligations will be dispelled,

possibly initially resulting in bankruptcies and in "surfacing" of "latent" bad debts on the hands of banks. But if that enhances the transparency of bank assets, thereby dispelling unnecessary doubts about the soundness of bank management, it is reasonable to expect that the result will be recovery of trust in banks.

(3) Improvement and Expansion of the Financial Market

Improvement of the financial market and improvement of the settlement system affect one another. That is to say, not only is improvement of the settlement system so as to make it possible to process a large volume of settlement transactions in a short period of time something indispensable as infrastructure for development of the financial market, but improvement of short-term financial markets and particularly the inter-bank market accomplishes the function of facilitating the day-to-day fund raising of financial institutions and lowering liquidity risk, which is an extremely important element in stable operation of the settlement system.

(4) Improvement of Deposit Transfer Function

Presently in the Kyrgyz Republic because of lack of development of a commercial bank settlement network promissory notes, checks, bank transfers, credit cards and other means of settlement using bank deposits have not been adequately developed. As a result the cash/deposit ratio (ratio of cash to deposits) of the population is high, and there is an extremely high degree of outflow of funds from the banking sector, and, as we have seen, that is seriously braking the credit creating function of banks and hindering expansion of investment. A basic condition for economic development is creation of an environment in which the population can accomplish fund settlement without using cash by urgently improving the settlement system and enhancing the deposit transfer function of banks.

(5) Effect of Development of Network of Bank Branches

At the present time the branches of commercial banks in the Kyrgyz Republic are located mainly in the provinces of Chui and Osh, and the provincial branches cover very considerable geographic areas. It is therefore to be supposed that in such areas deposit and savings, loan transaction and settlement transaction

opportunities of the people are probably not at a satisfactory level. Hence the need to reinforce the network of bank branches, including invigoration of savings bank branch networks, and booster the deposit transfer function.

6. The Framework of the Financial System to be Established by the Year 2000

(1) Types and Sizes of Financial Institutions

Commercial Banks

In the period of a little more than two years since the Kyrgyz Republic became independent of the former Soviet Union twenty-one commercial banks have been established there (presently nineteen). In this chapter saving bank is also included in a commercial bank category, because it has potentialities to develop into a large commercial bank based on accumulation of personal savings in the balance sheet, which is relatively large, although saving bank has not yet been given a license upon Banking Law in 1992 as of August 1, 1994. It is reasonable to conclude, considering the size of the country's economy and the volume of its financial transactions or its state of market competition, that is already an appropriate number of banks. Although it also depends on the stance that the NBK takes as the entity with the power to grant bank licenses, it is safe to assume, considering market capacity and other factors, that the pace of establishment of new banks will slacken considerably in the months and years to come.

Furthermore, in the future some banks will no doubt choose to merge in order to enhance their capital power, and it is possible that some will also convert to financial institutions with the kinds of roles that are discussed further on. Accordingly, the present number of about twenty banks can be expected to remain substantially unchanged considering also the trend with respect to establishment of new banks. The branches of these banks are projected to be numbered about 500 in year 2000, including local units under the branches of saving bank.

Long-Term Financing Institutions

Since banks playing a central role in the settlement system are expected to operate on the basis of the principle of commercial banking, besides commercial banks it

is necessary to consider creation of a financial institution the main business of which is supply of long-term investment funds. It can be newly established or result from future specialization of an existing bank or existing banks in long-term financing operations.

Development Bank

In principle, private savings should be channeled to investment by private financial institutions. However, considering the present state of the economy of the Kyrgyz Republic, "policy" investment of government funds and foreign aid funds in industrial areas forming the basis of economic development and industrial areas in which investment has a relatively strong multiplier effect is of great importance. There are too many problems in having that accomplished in the form of supply of credit to the private sector by the NBK, particularly considering past experience with "special-purpose" credit, and hence the need to establish a public financial institution that can function as a government finance policy institution.

System for Supplementation of Credit Furnished by Financial Institutions Catering to Small and Medium-Size Enterprises

Although it is desirable that the private small and medium-size enterprises that have started to be established with transition to a market economy receive financial support, it is very likely that in actual practice the available funds will go mostly to former State enterprises and other large firms characterized by relatively small credit risk. That being the case, it would appear to be necessary to devise institutional means of encouraging some private financial institutions to actively engage in financing of small and medium-size enterprises such as providing them with some kind of incentives to do so.

Consideration should be given to a system for supplementation of credit to small and medium-sized enterprises as such an incentive to provide them with financing. Such a system should, in principle, be established by a public institution, but it might be a good idea for the users of the system, too, i.e. industry and private financial institutions, to contribute their share of funds to the system from the viewpoint of avoiding occurrence of "moral hazard."

Deposit Insurance System

Deposit attraction capacity of banks in the Kyrgyz Republic is extremely weak, one of the reasons being the fact that confidence in financial institutions there is low. That being the case, from the viewpoint of fostering greater confidence in financial institutions and deposit transactions on the part of the population it is necessary to consider creation of a deposit insurance system. In that connection the country has already itself started studies with a view to establishment of such a system. However, in establishment and operation of such a system one must always bear in mind the difficult problem of occurrence of "moral hazard" in connection with deposit insurance, as is clear from the example of the United States in recent years.

