



**National Bank
of the Kyrgyz Republic**

**THE FINANCIAL SECTOR
STABILITY REPORT OF THE
KYRGYZ REPUBLIC**

June 2016

Bishkek

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On the issues related to the content of the publication, please contact:

168 Chuy Avenue, Bishkek city
National Bank of the Kyrgyz Republic
Financial Stability Monitoring Division
Mr. Ulukbek Usubaliev (Head of Division)
Tel.: (+996 312) 61-22-46
Fax: (+996 312) 61-07-30
E-mail: uusubaliev@nbkr.kg

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Other Publications of the National Bank of the Kyrgyz Republic

Annual Report of the National Bank of the Kyrgyz Republic

This document is an overall report of the National Bank of Kyrgyz Republic (NBKR) for the last year. It contains summary on economic development of the republic and monetary policy, as well as the National Bank financial statements, general information about the NBKR, statistical annexes. It is published in three languages: Kyrgyz, Russian and English.

Bulletin of the National Bank of the Kyrgyz Republic

This monthly informational publication includes statistical data on the basic macroeconomic indicators and economy sectors of the Kyrgyz Republic. It is published in three languages: Kyrgyz, Russian and English.

Balance of Payments of the Kyrgyz Republic

“The Balance of Payments of the Kyrgyz Republic” reflects development trend of the external sector and information about the balance of payments, foreign trade, international reserves, foreign debt and the international investment position of the Kyrgyz Republic. It is published quarterly in January, May, July and October in Kyrgyz, Russian and English.

Monetary Policy Report (Inflation Report in the Kyrgyz Republic)

The purpose of this publication is to provide the public at large with regular information about the main directions of the activities in the monetary policy sphere. This publication contains analysis of external environment and macroeconomic situation development in the country, information about dynamics and inflation factors, inflation forecasts, development of real and external sectors of economy in the Kyrgyz Republic and in the countries-major trading partners. It is published quarterly in Kyrgyz, Russian and English.

Statutory Acts of the National Bank of the Kyrgyz Republic

The purpose of the document is to publish statutory acts of the National Bank officially in order to provide commercial banks and public with statutory acts and information on the National Bank activity, as well as propaganda of the Kyrgyz Republic banking legislation. Presumable publication frequency is once a month in Kyrgyz and Russian languages.

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PREAMBLE

National Bank of the Kyrgyz Republic has been publishing the Financial Sector Stability Report of the Kyrgyz Republic since 2012. The objective of the report is to inform the public of the general assessment on the stability and sustainability of the financial system of the Kyrgyz Republic.

Financial stability in this publication means smooth and uninterrupted activity of financial institutions, financial markets and payment systems enabling to perform functions of the financial intermediation even in conditions of financial imbalances and shocks.

Results of the monitoring and analysis of financial stability are considered by the National Bank in main directions formulation of the NBKR monetary policy, regulating the banking activity and development of the strategy for financial and credit institutions of the Kyrgyz Republic.

The Financial Sector Stability Report of the Kyrgyz Republic is oriented to financial market participants and the audience interested in the issues of financial stability.

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MAJOR CONCLUSIONS

At the end of 2015, the results of macro-prudential analysis, econometric modeling, modeling of the financial forecasts, as well as “reverse” stress tests indicated that the financial sector was sustainable enough and the financial strength was sufficient to withstand certain macroeconomic shocks.

Positive rates of economic growth persisted during 2015 despite the weak diversification and the dependence of the Kyrgyz Republic economy on external factors. Country risk still remained moderate for the banking sector. At the end of 2015, an increase was observed in the share of placed banks assets of non-residents (from 12.4 percent to 20.5 percent) and obligations compared to 2014 due to a growth in the share of foreign borrowings from OECD countries as compared to 2014 (the share of the Kyrgyz Republic banks obligations to non-residents increased from 17.6 percent to 20.8 percent).

Concentration risk is one of the main risks in the banking sector. Concentration risk remains significant for the banking sector. Potential default of the largest borrowers and a sudden outflow of major funding sources (including public sector bodies and public enterprises) can negatively affect certain banks.

Despite volatility of the national currency exchange rate in the reporting period, the Kyrgyz banking sector remained stable to macroeconomic shocks. The results of macroprudential analysis indicate that weakening of the national currency did not affect significantly the sustainability of the banking sector in the Kyrgyz Republic. Meanwhile, the results of the stress tests indicate that some banks have become more vulnerable to the indirect currency risk due to possible insolvency of borrowers to service loans in foreign currency. Persistence of the current trend can result in increase of the risks in the subsequent periods.

Preservation of the financial strength stocks in the banking sector of the Kyrgyz Republic was still observed. The results of econometric modeling, modeling of the financial projections, as well as “reverse” stress tests indicated a slight increase in stocks of financial strength at the end of 2015 compared to 2014 due to banks’ capitalization.

According to the results of 2015, the payments systems of the Kyrgyz Republic operated normally, the level of system risks in the financial infrastructure was assessed as moderate.

Slowdown of increase in the prices for real estate was observed in the real estate market. At the end of 2015, a slight decrease was observed in the prices for residential real estate. The results of stress tests of the commercial banks indicated that the banking sector of the Kyrgyz Republic could potentially suffer losses in case of decline in prices for real estate by more than 47 percent. Large banks can potentially suffer losses in case of decline in prices for real estate by more than 46 percent.

I. MACROECONOMIC AND FINANCIAL ENVIRONMENT

1.1. Macroeconomic Conditions and Risks

The National Bank continued developing and implementing monetary policy in the complex macroeconomic environment. Devaluation expectations of business environment and the population amid global strengthening of the US dollar and weakening of the national currencies in the countries-major trading partners put additional pressure on the exchange rate for the Kyrgyz som and, consequently, on the inflation rate.

On the background of existing difficult geopolitical and economic situation in the world, business activity in the economies of the major trade partners continues slowing down, and in some cases declining, which in turn involves retaining the risks of low rates of economic growth in Kyrgyzstan.

Gross Domestic Product

Despite persisting downward trend in the economic growth during 2015, according to the results of the reporting year, GDP growth rate¹ was formed positive and made 3.5 percent (in 2014, GDP growth was 4.0 percent), excluding companies for the development of gold mining “Kumtor”, GDP increased by 4.5 percent (in 2014 – 5.0 percent). The sector of services (1.7 p.p.), construction (1.0 p.p.) and agriculture made a positive contribution to GDP growth. The industrial sector (-0.7 p.p.) had a restraining impact on the economic growth, primarily, due to negative contribution of the manufacturing industry (-1.1 p.p.). The deflator made 2.2 percent (in 2014 – 8.4 percent).

Reduction in the volumes of industrial output in 2014 by 4.2 percent against the same value of 2014 was primarily due to decline in the manufacturing industry (-7.8 percent), particularly, decrease of output at the enterprises on development of gold mining “Kumtor” (-8.3 percent). Moreover, significant decline was observed in the output of chemical products (-36.4 percent), in manufacture of vehicles (-29.5 percent), machinery and equipment (-25.9 percent) and textile manufacture, productions of clothing and footwear, manufacture of leather and other leather products (-11.3 percent).

High growth rates in the sector of agriculture made 6.2 percent compared with decline by 0.5 percent in 2014. Growth resulted from increase in crop production by 10.1 percent due to rise in the output of cereals, vegetables and potatoes.

Growth in this construction sector made 13.9 percent, which was accompanied by increase of investments in fixed capital by 8.0 percent. Growth of construction was primarily due to increase in the volumes of construction contract and other capital works, overhaul and current repairs of buildings and structures.

In the sphere of services, increase by 3.7 percent primarily due to growth in the sector of trade – by 6.6 percent and information and communication – by 5.2 percent.

¹ Preliminary data.

Table 1.1.1. Contribution of Individual Activities in GDP,
(percent)

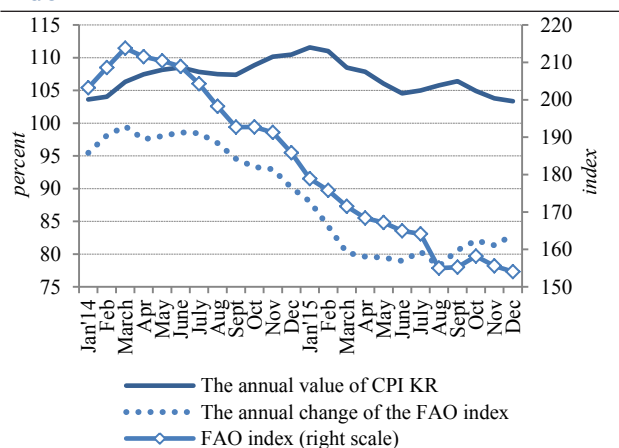
	2014			2015		
	Share, percent	Growth rate, percent	Contribution in growth, perc. points	Share, percent	Growth rate, percent	Contribution in growth, perc. points
GDP	100.0	4.0	4.0	100.0	3.5	3.5
Agriculture, forestry and fishery	14.7	-0.5	-0.1	14.0	6.2	0.9
Industry	16.5	-1.6	-0.3	15.3	-4.2	-0.7
Mining	0.7	-0.3	-0.002	0.9	63.8	0.4
Processing sectors (Processing industry)	13.7	-2.9	-0.5	12.1	-7.8	-1.1
Provision (supply) of electric energy, gas, steam and conditioned air	1.9	8.0	0.1	2.1	-2.8	-0.1
Water supply, waste treatment and processing, receipt of recyclable materials	0.3	6.5	0.02	0.2	3.5	0.01
Construction	7.4	27.1	1.7	8.3	13.9	1.0
Services	47.4	4.6	2.1	50.3	3.7	1.7
Wholesale and retail trade; repair of cars and motor-cycles	17.8	8.6	1.4	18.7	6.6	1.2
Transportation activity and storage of cargo	3.7	4.0	0.2	3.9	1.2	0.05
Information and communication	4.3	6.9	0.3	4.3	5.2	0.2
Activity of hotels and restaurants	1.8	9.7	0.2	1.9	8.9	0.2
Financial intermediation and insurance	0.7	2.6	0.02	0.7	0.7	0.005
Operations with real estate	2.5	0.04	0.001	2.5	-0.7	-0.02
Professional, scientific and technical activity	1.7	-4.6	-0.1	1.9	1.4	0.02
Administrative and auxiliary activity	0.5	4.5	0.02	0.5	-0.9	-0.004
State administration and defence; obligatory social security	5.3	-1.7	-0.1	5.8	-0.1	-0.01
Education	4.9	1.9	0.1	5.2	1.7	0.1
Healthcare and social servicing of population	2.8	1.2	0.04	3.2	1.3	0.04
Art, entertainment and rest	0.5	1.1	0.01	0.6	1.2	0.01
Other servicing activity	1.0	6.2	0.1	1.0	0.3	0.003
Net (exclusive of subsidies) taxes on products	14.0	4.0	0.6	12.1	3.5	0.5

Source: NSC KR

With positive economic growth taken as a whole, unstable situation was observed in the industrial sector, in particular, in the manufacturing industry, due to dependence of this sector on the production output at mining “Kumtor” company. This dependence will exist in 2016 and such situation can negatively affect GDP actual indices in 2016.

Inflation

In 2015, the inflation rate in Kyrgyzstan was formed amid favorable situation in the agricultural sector, decrease in prices in the world food markets and in the energy carriers markets, as well as due to impact of decline in the aggregate demand. In January 2015, NSC KR corrected parameters of the market basket in respect of accounting the electricity tariffs, which further contributed to the CPI. In August 2015 and at the beginning of the heating season in November, CPI increased due to rise in tariffs for electricity and heat energy. Growth of production output in the agricultural sector, setting export wheat prices at a lower level in Kazakhstan and favorable situation in the world food markets contributed to decline in food prices, it was the main factor of relatively low inflation rate. According to the NSC KR, in December 2015 (December 2015 to December 2014) the CPI annual growth constituted 3.4 percent (in 2014 – 10.5 percent), the annual average inflation rate made 6.5 percent (in 2014 – 7.5 percent).

Chart 1.1.1. Dynamics of CPI KR and the FAO Index


Source: NSC KR

In 2015, the average value of FAO (Food Price Index) reflecting changing trend in the prices for food products in the world markets decreased by 18.7 percent against the value of 2014. This index decreased due to significant stock of food products, weak demand in the world markets and strengthening of the US dollar.

State Budget

In 2015, complicated situation existing in the economy of the country accompanied by slowdown/decline in economic growth in the countries-major trading partners prevented from executing the plan on budget revenues collection in full. Nevertheless, the economic policy measures of the Government of the Kyrgyz Republic allowed fulfilling social obligations and ensuring macroeconomic stability by supporting the deficit at the level, which ensures financial stability.