(2) Financial, Capital and Foreign Exchange Markets and Their Size

Inter-bank Market

In order to promote formation and development of an inter-bank market it is advisable to improve the environment for providers of funds.

It is necessary to abate inflation in order for providers of funds on the inter-bank system not to suffer prejudice.

Secondly, it is desirable that there be a situation in which it is possible for financial institutions that are normally (or net) takers of funds to be providers of funds in the case of temporary fund raising. If borrowing from the NBK is reduced as a result of implementation of reforms such as transfer of policy financing to government financial institutions, there will be leeway for commercial banks to be providers of funds at times depending on day-to-day change in their fund positions in order to put temporarily spare funds to use.

Thirdly and more basically, it is desirable for the sake of development of the inter-bank market that financial institutions be fostered that are capable of effectively absorbing and accumulating funds of individuals and that therefore can act as stable fund providers on the inter-bank market.

The main function of the inter-bank market is to adjust temporary fund surpluses and shortages and make it possible for the banking sector as a whole to make efficient use of funds. It is necessary that facilitation of adjustment of fund surpluses and shortages be accomplished in the form of finality of payment with minimum time lag in settlement between banks. In this connection plans will be formulated for improvement of the inter-bank fund transaction settlement system as the main task of the planning by this Study Team for improvement of the settlement system.

Let us consider how the scale of the inter-bank market can be expected to change in the coming years taking into account the factors mentioned above. First of all, the inter-bank fund transaction market is expected to get started in 1995. After 1995 the fund transactions market is expected to gradually expand up to the turn of the century. Specifically, its scale on a balance base is expected to be about 1% of the anticipated lending balance of banks in the period 1995-1997 and about 2% in the period 1998-2000, when greater progress is made in improvement of the financial and settlement systems. In terms of percentage of nominal GDP it is expected to be about 0.2% in 1995-1997 and 0.5-0.6% in 1998-2000.

T/B Negotiation Market

It would seem that it will be necessary to improve the T/B issue and trading markets from the following viewpoints:

- 1) In order to facilitate issue of T/B's for the purpose of covering government spending deficits.
- 2) In order to make it possible to carry out open market operations on the T/B market as a means of financial adjustment by the NBK.
- 3) Increase of T/B needs, for example as security in case of recognition of NBK correspondent account overdrafts in the settlement system.

The T/B trading market is expected to undergo full-fledged formation starting in 1995 because with a widening deficit in the general balance of government spending and income and progress in improvement of the issue market by the

government, the volume of T/B issues is expected to increase, bringing the issued balance to a level that will make formation of a trading market possible.

It is expected to increase to a scale of about 0.70% of nominal DGP by 1997 and 1.43% by the year 2000 on a balance basis. The volume of trading is also expected to trend upward as the trading turnover rate gradually rises during that period.

Foreign Exchange Market

Both the market balance and the volume of trade of the foreign exchange market are expected to gradually increase up to the year 2000 on account of the following factors and increase in the volume of transactions on the inter-bank market as a result thereof.

- 1) Rise in the percentage of total trade volume represented by trade with non-CIS countries.
- 2) Start in earnest of provision of assistance by non-CIS countries in the form of funds and technology beginning in 1994.
- 3) Gradual increase in direct investment from abroad starting in 1996.

Stock Trading Market

"Present Situation and Their Effect of Economic Stabilization and Structural Reform Policies," the State Property Fund (SPF), the committee in charge of privatization, is considering commencement of allocation of privatization vouchers to the population.

Since stock trading needs are expected to rise sharply as a large number of people come to acquire stock of privatized former State enterprises through voucher auctions, it will become necessary to organize a stock trading market. Consideration is already being given to establishment of a securities exchange, but in that connection it will be necessary to overcome certain difficulties, including the need to determine whether or not such a securities exchange will be able to pay its own way. It will also be important to establish rules for it to ensure transparency of price formation and publication of necessary information as well

as establishment of the principle of responsibility of investors for their own actions on the basis of such transparency and publication. Since the country is still in transition toward a market economy, it will be necessary to pay particular attention to that so as not to give rise to trouble in securities trading.

Monetary Policy and Government Administrative Supervision Over Financial Institutions

Let us now take a general look at what the state of monetary policy and government administrative supervision over financial institutions can be expected to be by the year 2000. In monetary policy the NBK will be maintaining its tight stance, and broad money supply will continue to take place at a rate somewhat lower than the rate of growth in nominal GDP. The reserve rate required of banks will be being lowered in steps under the policy of enhancing their capacity to create credit. Furthermore, in connection with lowering of the bank reserves/deposits ratio because of fall the ratio of cash on hand of enterprises and households to deposits, the credit creating capacity of banks will have recovered to about the level that it was at in 1992.

Credit auctions will still be the main tool of monetary policy, but since policy financing ("special-purpose" credits) of large enterprises by the NBK and commercial banks will have been improved by having it accomplished by government financial institutions instead, credit auctions, which are a monetary policy tool utilizing NBK loans, will have become more effective. Furthermore, since the scale of the T/B trading market will have expanded, although only gradually, the possibility of carrying out open market operations utilizing that market will have increased.