Table 1.1.2. Main Parameters of the State Budget of the Kyrgyz Republic

	Jan-Dec 2015		Jan-Dec 2014	
	billions of KGS	% to GDP	billions of KGS	% to GDP
Total incomes (including sales of non-financial assets)				
including incomes from operational activity	128.2	30.3	119.4	29.8
sale of non-financial assets	128.1	30.2	119.4	29.8
	0.1	0.0	0.0	0.0
Total expenditures (including purchase of non-financial assets)				
including expenditures for operational activity	134.5	31.8	121.3	30.3
purchase of non-financial assets	105.3	24.8	95.6	23.9
	29.3	6.9	25.7	6.4
Deficit(-) / Profit (+)	-6.3	-1.5	-1.9	-0.5
Budget financing				
External financing	19.4	4.6	12.1	3.0
Internal financing	16.3	3.8	22.1	5.5
	3.1	0.7	-10.0	-2.5

Source: MF KR

According to the preliminary data of the Central Treasury of the Ministry of the Kyrgyz Republic, the state budget was executed with a deficit in the amount of KGS 6.3 billion or 1.5 percent to GDP, meanwhile at the end of 2015, meanwhile, at the end of 2014, the budget was executed with a deficit in the amount of KGS 1.9 billion or 0.5 percent to GDP. The overall financing of the budget deficit was fulfilled primarily by means of external sources in the amount of KGS 16.3 billion (3.8 percent to GDP), by means of internal sources in the amount of KGS 3.1 billion (0.7 percent to GDP).

In 2015, revenue part of the republican budget was executed by 99.1 percent; it resulted in overachievement of the target, primarily, on collection of non-tax revenues by 105.8 percent and official transfers – by 104.4 percent. Meanwhile, the plan for the collection of taxes by the State Tax Service was implemented by 96.5 percent, the State Customs Service plan – by 97.1 percent. Financing of the republican budget expenditures was fulfilled by 109.2 percent.

Macroeconomic risks

Mixed picture in the world economy and existing trend of slowdown and decline of economic growth in the countries-major trading partners will still have restraining impact on further economic development and carries risks for stable development of the real sector. Certain dependence on the production output at the enterprises on the development of gold mining “Kumtor” will still be observed.

Low level of remittances inflow expected due to recession in Russia will result in weak domestic demand. Offers about reduction in exports of goods will be made due to changes in the US dollar exchange rate and in connection with the factors related to the practical aspects of entering the Eurasian Economic Union.

A large share of food products in the consumer basket causes high dependence of the inflation rate in the country on the food price dynamics, therefore crop yield in the agricultural sector of the country will be the factor, which will primarily determine the formation of the general price level. Therefore, strengthening of inflationary pressure in the country is possible in the event of worsening weather conditions, which is potentially able to have a negative effect on the production output in agriculture. The prices in Kyrgyzstan are still dependent on the situation in the foreign markets and in the countries-trading partners.

The following fiscal risks, associated with Kyrgyzstan entering the Eurasian Economic Union and a reduction in the tax base of indirect taxes in case of administration thereof, are possible: decline in import volumes both within the EEU and with the third countries; reduction of the VAT tax base (the value of dutiable imports does not include transportation costs, insurance, fees); shortfall of income from the individuals and small businesses engaged in imports from the EEU member states without declaring and submitting reports to the tax authorities.

1.2. Structure of the Financial Sector

Institutional structure of the financial sector in Kyrgyzstan is represented by commercial banks and other financial institutions (non-banking financial institutions, insurance companies, investment and pension funds, stock exchanges).

Table 1.2.1. Institutional Structure of the Financial Sector
(number of the financial institutions)

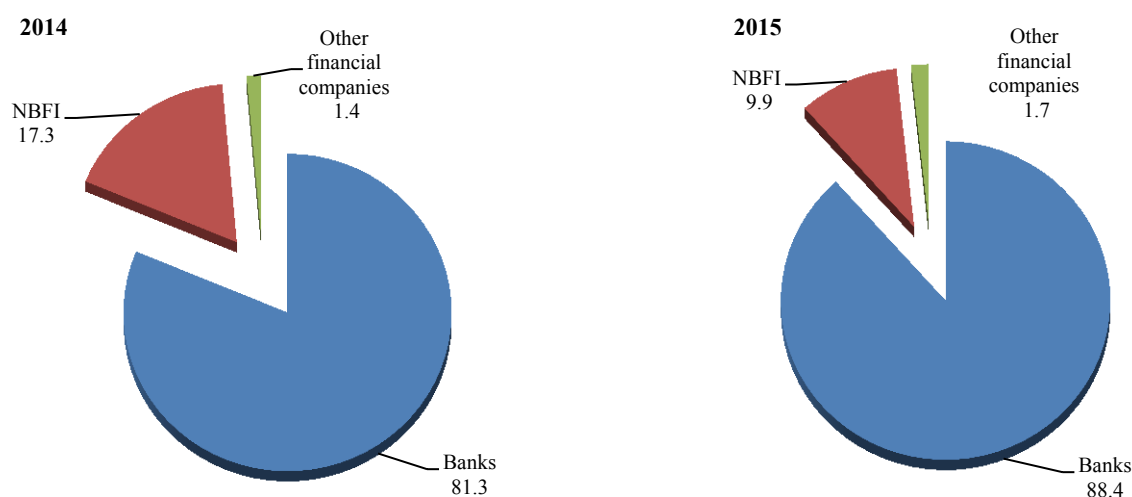
Financial institutions	2011	2012	2013	2014	2015
Commercial banks	22	23	24	23	24
Other financial companies, including:	958	837	794	689	656
Non-banking financial institutions (NBFI), including:	931	810	765	660	627
Micro-financial organizations, including:	454	320	277	215	172
microcredit companies	340	242	208	154	109
microcredit agencies	110	74	65	56	57
microfinancial companies	4	4	4	5	6
“FCCU” OJSC	1	1	1	1	1
Credit unions	197	183	153	135	125
Exchange offices	279	306	334	309	329
Insurance companies	16	16	18	17	17
Investments funds	8	8	8	9	9
Stock exchanges	1	1	1	1	1
Pension funds	2	2	2	2	2

Source: NBKR, NSK KR

As of the end of 2015, assets of the financial sector constituted KGS 197.9 billion or 46.7 percent to GDP, an increase was KGS 31.0 billion compared with the same period of 2014.

The banking sector's share in the total assets of the financial sector constituted 88.4 percent. The share of NBFI and other financial companies accounted for 9.9 percent and 1.7 percent, respectively (Chart 1.2.1).

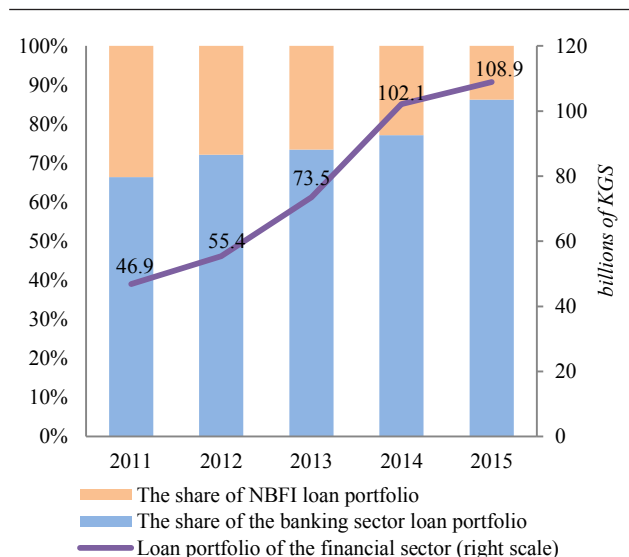
Chart 1.2.1. Institutional Structure of the Financial Sector Assets of Kyrgyzstan
percent



Source: NBKR

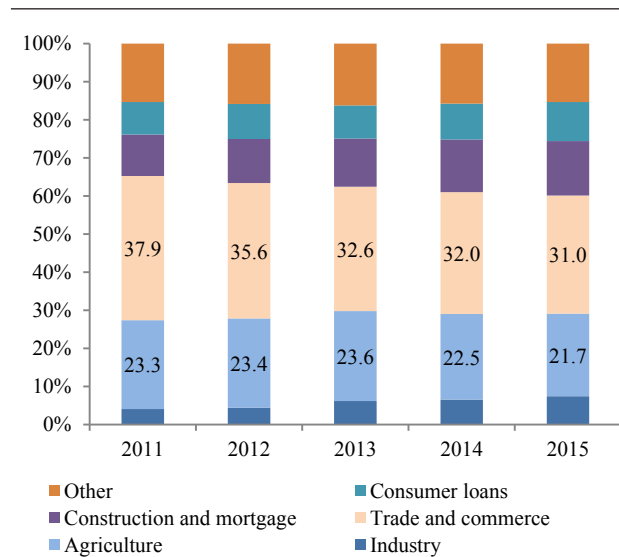
The total loan portfolio of banks and NBFIs in 2015 increased by 6.7 percent compared with 2014 and amounted to KGS 108.9 billion or 25.7 percent to GDP. The share of bank loans in the loan portfolio of the financial sector increased by 9.1 p.p. and as of the end of 2015 constituted 86.3 percent (Chart 1.2.2).

Chart 1.2.2. Structure of the Loan Portfolio



Source: NBKR

Chart 1.2.3. Sectoral Structure of the Loan Portfolio in the Financial Sector



Source: NBKR

The concentration was still observed in the trading sector (banks) and agriculture (NBFI) within the sectoral structure of the loan portfolio in the financial sector. The aggregate share of the loan portfolio in the financial sector in the above-noted sectors of the economy at the end of 2015 constituted 52.7 percent of total issued loans or KGS 57.4 billion (Chart 1.2.3).

1.3. Status of the Financial Markets

In the reviewed period, the situation in the domestic foreign exchange market was characterized by persisting increased pressure on the exchange rate. The national currency weakened in nominal terms on the background of economic slowdown in the countries-major trading partners.

The NBKR still carried out foreign exchange market interventions on sale and purchase of foreign currency in order to smooth out sharp fluctuation of the exchange rate.

A decline in the volume of repo transactions accompanied by increasing weighted average interest rate on these transactions was observed in the interbank market of credit resources. The rates were characterized by the upward trend in the market of the state treasury bills and bonds.

1.3.1. Status of the Currency and Money Market

Currency Market

In 2015, the exchange rate volatility was still observed in the currency market. Dynamics of the exchange rate in the domestic market of the Kyrgyz Republic was conditioned by the impact of fundamental factors – strong position of the US dollar in the world due to recovery of the American economy and policy of moving towards tighter monetary policy conducted by the US Federal Reserve System, on the one hand; persistence of the Russian ruble volatility and rising of the Kazakh tenge volatility on the other hand. The official exchange rate of the US dollar increased within the year by 28.9 percent, from KGS 58.8865 to KGS 75.8993/USD 1.

In the reporting period, the effect of external shocks and speculative pressure was regulated by foreign exchange market interventions and other measures of the NBKR, which were focused on smoothing sharp fluctuations of the national currency exchange rate. In the reporting period, the National Bank carried out foreign exchange market interventions, net sales thereupon constituted USD 286.8 million.

Money Market

In the reporting period, the volume of repo transactions decreased by 35.1 percent compared with 2014. However, the volumes of standard interbank credit transactions in the national currency increased up to KGS 1.1 billion (by 88.0 percent).

In the reporting period, the volume of overnight loans issued by the National Bank of the Kyrgyz Republic amounted to KGS 26.7 billion, a decrease by 53.0 percent compared with the same indicator of 2014. Meanwhile, gross volume of funds placed on overnight deposits by the commercial banks in the National Bank of the Kyrgyz Republic amounted to KGS 325.6 billion (growth by 2.4 times).

In general, the situation in the market was stable, ensuring redistribution of liquidity among commercial banks at the expense of interbank transactions.

1.3.2. Status of the Securities Market

In the state treasury bills market, which consisted of 3-, 6- and 12-month securities, the total volume supply increased up to KGS 6.6 billion (+23.5 percent), the volume of actual placement (taking into account additional placements) - up to KGS 3.8 billion (+10.5 percent). The weighted average revenue of these securities increased by 3.31 percentage points, up to 12.76 percent.

2-, 3- and 5-year state treasury bonds were issued in the reporting period. The total volume of declared ST-Bonds (within the framework of carried out auctions) issues constituted KGS 7.7 billion, an increase by 1.9 times compared to the indicator of the same period of 2014. However, physically ST-

Bonds were placed to the amount of KGS 5.2 billion, an increase by 9.4 percent compared to the same indicator of the previous year. Thus, the total average monthly revenue increased by 15.98 percent (in 2014 – 14.41 percent).

In the reporting period, 7-and 14-day notes of the National Bank of the Kyrgyz Republic were offered for placement in the amount of KGS 130.5 billion in line with the conducted monetary policy, a decrease by 5.1 percent compared to the indicator of the same period. Gross volumes of sales decreased by 13.7 percent, down to KGS 67.9 billion. The results of the auctions showed that the weighted average revenue was 9.92 percent (+3.57 p.p.) at the end of 2015.

1.4. Real Estate Market

The real estate market of the Kyrgyz Republic experienced slight slowdown of the price index², due to decline in prices for flats (in the reporting period, prices decreased by 3.1 p.p.), and detached houses (a decrease by 3.1 p.p.) compared with 2014.

Decrease of the price level for the real estate and increase in the level of the average wage favorably influenced the housing affordability index, thereby indicating improvement of the situation with real property affordability.

Risks to the financial sector from the real estate market remain moderate due to insignificant share of mortgage loans in the total loan portfolio and tightening of the banks' mortgage policy.

Chart 1.4.1. Price Index Growth Rate in the Real Estate Market



At the end of 2015, decrease in property price index compared with 2014 was observed in Kyrgyzstan (Chart 1.4.1).

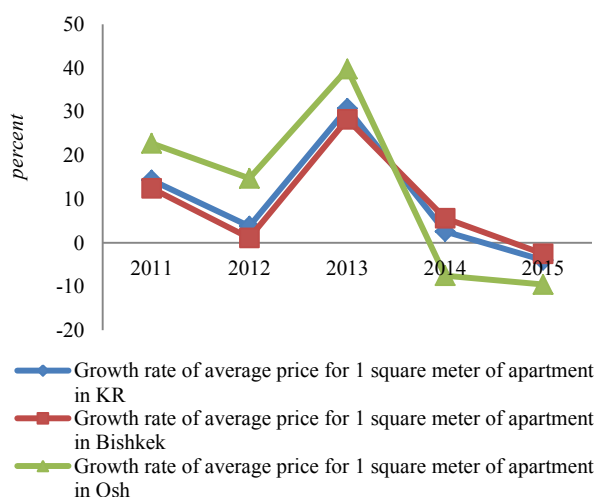
Source: SRS KR

As of December 31, 2015, the average price for 1 square meter of housing (apartments) in Bishkek and Osh decreased by 2.5 percent and 9.5 percent, respectively, compared with 2014 (Chart 1.4.2). The average price for 1 square meter of individual houses in Bishkek decreased by 7.6 percent and in Osh – grew by 20.0 percent, accordingly (Chart 1.4.3).

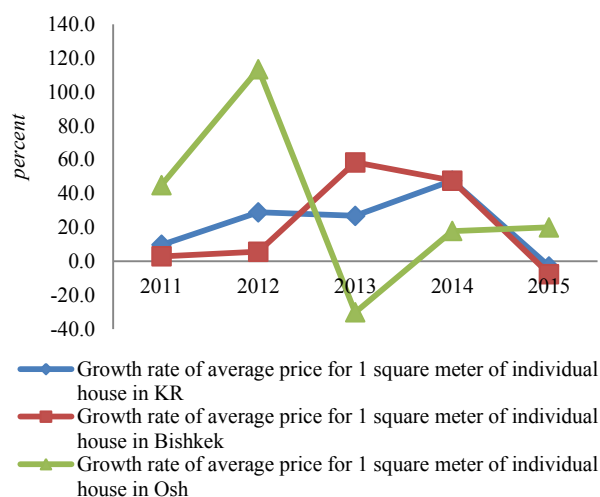
²The Laspeyres index method was used in developing the price index for the real estate. In general, the Laspeyres index is computed as follows:

$$L = \left(\frac{\sum_{i=1}^K Q_{oi} P_{ti}}{\sum_{i=1}^K Q_{oi} P_{oi}} \right) * 100,$$

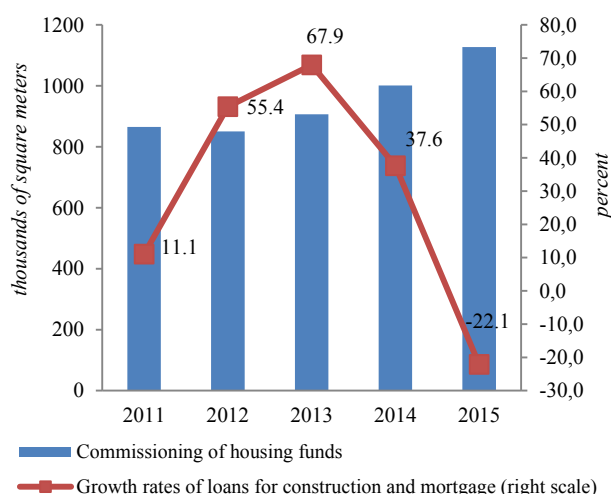
where K = number of real estate types;
 Q_{oi} = number of the real estate of type i in the base period;
 P_{oi} = price for the real estate of type i in the base period;
 P_{ti} = price of the real estate of type i in the current period.

Chart 1.4.2. Dynamics of Change in Prices for Apartments


Source: SRS GKR, NSC KR, NBKR calculations

Chart 1.4.3. Dynamics of Change in Prices for Individual Houses


Source: SRS GKR, NSC KR, NBKR calculations

Chart 1.4.4. Dynamics of Housing Commissioning and Provided Loans for Construction and Mortgage


Source: SRS GKR, NSC KR, NBKR calculations

Note: data for the reporting period

At the end of 2014, the increase in the aggregate level of commissioning of housing funds constituted 12.6 percent compared with 2014 (Chart 1.4.4). The main share of commissioned housing still accounted for Bishkek city and Chui oblast, Osh city and Osh oblast (Table 1.4.1).

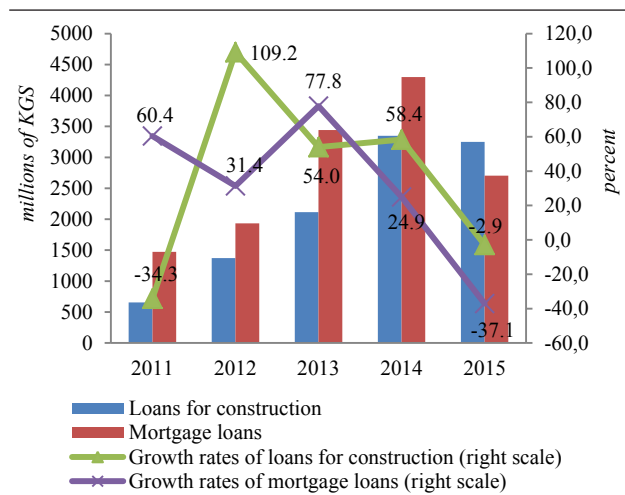
Table 1.4.1. Geographic Structure of Commissioned Housing

	2014		20145	
	Total commissioned area, thous. sq. m.	Share of total area, %	Total commissioned area, thous. sq. m.	Share of total area, %
Bishkek city and Chui oblast	334.4	33.4	602.1	53.4
Osh city and Osh oblast	205.6	20.5	247.3	21.9
Other oblasts of KR	461.2	46.1	277.7	24.6
Total	1001.2	100.0	1127.1	100.0

Source: NSC KR

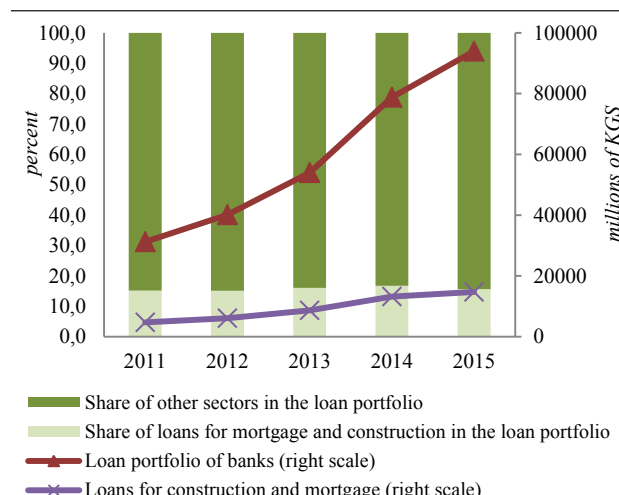
In the reporting period, the volume of mortgage loans and loans to finance the construction decreased compared with 2016. The total mortgage loans and loans issued to finance the construction constituted KGS 5.9 billion (Chart 1.4.5).

Chart 1.4.5. Loans Provided for Construction and Mortgage



Source: NBKR
Note: data for the reporting period

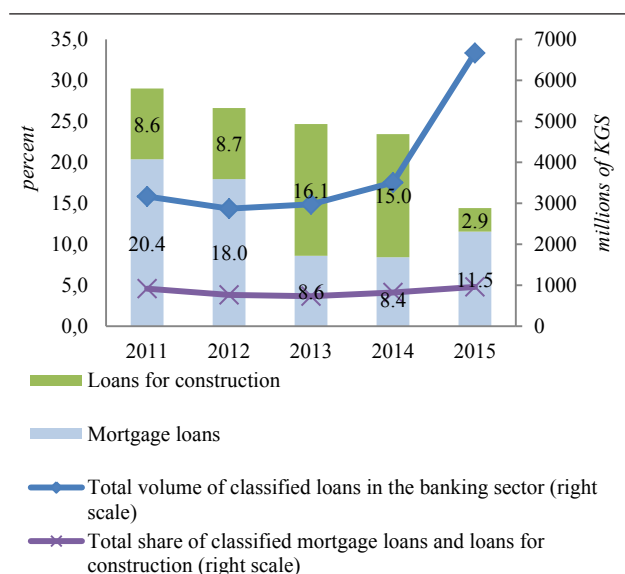
Chart 1.4.6. Total Share of Loans for Mortgage and Construction in the Loan Portfolio of Commercial Banks



Source: NBKR
Note: data for the reporting period

As of December 31, 2015, total loans for mortgage and construction grew by 11.3 percent compared with 2014 and amounted to KGS 14.7 billion. Meanwhile, the total share of loans for construction and mortgage in the loan portfolio of commercial banks decreased by 1.1 p. p. compared with 2014 and constituted 15.6 percent (Chart 1.4.6).

Chart 1.4.7. Dynamics of Non-performing Loans for Mortgage and Financing of Construction



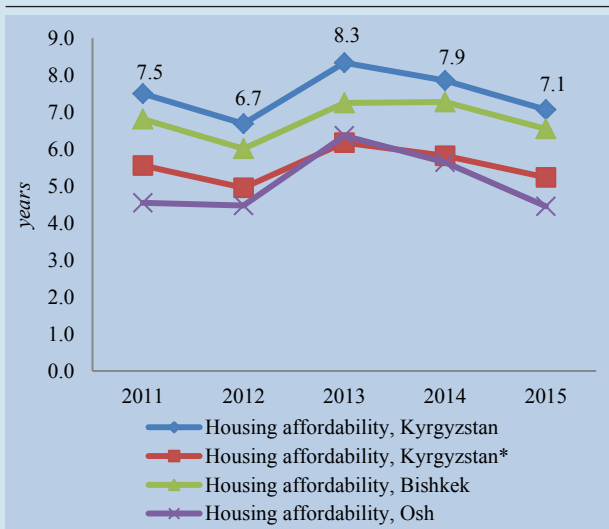
Source: NBKR

As of December 31, 2015, total volume of classified loans for mortgage and construction amounted to KGS 961.0 million (Chart 1.4.7). In the reporting period, gross share of classified loans of aforementioned sectors decreased by 9.0 p.p. and constituted 14.4 percent of the total volume of classified loans in the banking sector.

Box 1. Housing Affordability Index

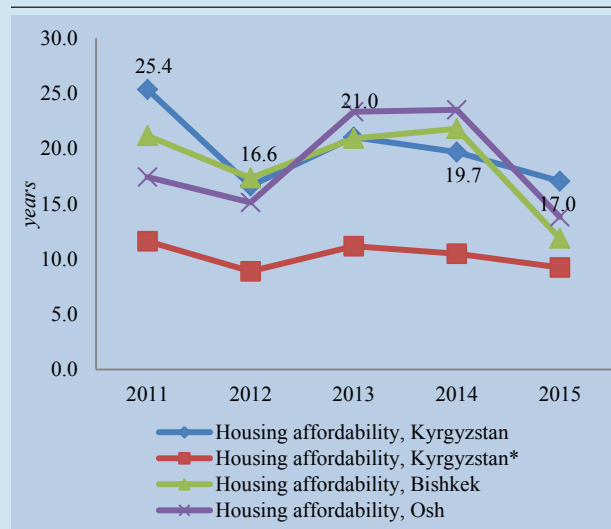
As of December 31, 2015, the situation with housing affordability in the Kyrgyz Republic improved slightly (index value decreased by 0.8 years) compared with 2014. This is due to decrease in prices for apartments in the real estate market of the Kyrgyz Republic (Chart 1.4.8).