**Chapter 5 Present Situation of the Payment System in the
Kyrgyz Republic and Plans on Improvement of
the Computerized Network Systems for the
Payment System**

Chapter 5 Present Situation of the Payment System in the Kyrgyz Republic and Plans on Improvement of the Computerized Network Systems for the Payment System

1. Participants in the Payment System

The banking system of the Kyrgyz Republic has two levels, the National Bank of Kyrgyzstan, that is the central bank, and commercial banks authorized to operate on the basis of the Banking Law. Each of these banks participates in the payment systems together with companies, individuals and other users of banking services in the country.

(1) NBK

The following four departments are specifically involved in payment activities.

1) Accounting Reporting Department

(a) Organization of Accounting Division

Here, in addition to balances obtained for each commercial bank based on data collected from the banks, each bank's balance with the central bank is obtained.

(b) Organization of Inter-bank Settlement

Originally, it processed documents related to inter-republic settlements. The scope of its activity was in the past limited to Ruble-denominated debts carried forward from the USSR era.

2) Inter-State Settlements Division

This division is in charge of payments to and from Kyrgyz and the 14 CIS nations. It undertakes settlements for inter-state transactions.

3) Information System Department

In June 24, 1994 NBK decided to re-name Automation Division to Information System Department and to enhance and re-organize its

functions. Major function of the divisions is to establish and construct operational structure and process of NBK and has objectives to promote for raising productivity by automization of the process. Among those divisions, Perspective Project Division is in responsible for payment systems planning including establishment of a clearing house and improvement plan of computerized payment systems which is a joint work with the JICA Study Team.

(2) Commercial Banks

As of July 1st, 1994, the Kyrgyz Republic has 19 commercial banks.

(3) Corporations and Individuals

Corporations and individuals are the users of the payments services.

(4) Other Parties Related to the Payments System

1) Computer Centers

There are two computer centers, in Bishkek and Osh, that are independent companies affiliated with NBK.

2) RKC and Rashotonaya Parata

On May 1, 1993, NBK started to use a new payments system. This was based on a recommendation by the IMF. The new system had the following four major features.

- (a) The payment process which went through the RKC's were abolished, and there was no longer intervention by NBK.
- (b) Intra-bank payments were made entirely within the bank.
- (c) Inter-bank payments were done directly, through use of correspondent accounts.
- (d) Amounts pending settlement were reviewed on a daily basis.

The small banks formed an association, the Rashotonaya Parata, where the three major banks could open correspondent accounts for common use in connection with the small banks.

2. Types of Payment and Number of Payments

(1) Transactions at NBK Head Office and Branches of NBK

Branches of NBK send or receive cash through the Chui Cash Distribution Center (in the Chui region) to and from commercial banks in the region. A correspondent account is opened by the commercial banks only at the head office of NBK; no payments are done at NBK branches.

(2) Inter-bank Transactions

The inter-bank market is still under developing stage. However, when reviewing background of those individual transactions there seems to exist some transactions which are related to inter-bank transactions market. The Study Team were not able to verify the amount of those transactions. Usually, those transaction settlements are being made in the following manner.

- 1) Using the Reserve Fund of NBK
- 2) Using Correspondent accounts in Commercial Banks
- 3) Using Correspondent accounts in Rashotoya Parata

(3) Transactions With Customers

A customer must have an account at a bank to remit funds through the bank. Many commercial banks require that a minimum balance of 2-5,000 Som is maintained in an account.

(4) Volume Handled by the Chui Computer Center

With regard to Chui, the region of Kyrgyz that handles the greatest number of documents, half of the republic's total, the study team was able to obtain data on document volume from NBK Computer Center. In 1989, 8,860,000 documents

were handled. The number fell to about half of that, 4,700,000, in 1990, however, and failed to recover thereafter. The number handled in 1993 was somewhat under 3,000,000.

With the cooperation of the commercial banks, NBK implemented a questionnaire survey on the payment system during autumn, 1993. In it was an item on the number of payments made per destination. The data for these banks was shown as a matrix of the daily volume of payments to six regions. It shows that the relative importance of payments made to Chui recipients and can be considered that almost 40% of the payment is concentrated Chui region.

(5) Processing Fee

The concept and methodology taken by each bank, it could be classified into 5 following methods:

- 1) To multiply constant charging rate (0.1 to 0.4 %) to the total amount transferred per account per month.
- 2) To set certain amount which varies from 0.5 Som to 4.0 Som per payment instruction.
- 3) To fix certain amount of monthly charge (e.g. 75 Som) per account.
- 4) Combination of above 1. and 2., but to set minimum amount 75 Som. And to calculate bases on above 1. if the charge exceeded the minimum amount.
- 5) To charge none, but the customer deposit minimum amount of deposit per account.

At present many banks are tending to accept above method 5 that is set minimum amount to be kept in a payment account.

(6) Major Payment Systems

- 1) NBK Computer Center (C.C.)

The Center functions as a central office for intra-province payments and a computer bureau for private financial institutions, and provides the

following services to head and branch offices of banks in connection with remission and receipt of payments.