Chart 1.4.8. Housing (Apartments) Affordability Index without Minimal Consumer Budget



Source: NSC KR, SRS KR, NBKR calculations
* including non-registered income

Chart 1.4.9. Housing (Apartments) Affordability Index Including Minimal Consumer Budget



Source: NSC KR, SRS KR, NBKR calculations
* including non-registered income

According to the results of 2015, to purchase an apartment of 54 square meters in Kyrgyzstan one should save all wages for 7.1 years (including non-registered income³ – 5.2 years).

By the end of the reporting period, a family in Kyrgyzstan with the minimum consumer budget of KGS 15 549.0 (58.6 percent of total family income) will need 17.0 years (including non-registered income – 9.2 years, Chart 1.4.9) in order to purchase housing.

³ According to the conclusions of the Working Group on the research of the shadow economy of the Kyrgyz Republic, the level of shadow income of the population constituted around 35 percent of the wages fund. This research was held by the Public Association “Investment Roundtable”, Bishkek city, December 2012.

Box 2. Stress Testing of Impact from Change in Prices in the Real Estate Market on the Banking Sector⁴

As of December 31, 2015, the share of loans, secured by pledged real estate, constituted 62.9 percent of the loan portfolio of banks (exclusive of “FINCA Bank” CJSC)⁵.

Credit risks of the banking sector are conditioned by decrease in the value of pledged real estate below the loan repayment balance and further refusal of a borrower from loan repayment.

Stress testing⁶ is focused on quantitative assessment of possible losses from outstanding loans and identification of the most vulnerable banks (groups of banks).

Scheme 1. Loans Issued by the Banks and Secured by Pledged Real Estate as of December 31, 2015

<i>Loan repayment balance⁷</i>		Less than 20 %	20 - 40 %	40 - 60 %	60 - 80 %	More than 80 %	Total
<i>Total amount of loan⁸</i>	→						
Loan repayment balance, millions of KGS		1,899.1	6,388.5	14,952.7	23,400.9	41,453.3	88,094.4
Total volume of pledged real estate, millions of KGS		14,038.1	25,750.8	62,144.8	44,592.0	77,685.1	224,210.7
including – residential:		10,945.3	20,682.0	52,700.9	33,197.0	51,304.5	168,829.7
– non-residential:		3,092.8	5,068.7	9,443.9	11,395.0	26,380.6	55,380.9

Scheme 2. Results of Stress Testing of Impact from Change in Prices in the Real Estate Market on the Level of Credit Risk of the Banking Sector

	<i>Banking sector</i>	<i>Large banks</i>
1) “Negative” scenario <i>Price for real estate</i> ↓ by 50% for a year	<i>Decrease in volume of pledged real estate is below the amount of loan repayment balance by KGS <u>3.7 billion</u></i>	<i>Decrease in volume of pledged real estate is below the amount of loan repayment balance by KGS <u>2.6 billion</u></i>
2) “Historical” scenario* <i>Price for real estate</i> ↓ by 23% for a year	-----	-----
3) “Alternative” scenario <i>Price for real estate for 2 years</i> ↓ by 40% (by 20% for a year)	-----	-----

* At the end of 2008, prices for real estate in Kyrgyzstan decreased by 23%.

In addition to stress test, marginal level of decrease in prices for real estate, when banks suffer losses, was calculated. The banking sector suffers losses if prices for the real estate decrease by 47 percent, large banks – by 46 percent.

⁴ Stress testing was conducted on the basis of data provided by the commercial banks by means of the survey as of December 31, 2015.

⁵ Inclusive of “FINCA Bank” CJSC – 42.9 %.

⁶ Based on the data of the commercial banks surveys.

⁷ The principal amount of a loan and interest.

⁸ The amount of a loan includes the amount of issued loan plus accrued interest for the whole loan term.

Scheme 3. Comparative Analysis of the Results of Conducted Stress Tests

	<i>Stress test as of June 30, 2015</i>		<i>Stress test as of December 31, 2015</i>			
Banking sector	Scenario 1: - KGS 19.2 billion; Scenario 2: ----- Scenario 3: - KGS 2.4 billion		Scenario 1: -KGS 3.7 billion; Scenario 2: ----- Scenario 3: -----			
Large banks	<i>Scenario 1: - KGS 9.3 billion</i> <i>Scenario 2 and 3: -----</i> <i>Banks at risk: 2 banks</i>		<i>Scenario 1: -KGS 2.6 billion</i> <i>Scenario 2 and 3: -----</i> <i>Banks at risk: 1 bank</i>			
Separate banks	<i>Most vulnerable banks: 4 banks</i> <i>Banks at risk: 2 banks</i>		<i>Most vulnerable banks: 3 banks</i> <i>Banks at risk: 2 banks</i>			
<i>Threshold level of decline in prices for real estate</i>	<i>for the banking sector:</i>	↓	27 %	<i>for the banking sector:</i>	↓	47 %

Banks policies were not taken into account in calculations of the stress test; according to these policies banks can underestimate the value of pledged real estate to the amount, which constitute 20% of its market value. Taking into account aforementioned facts, the threshold level of decline in prices for real estate can increase by 20 percent.

II. BANKING SECTOR

Generally, the development of the banking sector was characterized by growth of lending volume on the background of some diversification of the loan portfolio. Growth of major indicators of the banking sector: assets, loan portfolio, resource base was observed.

The growth of financial intermediation on the part of the banks remained on the background of the main indicators of the banking sector outrunning the rates of economic growth.

2.1. Major Trends

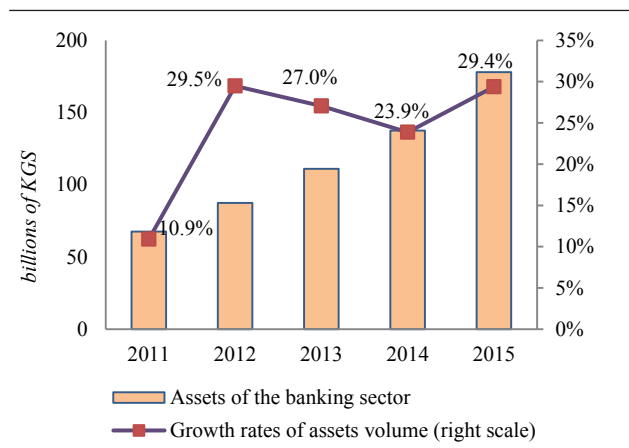
As of December 12, 2015⁹ 24 commercial banks (including the Bishkek Branch of the National Bank of Pakistan) and 314 of their branches worked in the territory of the Kyrgyz Republic, among which there were 16 banks with foreign participation in the capital, including 11 banks with foreign participation in the amount of more than 50 percent. All banking institutions of the country are universal by the type of business.

In 2015, the licenses for carrying out banking operations were withdrawn from “Manas Bank” CJSC¹⁰ and “Issyk-Kul” IB OJSC¹¹, the licenses for carrying out banking operations were issued to “FINCA Bank” CJSC¹² and “Chang An Bank” OJSC¹³.

Assets

Generally, the growth in the volume of all types of the banking sector assets was observed at the end of the reporting period. Assets of the banking sector at the end of 2015 amounted to KGS 178.0 billion, having increased by 29.4 percent compared with 2014 (Chart 2.1.1).

Chart 2.1.1. Dynamics of Assets in the Banking Sector



The growth of assets was primarily provided by increase of:

- the correspondent accounts and cash by 57.8 percent or KGS 21.0 billion;
- the loan portfolio by 19.3 percent or KGS 15.2 billion.

The share of loan portfolio in the structure of assets constituted 52.8 percent, having decreased by 4.5 p.p. compared with 2014.

At the end of 2015, in the structure of the banking sector assets by sectors of economy the share of non-residents increased and constituted 21.6 percent, the increase made 9.1 p.p. or KGS 21.3 billion compared with 2014 (Chart 2.1.3).

The total share of liquid assets (cash, correspondent accounts and securities) at the end of 2015 increased by 5.5 p.p. compared with 2014 and amounted to 36.7 percent of the total volume of assets or KGS 65.3 billion.

⁹ The data are submitted according to periodic regulatory reporting of the commercial banks.

¹⁰ License of “Manas Bank” CJSC was revoked on June 23, 2015.

¹¹ License of “Issyk-Kul” Investbank OJSC was revoked on June 3, 2015.

¹² License was issued to “FINCA Bank” CJSC on March 3, 2015.

¹³ License was issued to “Chang An Bank” OJSC on October 7, 2015.

Chart 2.1.2. Change of Assets Structure in the Banking Sector
billions of KGS

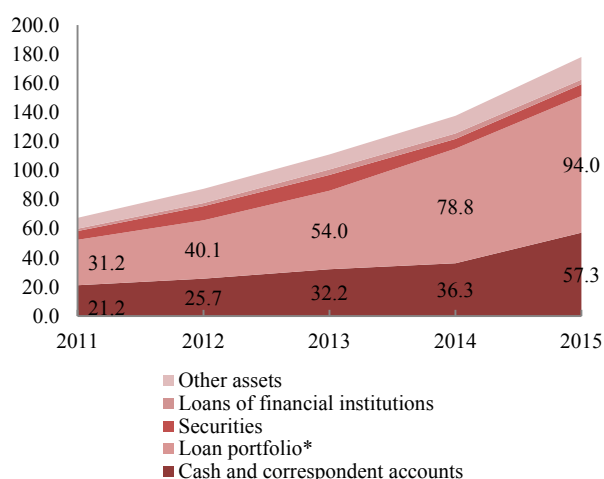
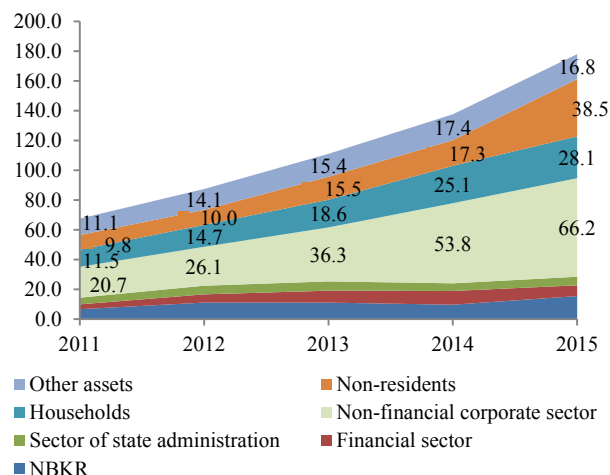


Chart 2.1.3. Institutional Structure of Assets in the Banking Sector
billions of KGS



* Loans and financial leasing to the clients exclusive of special loan loss provisions

Loan Portfolio

The growth of banks' loan portfolio in 2015 was primarily due to increase in the volume of lending to agricultural, trade and consumer sectors.

At the end of 2015, the level of dollarization of the loan portfolio in the banking sector decreased by 2.5 p.p. compared with 2014 and amounted to 55.1 percent (Chart 2.1.4).