- (a) Calculation and reporting of balances between banks and branches.
- (b) Reports on changes in customer account balances, calculation of the balance and reports.
- (c) Calculation and reporting of the balance in correspondent deposit between the three major banks and the Rashotonaya Parata.
- (d) Calculation and reporting of the balance between small commercial banks within the Rashotonaya Parata (Same function as above 3.)
- (e) Processing of documents at the rate of 10,000/day

The Center's equipment and facilities, however, are out of date and may not be adequate for the tasks ahead.

2) Cash

Cash is still preferred as a means of settlement among individuals as well as corporations, because the delay in improvement of the payment system and a low level of confidence in the banks has kept the number of persons holding deposit accounts down.

3) Deposits

There are three types of deposit account: 1) demand deposits (primarily for liquid assets of individuals, 2) current deposits, used by corporations for payment purposes, and 3) term deposits, used by both individuals and companies.

Some banks have adopted use of personal computers for deposit and withdrawal entries and provide accounting information for accounting system use in the form of a diskette. CDs, ATMs, and bank cards (cash cards) are not being used yet at present.

(7) Intra-bank Payment System

The computer centers in the past had performed centralized business functions and calculations for all banks, and since it has an intimate relation to the nation's payment system, it is considered impossible to completely eliminate its role in intra-bank payments in a short time. Therefore, Kyrgyz's payments system in the actual processes involved does not now make a distinction between intra-bank and inter-bank payments.

The Kyrgyzstan Bank and some of the more advanced banks, having developed their own payment systems, are interested in ending the use of a computer center. Many of the banks that lack such systems, however, have no choice but to continue using the computer centers for important services.

Some banks are using personal computers for input of requests for payment and account management simultaneously, but there are no banks that have an on-line system linking all branches to the head office. Even at the banks that have relatively advanced procedures, data is accumulated and undergoes batch processing.

Even in the same bank, however, it is not necessarily the case that all branches are part of the system; there are many banks that have not been able to standardize procedures.

(8) Inter-bank Payment System

Computer Centers operated by NBK in Chui and Osh at present perform a vital role in operation of the payment system between banks through their centralized information processing and calculation services.

1) Establishment of Rashotonaya Parata (RP)

With regard to the three major banks, the RP is in effect as if all smaller commercial banks were one as far as payments are concerned. That is, each participating bank has an account and the Rashotonaya Parata acts as a correspondent with other parties for payment transactions.

The Rashotonaya Parata also functions as a common information processing center for small and medium-sized banks, including not only processing made within Chui but also processing of transactions made from the branches of small and medium-sized local banks.

The Rashotonaya Parata has the following characteristics.

- It simplifies the transmission of information in comparison to the situation when payments are made by means of correspondent accounts. Banks participating in the Rashotonaya Parata have only to send payment information. All that they have to do is to send payment information to the receiving bank the document for conformance and the former's copy.
- Participating banks do not have to maintain a blanche in correspondent accounts with each other. This makes it possible to reduce the amount of funds required to do business.

The Rashotonaya Parata faces the following issues.

- According to the Rashotonaya Parata's charter, each participating bank is to subscribe to it (5,000 Som). At present, the subscription funds amount to 15,000 Som, far below the 60,000 required by the charter.
- There is no guarantee that payment can be made with the finality of payment by NBK. This is because if a participating bank has a shortage of money, and other participants can not cover that shortfall, there is a danger that the system will break down.

(9) Crossborder Payments System

There are two fundamentally different forms of crossborder (inter-bank) payment systems in use in Kyrgyz. One is the use of correspondent agreements, which is common among private financial institutions in the industrially advanced nations. The second is payment by means of the correspondent arrangement among central banks of the CIS nations.

New systems for settlement are being reviewed in order to ensure the maintenance and development of trading among FSU countries. Particularly promising is the

proposal to set up an Interstate Bank (ISB) to permit a pluralistic settlement mechanism.

(10) Other Payment Systems

In Kyrgyz at the present time, commercial bills are not in general use. The check clearing system is not well developed and there is no central clearing institution.

Credit cards and prepaid cards do not now exist in Kyrgyz.

There have been no efforts to date to introduce electronic banking such as home banking.

3. Present Situation of Computer Payment System

(1) Computer Center

Computer payment systems which are under actual operation in Kyrgyz at present are NBK Computer Centers located in both Bishkek and Osh. Both centers are involved in deposit and account processing services for head and branch offices of banks. From the technical point of view of methods, Computer Centers do data entry and data transfer for the head branches of commercial banks as the user. These methods are as follows:

- Input by teletype terminal and transmit by telegraph circuit
- Input by users PC and send files via RP
- Carry in paper documents to CC and request data entry service

Receiving methods of output as well, there are three methods including 1) via telegraph circuits, 2) file transfer on PCs, and 3) hard copies which are printed out.

To respond above methods, both Computer Centers and RP have following facilities:

- Circuit concentrator of telegraph circuit and data distribution system
- Data distribution system by file transfer on PC and RP
- MT conversion system from PC at RP

- Line printer with medium speed

Using these methods (data collection and distribution system, host systems do accounting data processing and then as a result of debit and credit operation, both customer transfers and inter-bank transfer have been processed. Both Computer Centers processing the day's data up to the next day morning, however, since these systems are old types of equipment (1960's) operation of hardware and software are facing difficulties in operation.

(2) Present conditions of computer systems for transfer processing among the commercial banks

Most commercial banks have installed PCs for automation of processing. Most are old type model and use for very primitive type of processing methods including receiving of balances and calculation of payment/receivers of account. Also the use of PCs are not for instantaneous processing in the front office but batch processing in the back office support.

For improvement of these systems, commercial banks tend to use PCs for the branch level accounting processing which runs on PCs as a banking system. This system is called "Operation Day" and runs on high performance PCs with the set of communication function. This system covers most operations within a branch of bank. Using these functions of the system, both commercial banks and NBK are exchanging accounting information and monetary exchange information. NBK is installing a set of PC as a communication system for these information exchange services to the commercial banks.

(3) Points for improvement of the payment system

As one of the major functions of Operation Day, there is an input function for transfer request, and it makes it possible to transfer remittance information to outside. It is easy to understand that the data entry using the system is becoming very good conditions for users (commercial banks). Therefore, it becomes a very secure and fast method for collection of information using this system to improve the payment system. Both penetration of Operation Day and development of data interface to external system is the key point of the build-up of the new payment systems in Kyrgyz.

4. Present Problems of the Payment System

(1) Conditions of Delay in the Payment

The duration required until payment is received, as the study team determined through discussions at companies and analysis of questionnaire responses, is as follows. When the recipient is within the same region (province) as the remitter of payments, payment is received normally in between 2 to 3 days it is sent, but in some cases more than one week are required. The payment period ranges from 7 days to as long as 10 days but when funds are to be sent to provincial cities such as Bishkek or Naryn, in some cases more than a month is required. In the case of CIS nations from two months to three months is required, and when it is a non-CIS country that is involved, from one weeks to two weeks are needed. Evidently the background factors causing delays are the large volume of paperwork that must be done owing to lagging of systematization, a long period of time that is needed for business procedures, and existence of an inadequately-developed telecommunications network. Further, apart from problems related to computer systems, it is believed that the decline of the real economy during the phase of transition to a market economy, by worsening conditions for procurement of funds, as well as inadequacies in the services sector that have their roots in the socialist economy of the past, is a cause of delay.

(2) Lagging systematization

The level of systematization at any given commercial bank is not very high. Systematization has not progressed beyond the level of systematization for discrete business procedures and there are no comprehensive systems in place.

The greatest problem from the standpoint of delays in or prolongation of the payment period, nevertheless, is the method of processing work. In general there are no on-line real-time systems; batch processing is used and this imposes a limit to what can be done to speed up work. As the reason for not adopting on-line real-time systems, which there are some technical problems, the inadequate state of development of the telecommunications system is considered to be the greatest bottleneck.

(3) Deterioration of fund procurement by banks

According to the results of discussions and the questionnaire, it is judged that as a result of deterioration of the real economy and deterioration of the banks' positions (overdrafts) resulting from it, that there are some cases of deliberate efforts being made to counter the problem of a shortage of funds by delaying the transfer of money.

It may be thought that the problem of lack of awareness regarding a swift payment remission service, comprises a man-made factor in the background for delays in completion of the payment process. With regard to the people as a whole, to be inadequately oriented toward providing satisfying service to customers, and it can not be denied that this is hampering efforts to make a neat transition to a market economy.

(4) Complexity of the payment system

The flow and procedures differ according to the combination of destination, type of paying party and region (Chui, Osh, or another), and according to whether a Computer Center is involved, the Rashotonaya Parata is involved, a "regional coordinating branch" is involved, a bank head office is involved, and everything could vary also according to the specific bank making the payment.

The Kyrgyz Republic's payment system at present has a major problem that is NBK does not guarantee the finality of a given payment. It is extremely important for the central bank, to enforce the means of settlement with finality to avoid from the various payment risks. Payment risks and the necessity for NBK's settlement with finality are briefly described hereunder.

(a) Credit risk	In the case when the net position is negative owing to a bank is inability to make payment, a loss is incurred in the net positions at the bank having a positive position relative to the first.
(b) Liquidity risk	A temporary disturbance that disrupts fund planning arises when for whatever reason expected funds can not be received. If suitable measures are taken, an ultimate loss can be avoided, unlike the case of credit risk.
(c) Systemic risk	This is the risk that either credit or liquidity risk spreads like a chain reaction, to a large number of system participants.

(5) Problems of the participants in the payment system

1) NBK

NBK, properly, should be provided with far-ranging powers of supervision and oversight of financial institutions, as an administrative agency of the government, however, NBK has to continue for its contribution to the development of both financial and payment systems in the country, NBK has following problems. That is to avoid risk occurrence in payment systems NB does not supply payment systems with finality including creditability function as the central bank.

2) Computer Center

The Computer Centers have the following problems.

- Because the computer equipment is antiquated, it is not capable of handling the increased volumes expected in the future.
- Because the software used is obsolete, the centers cannot provide the services desired by their customers (e.g., addition of more account items, or more detailed service).