Chart 2.1.4. Dynamics of Loan Portfolio in the Banking Sector
billions of KGS

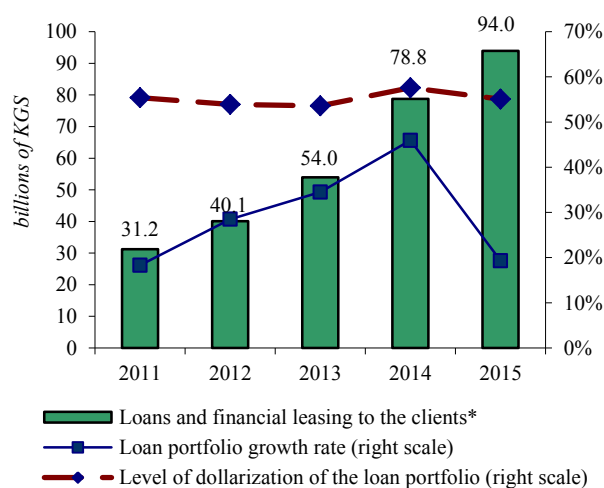
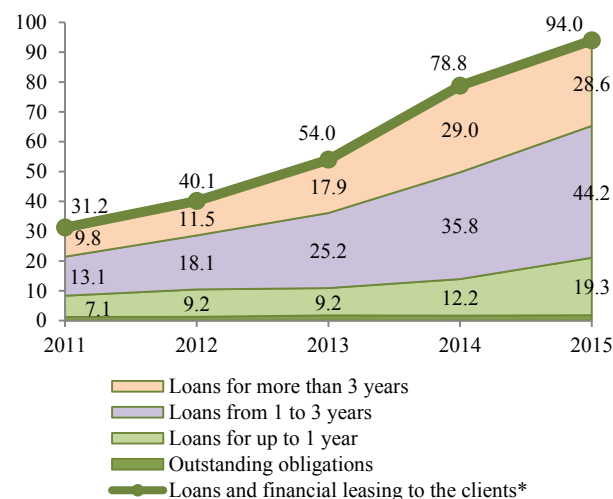


Chart 2.1.5. Structure of Loan Portfolio by Maturity
billions of KGS

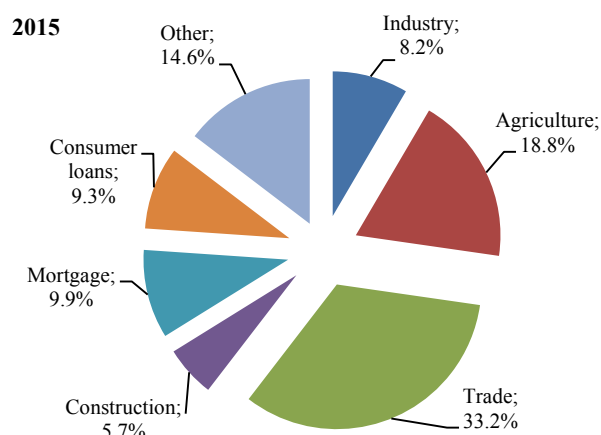
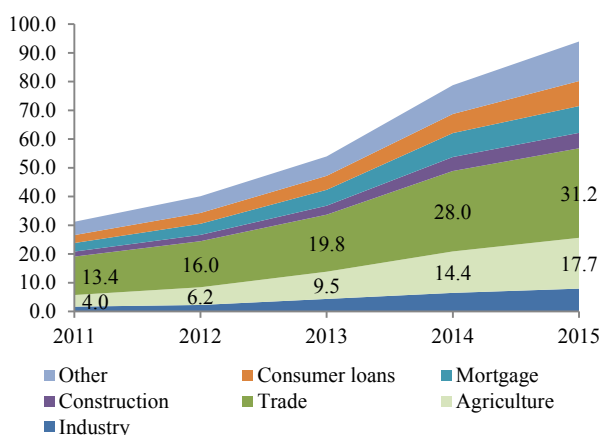


* Exclusive of loans provided by FCI and special loan loss provisions

The major share was accounted for medium-term loans from 1 to 3 years in the structure of loan portfolio by maturity, which constituted 47.1 percent or KGS 44.2 billion at end of 2015 (Chart 2.1.5).

Chart 2.1.6. Sectoral Structure of the Loan Portfolio

billions of KGS



Decrease in the share of loans to the trade as well as outstripping growth rates of lending to agricultural and consumer sectors over growth rates of lending to trade was observed in the sectoral structure of the loan portfolio (Chart 2.1.6). Thus, the share of lending to trade in the loan portfolio at the end of 2015 decreased from 35.5 percent to 33.2 percent compared with 2014. The share of agricultural sector loans increased from 18.3 percent to 18.8 percent. The volume of lending to agricultural sector at the end of 2015 increased by 22.7 percent compared with 2014 and amounted to KGS 17.7 billion. The volume of consumer loans within the same period increased by 31.1 percent and amounted to KGS 8.7 billion.

Liabilities

At the end of 2015, liabilities of the banking sector amounted to KGS 151.9 billion, having increased by 30.1 percent compared with 2014.

Decrease in the share of financial sector's and non-financial enterprises' funds was observed in the institutional structure of liabilities. Meanwhile, the share of households' funds increased. There was significant growth in the share of non-residents' funds (Chart 2.1.7). However, households' funds still remained the major source of attracted banks' resources.

Chart 2.1.7. Institutional Structure of Liabilities

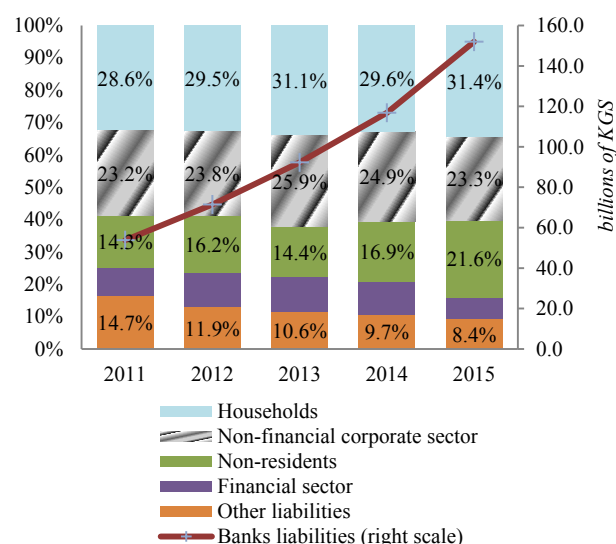
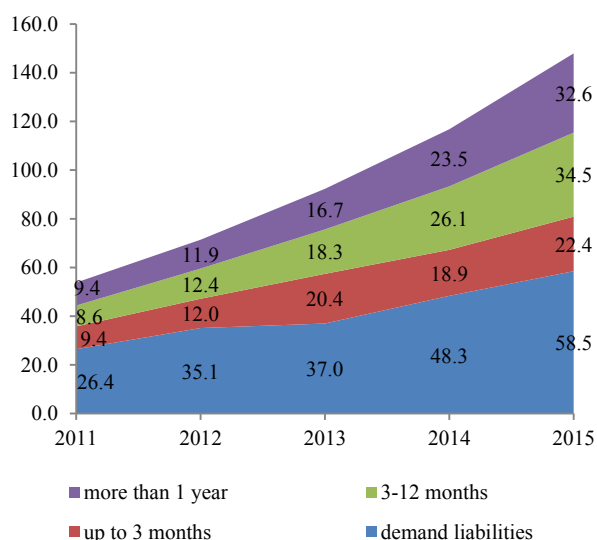


Chart 2.1.8. Structure of the Banking Sector Liabilities by Maturity

billions of KGS

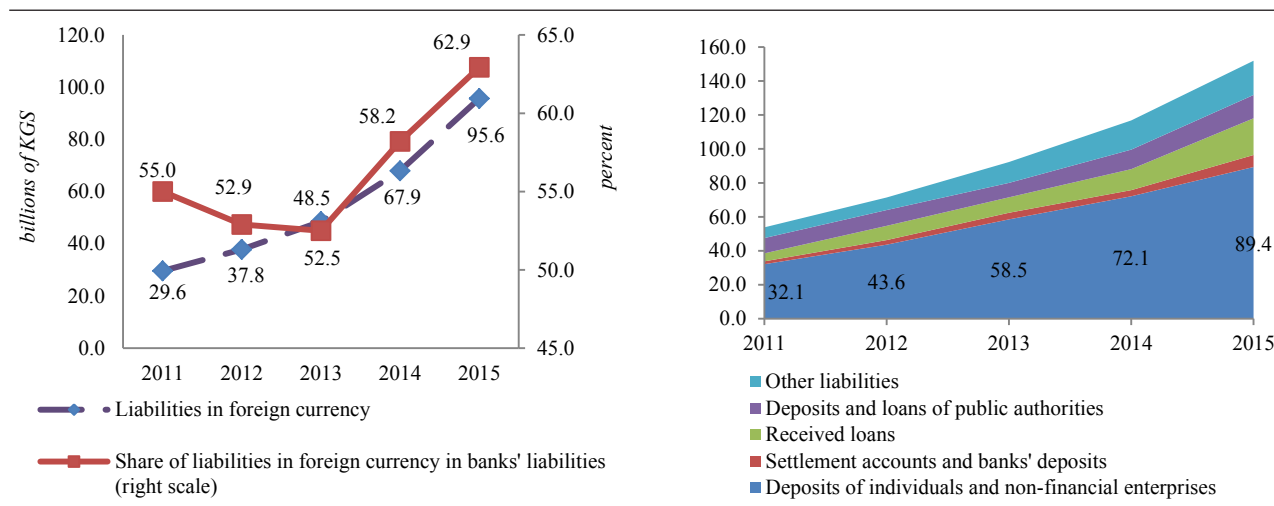


As of the end of 2015, demand liabilities amounted to KGS 58.5 billion (the share of demand liabilities decreased from 41.4 percent as of the end of 2014 to 39.5 percent). Liabilities with maturity of more than 1 year increased by 38.8 percent for the reporting year and amounted to KGS 32.6 billion or 22.0 percent of the total volume of banks' liabilities (Chart 2.1.8).

The share of liabilities in foreign currency in the total volume of attracted funds increased by 4.7 p.p. and amounted to 62.9 percent or KGS 95.6 billion (Chart 2.1.9).

Chart 2.1.9. Banks' Liabilities in Foreign Currency

Chart 2.1.10. Structure of Banks' Liabilities by the Reserve Sources
billions of KGS



Deposits of individuals and non-financial enterprises increased by 23.9 percent at the end of 2015 and amounted to KGS 89.4 billion (Chart 2.1.10). The share of deposits of individuals and non-financial enterprises in banks' liabilities decreased by 2.9 p.p. and constituted 58.8 percent.

Financial Results¹⁴

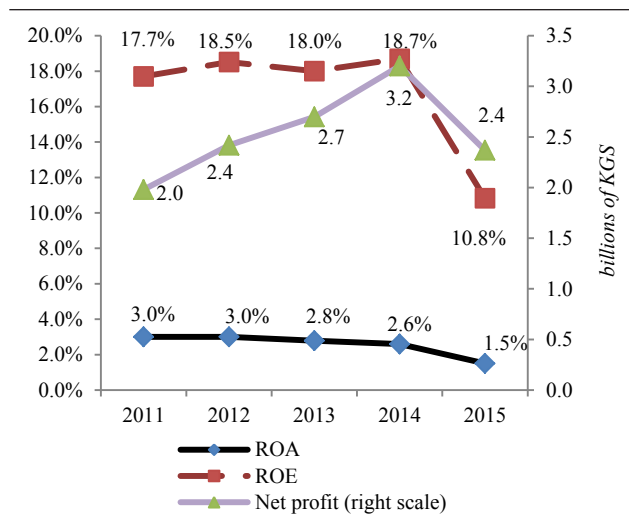
Generally, the change of profitability indicators¹⁵ at the end of 2015 was observed compared with 2014 (Chart 2.1.11):

- ROA decreased by 1.1 p.p. and constituted 1.5 percent;
- ROE decreased by 7.9 p.p. and constituted 10.8 percent.

¹⁴ For the purposes of this publication the main indicator of profitability of the banking activity is rate of return on assets (ROA), defined as the ratio of profits to average assets, as well as the rate of return on equity (ROE), defined as the ratio of profits to the average size of the Tier 1 regulatory capital.

¹⁵ ROA, ROE indicators are presented in annual terms.

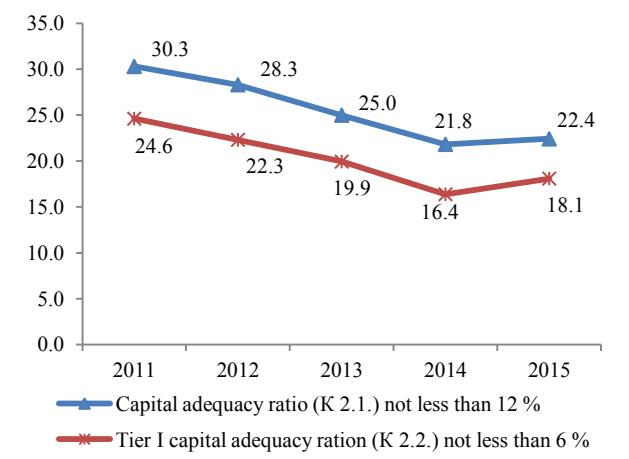
Chart 2.1.11. Indices of the Banking Sector Profitability for the Period



Meanwhile, net profit of the banking sector decreased by 26.0 percent, compared with 2014, and amounted to KGS 3.4 billion.

Capital Adequacy

Chart 2.1.12. Dynamics of Capital Adequacy Ratios
percent



With statutory minimum capital adequacy at 12.0 percent, at the end of 2015, this figure amounted to 22.4 percent (Chart 2.1.12), having increased by 0.6 p.p compared with 2014.

Increase of capital adequacy was due to growth rates of net total capital (+26.3%) outstripping growth rates of risk weighted assets and off-balance sheet liabilities (+22.8 %).

At the same time, the actual level of capital adequacy in the banking sector generally formed according to the results of 2015 can further increase the volume of risky and earning assets by 1.9 times, without exceeding established level of capital adequacy.

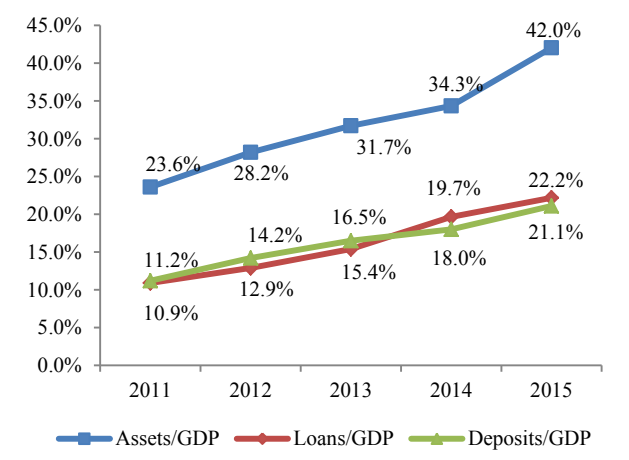
The abovementioned information indicates relative stability of the banking sector to negative

shocks and the presence of certain potential to increase the level of financial intermediation and efficiency of the banking sector activity in the future.

CONTENT

Financial Intermediation of the Banking Sector

Chart 2.1.13. Indicators of Financial Intermediation



The role of the banking sector as a financial intermediary, accumulating financial resources for their further redistribution among creditworthy borrowers and sectors of the economy, directly depends on the level of development and efficiency of banks.

At the end of 2015, growth of financial intermediation was still observed (Chart 2.1.13). However, growth rates of major indicators in the banking sector outstrip economic growth. Dynamic growth in the amount of borrowers and depositors was observed in the banking sector of the Kyrgyz Republic.

At the end of 2015, increase of financial intermediation indicators in the banking sector of

the Kyrgyz Republic compared with 2014 was the following:

- Assets to GDP – from 34.3 percent to 42.0 percent;
- Loans to GDP – from 19.7 percent to 22.2 percent;
- Deposits to GDP – from 17.9 percent to 22.0 percent.

2.2. Banking Sector Risks

2.2.1. Credit Risk

A credit risk is one of the main risks that accompany banking.

At the end of 2015, the volume of loan portfolio in the banking sector increased compared with 2014 (Chart 2.2.1). The share of classified loans in the loan portfolio of banks increased from 4.5 percent to 7.1 percent compared with 2014 (Chart 2.2.2).

Chart 2.2.1. Structure of Risk Weighted Assets,
millions of KGS

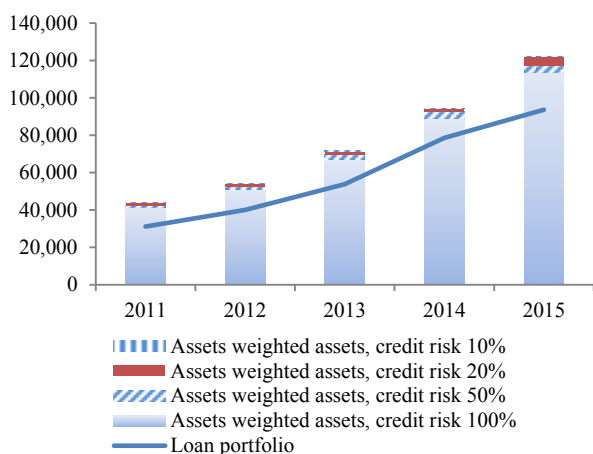


Chart 2.2.2. Loan Portfolio Quality

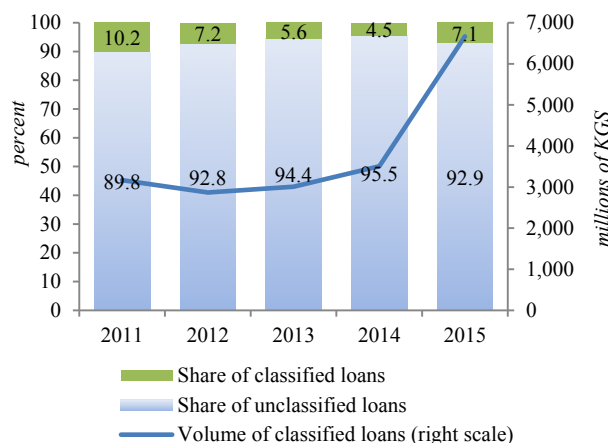
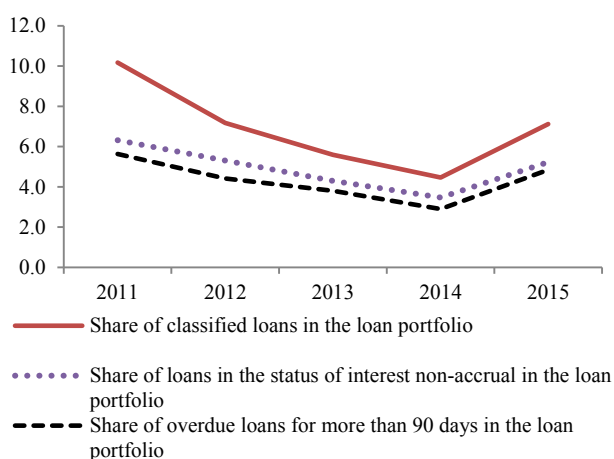


Chart 2.2.3. Indicators of the Loan Portfolio Quality
percent



In order to assess the quality of the loan portfolio, the commercial banks use a loan classification system¹⁶, which contributes to determining the possible level of potential losses from bad loans and compensating them in time through creation of appropriate reserves (Chart 2.2.3).

¹⁶ In order to assess the quality of the loan portfolio, all loans are usually divided into six categories, depending on the client's current capacity to fulfill the obligations to the bank (listed in declining order of classification): normal, satisfactory, under supervision, substandard, doubtful and losses. Loans of last three categories, as having the most negative characteristics in terms of return of loans, are usually attributed to the "non-performing" or "classified". For each of six categories, the bank has to create a reserve corresponding to this category defined as a percentage of loans issued.

At the end of 2015, the indicator of the risk of default on assets (the ratio of special loan loss provisions and loan portfolio) constituted 2.5 percent.

Aggregate reserves created by the commercial banks constituted 6.3 percent of the total loan portfolio (as of December 31, 2014 this index constituted 4.8 percent). Meanwhile, the share of special loan loss provision as of December 31, 2015 constituted 39.7 percent of the total reserves (Chart 2.2.4).

Chart 2.2.4. Total and Special Reserves
millions of KGS

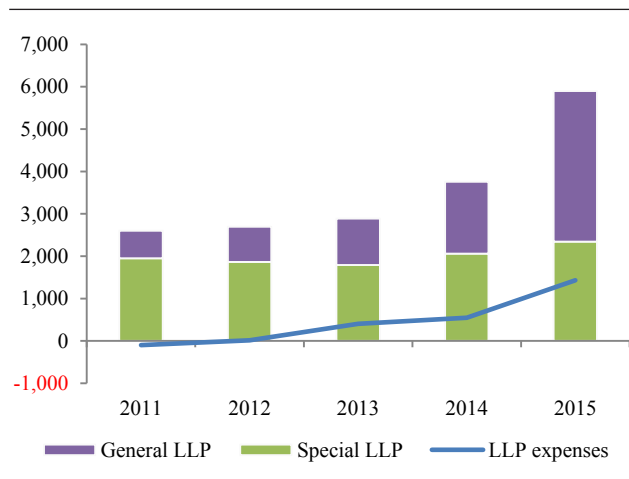
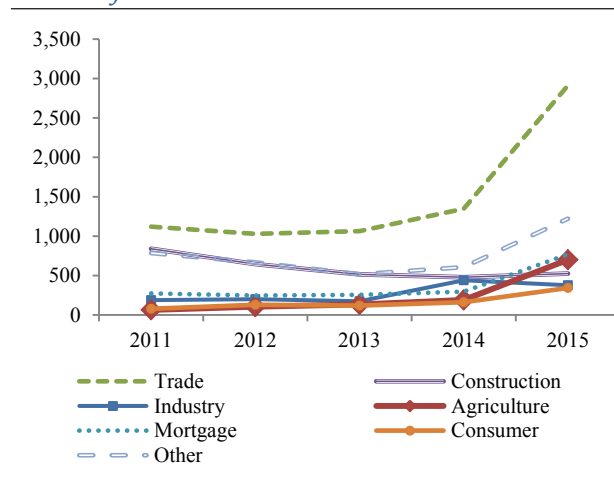


Chart 2.2.5. Volume of Classified Loans by Sectors of Economy,
millions of KGS



As of the end of December 31, 2015, the highest concentration of credit risks was observed in the trade sector of economy (Chart 2.2.5).

Box 3. Results of the Survey of the Clients of Commercial Banks

A significant portion of the loans (72.7%) given to borrowers is still used in the manufacturing sector of the economy, thereby reflecting contribution of the banking sector in creation of the country's GDP; more than 1/5 of issued loans (22.7%) are forwarded for financing of imports.

Chart 1. Sectoral Structure of Loans as of December 31, 2015

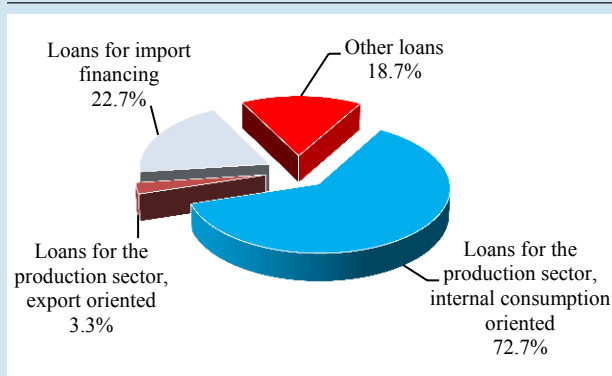
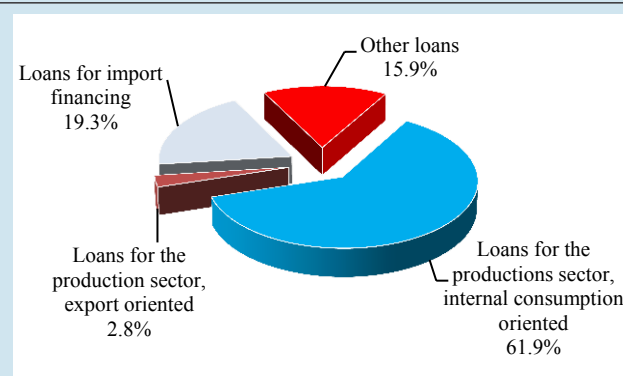


Chart 2. Sectoral Structure of Loans as of December 31, 2014

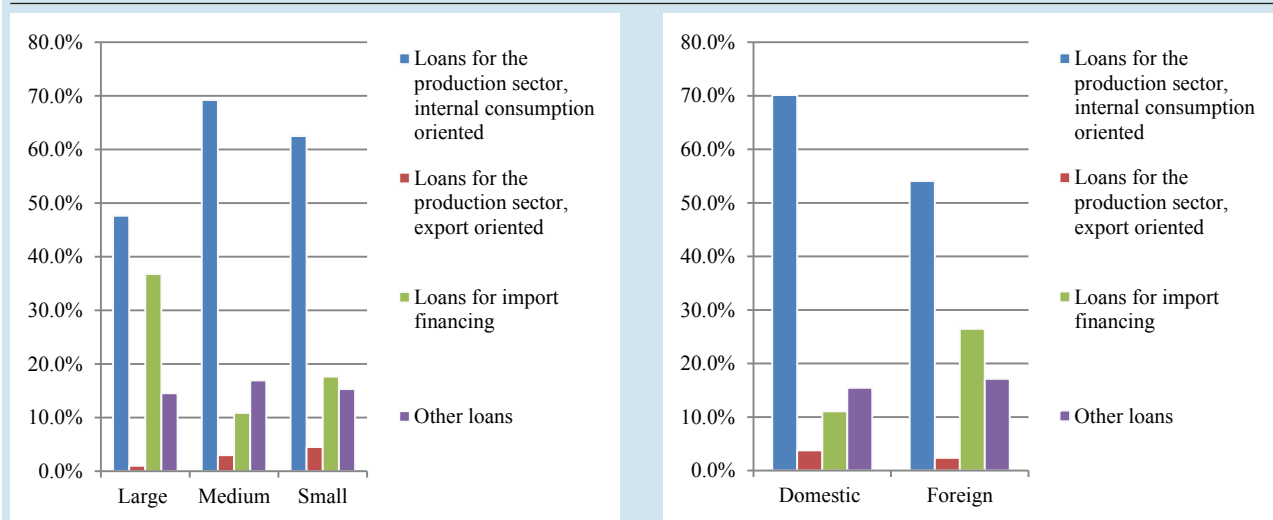


The major share of loans at the end of 2015 was still concentrated in the manufacturing sector of economy¹⁷ (61.6 percent of total borrowers' loans). The share of loans financing the imports amounted to 22.7 percent (Chart 1).