3) Rashotonaya Parata (RP)

The Rashotonaya Parata, that is an independent body, provides benefits through simplification of the transmission of information, reducing the

amount of money needed for payments and improving the efficiency of payments between participating institutions, but also has the following problems.

- Because of the capital base is insufficient, its organizational basis is weak and if there is a shortage of funds at one of the participating institutions, it is possible that the Rashotonaya Parata could experience a functional breakdown.
- The finality of a transaction such as where the NBK is an intermediary is missing. To the extent that a participating institution does not experience a shortage of funds, the Rashotonaya Parata can function efficiently, but one failure resulting in a shortage of funds, unless this can be covered by another institution, has the danger of easily leading to destruction of the Rashotonaya Parata.
- The three major banks are not participating, and there are limitations as to who can participate. Further, the only region receiving support is Chui.

4) Commercial Banks

There are some banks that are relatively advanced with regard to their own systematization, but in general the commercial banks have the following problems.

- Remission of funds (except in Chui and Osh) requires paperwork (in some cases telex is used) and this is wasteful.
- The banks' computer systematizations is in the initial stage.
- Retention and education of personnel is not adequate.

(6) Review of Development Strategy and Planning for Bank Payment Systems

1) Payment system for Improvement of the Clearinghouse

The Parliament took up the improvement of the payment system as an issue of payment system, and at a meeting of the directors of NBK in December a

decision was made to improve the system. On the basis of this decision, a Clearinghouse project has been begun and is being promoted, principally by the Information Systems Department of the NBK.

2) **Modernization of NBK's Accounting**

- In December 1994, NBK will convert to use of a new accounting system, acting on the advice of the IMF. It begins to use the same accounting items as generally used in the Western nations.
- Commercial banks, nevertheless, still arrive at their balances by use of the system adopted during the Soviet Union period. There is a plan for support by the World Bank for a change in the accounting and internal audit methods at commercial banks, and change of the accounting system is certain to be realized.
- In accordance with the above, it is necessary to proceed with review and revision of the payments system on the basis of the assumption that the internal systems of the commercial banks will be changed.

3) **Improvement of the computer at the NBK Computer Center**

- The old computer now in use at the central bank's Computer Center must be replaced with a new one and in July, 1994 this is expected to be realized as part of the Clearinghouse project, on the basis of support plan for which the EBRD carried out a feasibility study.

5. Formulation of Development Strategy for the Payment System and Determination of the Policy for Improvement of the Payment Systems

(1) **Making the Systems Conceptually Independent of Each Other, To Assure Maximum Capability of Future Expansion**

The payments system that is to be planned will be central to Kyrgyz's payment systems, and it is hoped that it will be provided the foundation for gradual expansion over time in keeping with change in requirements made of it. The

target year of this study is 2000 but it is expected that expansion and improvement will certainly continue after that year.

It is necessary to have assurance that the system has the flexibility for expansion and modification so as to accommodate factors that are indeterminable at the time of planning, and to do so without creating problems that might affect the system as a whole.

It is thought that the major tasks will be the following.

	Name of system	Function of system
1	Inter-bank payments (here called NBK-NET)	Transfers to/from reserve accounts at the central bank to execute inter-bank payment transactions
2	Customer transfers to other banks (here called Kyrgyz Fund Transfer System = KFTS)	Transfer of funds, relatively small scale and large volume from customer accounts to designated accounts at other banks
3	Joint-use system (here called Kyrgyz Co-Operative Banking System = KCBS)	Depositing of funds transferred by others into customer accounts, and support for own account management

(2) Independence of Communication Functions from Applications

In formulation of plans for improvement of the payments systems, in view of the reality that the telecommunications system is a limiting factor of great importance, it is indispensable to proceed with a constantly updated vision of what that system will be and what it actually is at the present time, so as to be able to select the optimum measures. Thus, at the time of planning, the telecommunications system should not be assumed to have a fixed nature, and there should be assurance that improvements in the system being planned can be made in keeping with future improvements in the telecommunications system. Thus, it will be possible to adopt the most effective and safest technical measures in accordance with the conditions that exist from time to time, while rational expectations regarding the ultimate, future nature of the system are also up to date and effectively employed in planning.

The communications function, that can be called the core of a payments system employing a computer network, in addition to being independent of the business functions of the system, must be capable of being readily improved without any consideration of or impact on business task performance as changed by improvement and expansion of the telecommunications network.

(3) Functional Separation of the Central Systems and Regional Systems

It is necessary to design on the basis of each region having its own communication system. That is, it is thought to be desirable that not only with regard to the communications area but with regard to business work function as well that in addition to providing a central function there is to be functioning based on the unit of the region.

(4) Outlook for the Principle of Competition, in the Intra-bank System

The Kyrgyz Co-Operative Banking System is one of the three operation systems. The reason for this is the recognition that whilst increasing the savings of individuals and improving deposit transfer function are extremely important from the view of the national economy, and while being aware of studies of planning of individual banks' improvements, it is extremely important as a matter of national policy for this to be included in the planning of improvement of the payment system. It is proposed that only the minimum needed for promoting the smooth working of financial policy is to be provided in the operating functions of the banks. (See Figure 7-8 in Appendices)

(5) Diversification of Payment Methods, and the Payment System

1) Improvement of Inter-bank Market Transactions

Foremost in the desired items would be the supply of a means for inter-bank payments, as it is necessary for improvement of the inter-bank market for there to be supply of a means of making payments of funds as inter-bank transactions. For there to be sound bank management it is indispensable that there be smoother raising and management of funds and it is particularly desirable for there to be smooth operation of the inter-bank short-term money market.