Domestic banks forward 70.2 percent of the loan portfolio to the manufacturing sector (GDP) and 11.1 percent – to finance imports. Generally, foreign banks also provided loans to the manufacturing sector of economy (54.1 percent). In the reviewed period, the share of loans forwarded to finance imports constituted 26.4 percent of the loan portfolio (Chart 3).

Chart 3. Sectoral Structure of Loans by the Groups of Banks and Forms of Ownership as of December 31, 2015

Chart 3. Sectoral Structure of Loans by the Groups of Banks and Forms of Ownership as of December 31, 2015

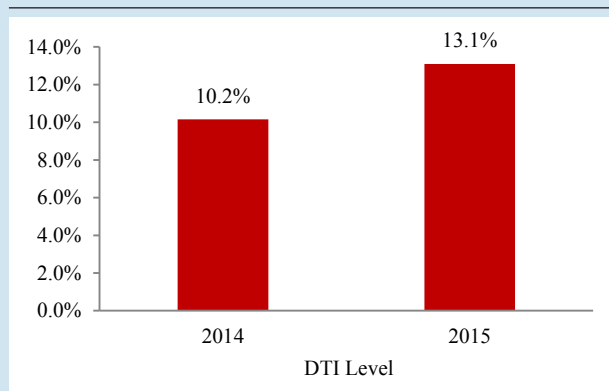


Source: data were received as a result of surveys conducted in the commercial banks

¹⁷ The production sector means the activity of the bank clients connected with the production of goods and services (construction, communication and automobile repair shop services, transport services, real estate leasing, hotels, restaurants, etc.).

Box 4. Results of the Survey of the Commercial Banks' Largest Clients*Borrowers solvency*

At the end of 2015, the level of debt load of 15 banks' largest clients calculated through DTI index constituted 13.1 percent.

Chart 1. DTI Level on 15 Banks' Largest Borrowers

By the groups of banks, the largest debt load was observed in the major borrowers of the **medium banks** (17.0 percent of the borrowers' basic income) (Table 1). At the same time, the lowest level of debt load was observed in the major borrowers of the **large banks**.

Table 1. Debt Load of the Banks Clients* in 2015

	Banking sector	Large banks	Medium banks	Small banks
Loan balance, <i>in billions of KGS</i>	22,197.5	7,240.8	9,889.1	5,067.5
Share of loans in 15 largest borrowers in the total volume of credit portfolio in the banking sector, in %	23.7	27.7	20.0	28.1
Ratio of expenses for loan debt servicing to the borrowers' total income, in %	13.1	10.0	17.0	11.5

Source: Data of the commercial banks, NBKR calculations

* data for 15 largest borrowers of each commercial bank

The level of debt load in the foreign banks was higher than in the domestic banks (Table 2).

Table 2. Debt Load in the Domestic and Foreign Banks at the End of 2015

	Domestic banks	Foreign banks
Loan balance, <i>in billions of KGS</i>	6 718,8	15 478,2
Share of loans in 15 largest borrowers in the total volume of credit portfolio in the banking sector, in %	17,6	27,9
Ratio of expenses for loan debt servicing to the borrowers' total income, in %	12,9	13,2

Source: Data of the commercial banks, NBKR calculations

* data for 15 largest borrowers of each commercial bank

Security of the borrowers' loans

At the end of 2015, the LTV actual level in the banking sector amounted to 39.3 percent. The prevailing level of collateral indicates a relatively high level of the loans secured the pledged property (Chart 2).

Chart 2. LTV Level on All Borrowers of the Banking Sector

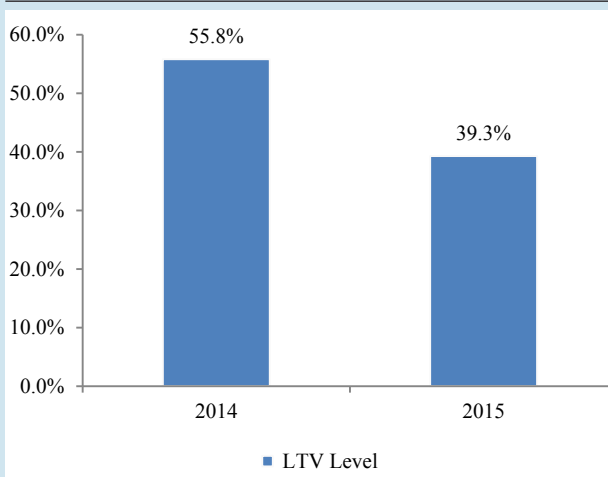
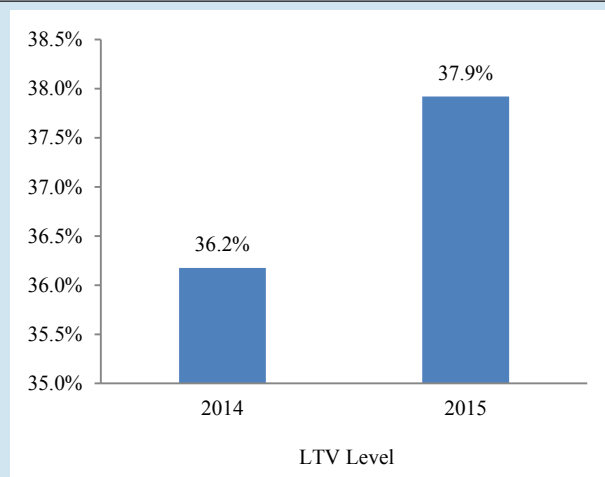


Chart 3. LTV Level on 15 Largest Borrowers of the Banking Sector



Meanwhile, the LTV value in the small banks is lower than in the large and medium banks and in the banking sector as a whole (Chart 4).

Chart 4. LTV Level on All Borrowers by the Banks' Groups in 2015

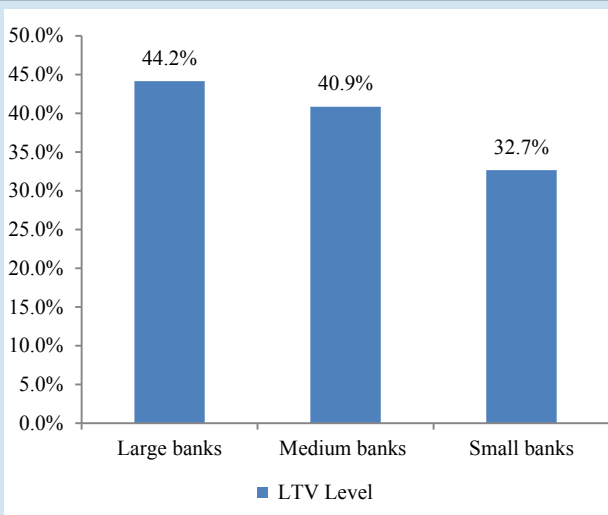
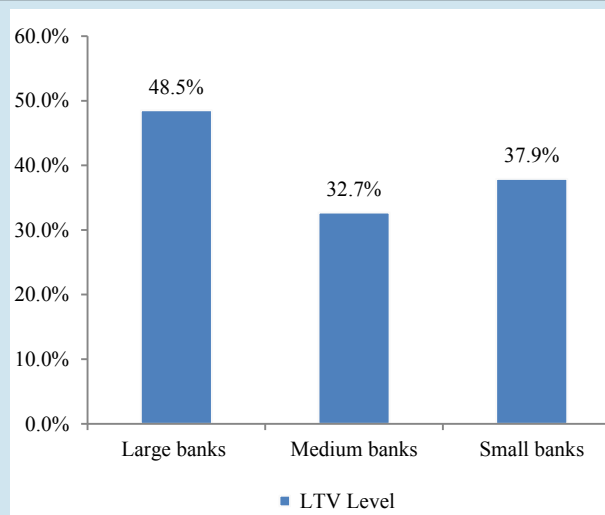


Chart 5. LTV Level on 15 Largest Borrowers by the Banks' Groups in 2015



LTV reverse indicator was calculated, i.e. the ratio of collateral to the volume of issued loans (Chart 6), in order to determine the extent to which the market value of pledged property covers the volume of issued loans.

Chart 6. Ratio of Collateral to the Volume of Loan Portfolio on All Borrowers by the Banks' Groups in 2015

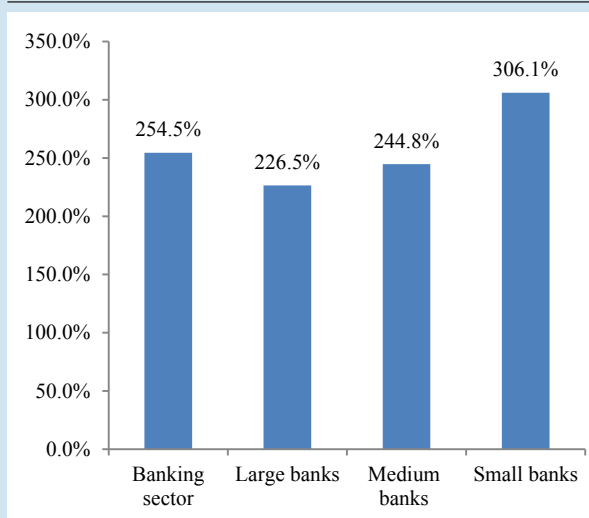
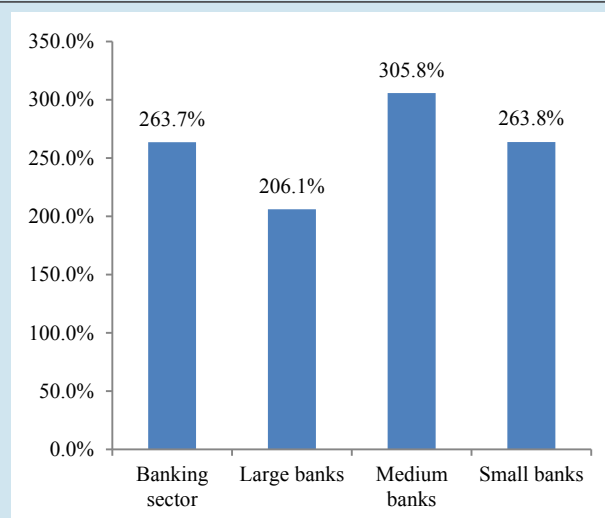


Chart 7. Ratio of Collateral to the Volume of Loan Portfolio on 15 Largest Borrowers by the Banks' Groups in 2015



At the end of 2015, the share of collateral in the form of real estate in the structure of total pledged property of the banks constituted to 84.5 percent (Chart 8).

Chart 8. Structure of Pledged Property of the Banking Sector

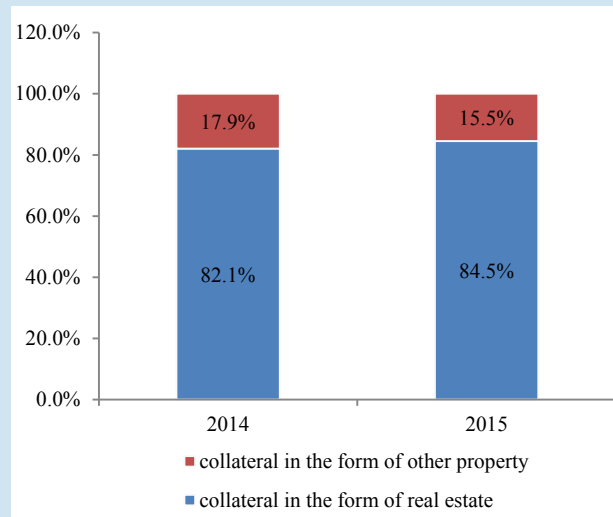
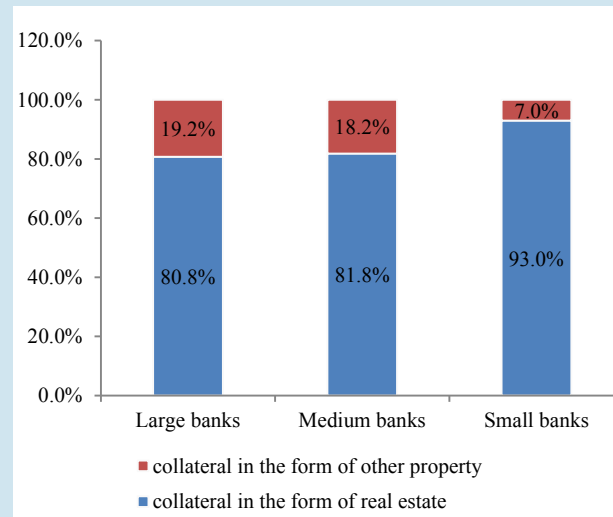


Chart 9. Structure of Pledged Property of the Banking Sector by the Banks' Groups in 2015



2.2.2. Liquidity Risk

Public confidence in the banking sector depends on the timely implementation of obligations by banks, which suggests availability of sufficient liquidity in the banks. For regulatory purposes, liquidity risk is assessed using economic current liquidity ratio¹⁸.