It is basic to everything for there to be recognition of the importance of providing a means of payment so that an inter-bank market can function, and that such means is developed at an early stage.

2) Improvement of Efficiency in Banking Business for Individuals' Accounts

It has been observed that one key for the improvement of the function of credit creation in the Kyrgyz banking sector will be the increase in use of bank deposit accounts by individuals. For that increase to take place it is essential to create an organization that is capable of improving the efficiency of bank business related to individuals' deposit accounts, including the swift, efficient processing of small-scale transactions in great quantities. This means that it is hoped for a relatively early establishment of a system in support of deposit-taking business.

3) Introduction of payroll transfers

It has been observed that one another key for improvement of the function of credit creation in the Kyrgyz banking sector will be the improvement of deposit transfer function. It is important, from the view of increasing creation of creditability of banking sectors in Kyrgyz, to install and enhance account transfer system. At the same time, if the objective of increasing the use of individual deposit accounts is adopted, it is then necessary to seek to improve the efficiency of deposit-account-related services, and to improve the "pipe" that supplies funds to the accounts. Deposit accounts became familiar to the ordinary person only when they are used as a means of receiving wages or salaries (or pension payments), by automatic transfer. Earning a wage or salary often will be the initial incentive for opening an account. In that sense, the start of automatic payment of wages and salaries into bank accounts is quite important.

4) Expansion of Use of Automatic Transfers

Contrasting to the 'supply' function in the form of automated payments of cash and pension money into deposit accounts, automatic transfers from those accounts, of the recurring, most common types of payments, such as

utility service charges and rent, would be a valuable way to increase the importance of accounts.

5) Introduction of Automatic Teller Machines

Together with the introduction of automatic transfer of pay through improvement of the "supply pipe" feeding the individuals' deposit accounts, it is indispensable that the account holders be enabled to make withdrawals with a suitable degree of convenience.

Provision of such withdrawal service through automatic teller machines (ATMs) should be started about the same time as automatic pay transfers. With regard to ATM service, it is not necessary to think in terms of providing uniform service throughout the nation, with all banks linked through a jointly-operated ATM system.

It is believed that the suitable method would be to provide only basic services such as withdrawals from demand accounts held by individuals, and to seek to provide good quality service and obtain broad understanding of the merits of the system.

6) Supply of Network Services

It is advisable to give some thought to whether so-called "network service" or deposits and withdrawals at remote (i.e., other) branches can be handled as one of the services provided to individual account holders.

In Kyrgyz, economic activities have generally developed with the region as the basic unit. Movements from one to another state, in overall perspective, are not numerous. Thinking on the basis of the present conditions, it will be observed that network service for an entire state is not necessarily a large-scale undertaking.

7) The Potential of Electronic Banking (Especially Firm Banking)

There are two reasons for not thinking of starting electronic banking service -- that permits customers to do banking business directly, by means of a

telecommunications link between the customer's office computer and the bank's computer -- before 2000.

First, there is a strong possibility too that the banks will not have a sufficient number of companies as stable customers to justify this service. Hence, it is thought desirable to wait until there is a good customer base before proceeding.

Second, it will be necessary to achieve improvements in both the level of the computer installation rate at banks and bank customers (including potential customers).

8) Overdrafts of Individuals' Accounts

It is necessary to improve arrangements so that when automatic pay and pension money transfers to, and automatic withdrawals from, individuals' accounts begin, the automated systems are capable to handling the work load.

Cases when a withdrawal from an account can not be made, would be when, as in the case of payments to the account, such an account as has been stipulated does not exist, or the name of the account holder is not correctly given. Some of these cases originate at the party depositing or remitting funds but in the majority of instances the depositor is at fault, for reasons including having an insufficient balance in the account.

9) Introduction of Credit Cards

Some banks are already studying matters related to introduction of credit cards. It is possible that use of credit cards can be begun at a relatively early date, if simplifying the authorization process is possible. Note that the number of travelers from abroad that visit Kyrgyz has increased. It is highly possible that use of credit cards will be begun within one to two years.

10) Use of Checks

It is thought that need for use of checks as a means of payment will decline once the bank payment system is improved through formation of a computer network.

It may be said, nevertheless, that the check as a means of creating credit is a simple and certain means suitable for use by companies, provided that the Bill and Checking Law and other aspects of the environment for checking are improved.

It can not be said, however, that the preconditions for use of checks -- a system of credit guarantees based on the Bill and Checking Law, and an actually functioning Bankruptcy Law -- exist in Kyrgyz.

(6) Inter-bank Payment System

It is understood that the inter-bank payment system is infrastructure of payments systems.

1) Gross Settlement and Net Settlement

There are two major methods of inter-bank payment. One is "gross settlement", the other is "net settlement".

(a) Gross Settlement

Gross settlement is an inter-bank payment method that is completed with the transfer of reserve funds in central bank with finality, one transaction at a time. It is a payment method of which to complete capital transfer with finality per payment transaction and is used primarily for large-scale capital transfer between customers in inter-bank transactions, and for the payment made in the net settlement scheme.

(b) Net Settlement

Net settlement is another inter-bank payment method by which a multiple number of transactions are pooled and the difference (net position, payments minus receipts) only is remitted. It is used primarily for processing a large number of small-scale transactions.

The two settlement methods can be usefully compared from the view points of risk and efficiency. Three types of risk are conservable when net settlement is used. These risks, because of inherent differences between the systems, do not arise when gross settlement is used.

Reduction of the amount of reserve money that must be supplied to accounts at the central bank is an improvement in efficiency that net settlement provides relative to gross settlement. This is because in the case of net settlement there is no temporary demand for funds to be placed in those accounts as a result of the movement of funds transaction by transaction.

Net settlement in general can be said to be the efficient use of capital. By way of contrast, if there is a shortage in an account at a central bank that uses gross settlement, then processing of settlements for that account is stopped.

Nevertheless, it is possible to operate a gross settlement system efficiently, provided that suitable measures are taken in anticipation of a possible temporary problem of a shortage of funds. Specifically, an effective measure is to approve overdrafts of accounts at the central bank.

Relations between the foregoing can be summarized as follows.

	Settlement method	
	Gross	Net
Risks	Low	High
Efficiency of capital	Low and improbable	High

When a settlement system is operated by use of a computer, it is possible to both improve efficiency and reduce risk.

In Kyrgyz at present, authorities require that utmost efforts must be made to avoid not only overnight overdrafts but daylight overdrafts as well. It is understood that to the extent that improvement of settlements is an objective this permits the choice of approving daylight overdrafts.

For inter-bank payments in Kyrgyz, it is expected that the gross settlement method with the finality of NBK (tentatively called NBK-NET) will be used, while a large number of small scale transfers on behalf of customers to other banks, by the KFTS (tentative name), will use net settlement.

It is desirable that the NBK-Net system be given the highest priority among the three because it is fundamental to the inter-bank transactions that guarantee finality for all payment processing. Further, it is desirable that the KFTS be assigned high importance from the viewpoints of increase of transaction volume.

2) The Precondition of Improvement of the Inter-Regional Network

The gross settlement method requires that processing be done while monitoring account balances at the NBK. This method in principle requires that even for a transaction between branches of different banks within the same region that the NBK account balance be checked, a transfer be made, and the result reported to the branches. For this reason, the network created between the regions and the center must be capable of real time processing.

It is a precondition for establishment of the gross settlement method that telecommunications network service be available for real-time communications functions that are distinct from the applications functions.

Conversely, it may be understood that it would not necessarily be proper if a payment system using the gross settlement method were go into use prior having available a telecommunications system of the right quality and capacity. This is necessary for the gross payment system to be used and also has the aspect of giving full consideration to risk control.

3) **Processing of Paper Documents After First Computers Are Operational**

When the system is placed in use, all banks (or all branches) are not likely to participate; participation will increase gradually. For a period of time, any region will have a combination of participating and non-participating banks, or banks using computers and banks using paper documents. It therefore will be necessary for the non-participating banks to convey documents to the region's communication center where they will be used for data input, after which point the new system will be used.

Operation of the new system thus must accommodate some work done using paper documents.

4) **Organization, and Role of the Central Bank or a Disinterested Entity**

It would be desirable that the central and regional communication centers be organized as public entities, in view of obtaining telecommunication network. From this viewpoint, it would be attractive to form an organization that has the NBK as the main body or a its central member and all banks are participants.

5) **Establishing the Legal Status of Electronic Documents**

The new payments system will liberate Kyrgyz from the restrictions imposed by need to use paper documents as electronic communication will overcome limitations of time and space. But this requires that the legal

status of electronic documents or records, to be used in place of paper documents, to be established.

(7) Intra-bank Payment System

It is necessary to revise the basic concept regarding intra-bank payments processing from that used when the work was done through the RKC for all banks on the same basis. Every commercial bank is a separate business whose branches are not subsidiaries of the NBK, and each of the banks must develop its own business strategy and manage its affairs in its own way. As far as processing or operations in each bank, the banks have to devise their own methods and procedures. It is proposed that only the minimum of jointly-owned and -operated infrastructure should be used for the intra-bank payment system, in view of the importance of the foregoing and the principle of free competition between banks.

1) Start With a LAN System Joining All Branches for Business Operations

Several banks have already developed or started to study use of local area networks (LANs) within individual branches.

This payment system network is conceived to be a neutral system that has the prospect of becoming the core of a mutually interconnected inter-bank system, and it is expected that at that time it will be possible for each bank's system, that has developed independent of the others, to be interconnected.

2) Outlook for a Joint Network of Automatic Teller Machines

Service provided by automatic teller machines (ATM) are among the important services provided by an inter-bank network. At the outset, each bank will operate its ATMs independently of the other banks but it should be recognized as a high-priority service to interconnect the ATM networks through the inter-bank system. It would be desirable for the hours that ATM service is provided to be different from normal banking hours and to include holidays and evening hours.