At the end of 2015, current liquidity ratio increased from 65.0 percent (as of the end of 2014) to 77.8 percent (Chart 2.2.6).

Chart 2.2.6. Liquidity Indicators in the Banking Sector

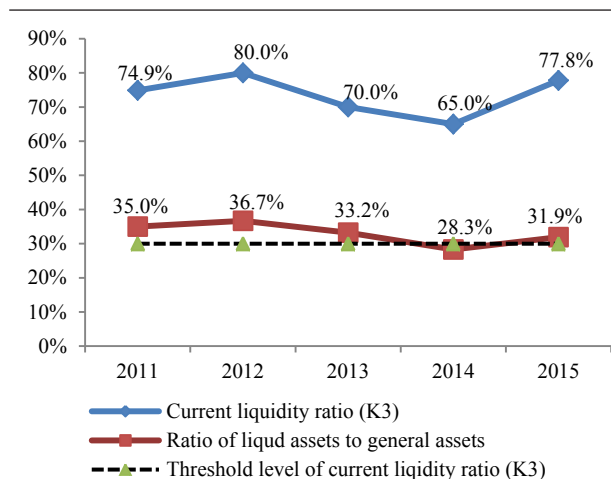
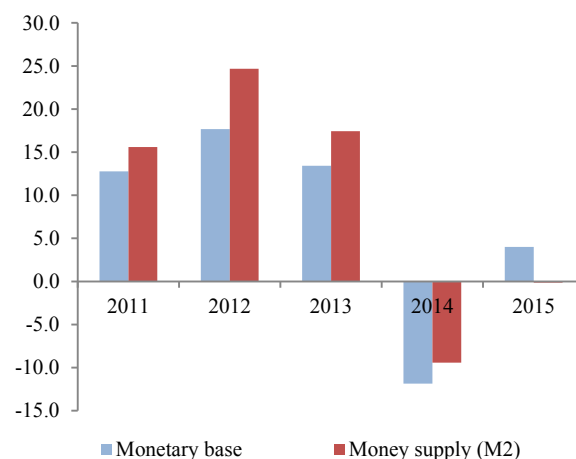


Chart 2.2.7. Growth Rates of Money Supply (M2) and Monetary Base, percent



Liquidity ratio of the banking sector increased due to excess of liquid assets growth rates over growth rates of total assets.

In terms of the groups of banks, increase of liquidity at the end of 2015 was observed in the large banks (Scheme 2.2.1). As of December 31, 2015, current liquidity ratio of one bank was at the level below 40 percent.

Scheme 2.2.1. Current Liquidity Ratio (K3) by the Groups of Banks

	2014		2015
Large banks	55.0 %	⇒	90.0 %
Medium banks	72.3 %	⇒	68.9 %
Small banks	87.1 %	⇒	81.7 %

In the reporting period, short-term financial liabilities of the banks up to 1 year outstripped growth rates of short-term financial assets. Finally, this dynamics contributed to increase of negative gap between financial assets and liabilities of the banks with a maturity period of up to 1 year.

The most significant gaps by maturity were still observed in the “demand” category (Table 2.2.1), therefore the banks kept a substantial amount of low-income highly liquid assets in the structure of assets.

¹⁸ *Economic current liquidity ratio* is one of the mandatory standards for the bank established by NBKR, according to which the liquid assets (for calculation of this indicator including funds of banks in cash and correspondent accounts) must be at least 30 percent of short-term liabilities.

Table 2.2.1. Cumulative Gap¹⁹ by Maturity of Financial Assets and Liabilities,
as of December 31, 2015, millions of KGS

Total	demand	up to 1 month	up to 3 months	up to 1 year	up to 3 years	Grand total
Total financial assets	43,519	68,604	79,529	113,498	182,073	182,073
Total financial liabilities	58,485	70,979	80,904	115,410	147,961	147,961
Gap (gap interval)	-14,966	-2,375	-1,375	-1,912	34,112	34,112
Gap in % of assets	-8.2%	-1.3%	-0.8%	-1.1%	18.7%	18.7%
Gap in % of net total capital	-54.3%	-8.6%	-5.0%	-6.9%	123.8%	123.8%

in foreign currency	demand	up to 1 month	up to 3 months	up to 1 year	up to 3 years	Grand total
Total financial assets	28,872	41,928	47,753	64,232	103,394	103,394
Total financial liabilities	38,575	46,056	52,290	71,512	94,446	94,446
Gap (gap interval)	-9,702	-4,129	-4,537	-7,280	8,947	8,947
Gap in % of assets in foreign currency	-9.4%	-4.0%	-4.4%	-7.0%	8.7%	8.7%
Gap in % of net total capital	-35.2%	-15.0%	-16.5%	-26.4%	32.5%	32.5%

in national currency	demand	up to 1 month	up to 3 months	up to 1 year	up to 3 years	Grand total
Total financial assets	14,647	26,676	31,775	49,267	78,679	78,679
Total financial liabilities	19,911	24,923	28,613	43,898	53,515	53,515
Gap (gap interval)	-5,264	1,753	3,162	5,368	25,165	25,165
Gap in % of assets in national currency	-6.7%	2.2%	4.0%	6.8%	32.0%	32.0%
Gap in % of net total capital	-19.1%	6.4%	11.5%	19.5%	91.3%	91.3%

Table 2.2.2. Maturity of Financial Assets and Liabilities,
as of December 31, 2015, millions of KGS

Name	Maturity					Grand total
	up to 1 total month	1- 3 months	3-6 months	6-12 months	more than 12 months	
Total financial assets	68,604	10,925	11,198	22,771	68,575	182,073
Including loans and financial leasing to the clients	4,827	5,981	8,207	19,199	55,405	93,618
Total financial liabilities	70,979	9,925	16,118	18,388	32,551	147,961
Including deposits of individuals and fixed deposits of legal entities	24,196	5,274	9,849	10,645	11,945	61,908
Gap	-2,375	1,001	-4,920	4,383	36,024	34,112
Including on loans and deposits	-19,370	707	-1,642	8,554	43,460	31,710

¹⁹ Cumulative gap is the amount of possible expenses for support of solvency, estimated for each range of maturity.

Box 5. Assessment of “Irreducible” (Stable) Level of Demand Deposits during the Period of 2010 – 2015.²⁰ (“Irreducible” Balance of Deposits)

The purpose of determining the “irreducible” level of demand deposits is to reveal volumes of banks’ demand deposits, which are permanently at banks’ disposal (“irreducible” balance²¹) and are used in assessment of so called “excess liquidity”.

Chart 2.2.8 shows that during 2015, demand deposits of commercial banks²² had a certain volatility. At the end of the reporting period, the volume of demand deposits increased by KGS 11.5 billion compared to the same period of the last year and amounted to KGS 49.0 billion. “Irreducible” balance of demand deposits increased, and at the end of 2015 amounted to KGS 30.5 billion or 62.3 percent of the total volume of demand deposits (Chart 2.2.8).

Chart 2.2.8. Volume of “Irreducible” Balances of Demand Deposits
billions of KGS

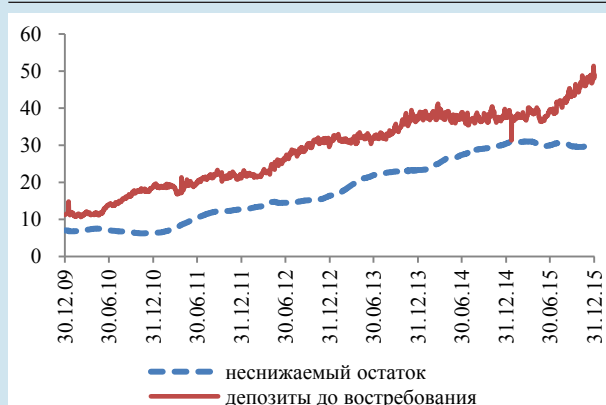
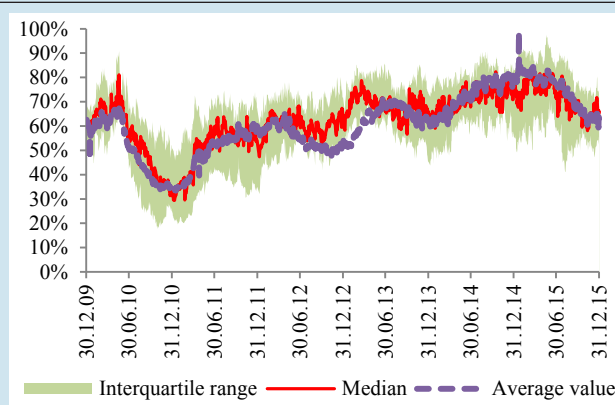


Chart 2.2.9. Share of “Irreducible” Balances in Demand Deposits



“Unstable” share of demand deposits constituted 37.7 percent, respectively.

Divided by the banks, the interquartile range²³ of minimum “stable” level of demand deposits at the end of 2015 constituted 70.5 percent of the total volume of demand deposits (Chart 2.2.9).

At the end of 2015, growth was observed in the volume of the banks’ assets, finally, it resulted in increase of the positive cumulative gap value between the financial assets and liabilities with the maturity from up to 1 month to 1 year (Chart 2.2.2). Thus, taking into account “irreducible” balance, financial assets exceeded financial liabilities of banks. The same dynamics was observed by currencies.

Finally, as of December 31, 2015, the positive cumulative gap, taking into account “irreducible” gap of demand deposits, constituted 11.8 percent of the banking sector assets (with demand maturity), 18.7 percent of the banking sector assets (with maturity up to 1 month) and 19.0 percent of the banking sector assets (with maturity up to 1 year).

In case of existing aforementioned dynamics, marginal growth of medium-and long-term loans at the expense of short-term liabilities of the banks, when the cumulative gap²⁴ can maintain a positive value, constitutes KGS 28.2 billion.

²⁰ Conducted calculations did not include demand deposits and settlement accounts of troubled banks, as well as relatively new banks possessing restricted historical data series for analysis.

²¹ Volumes of “irreducible” balances of commercial banks are calculated on the basis of demand deposit daily balances since 2010 as the difference between arithmetical average and 2.33 of standard deviations. Credibility level of 99 percent was chosen in the calculations.

²² Including settlement (current) accounts.

²³ Share of “irreducible” balance of demand deposits ranged among the banks from the smallest to the largest. Interquartile range reflects the smallest and the largest shares.

²⁴ Inclusive of “irreducible” balances of demand deposits.

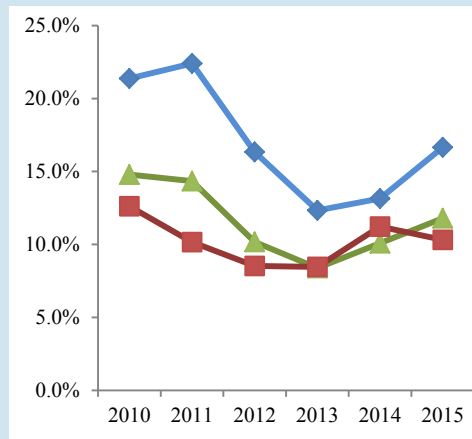
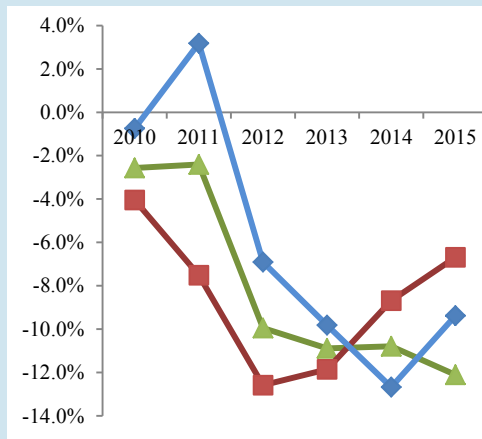
Scheme 2.2.2. Cumulative Gap by Maturities (Exclusive and Inclusive of “Irreducible” Balances of Demand Deposits)
percent of the total assets

Maturities

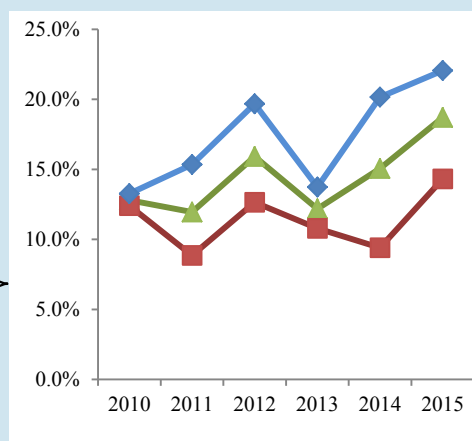
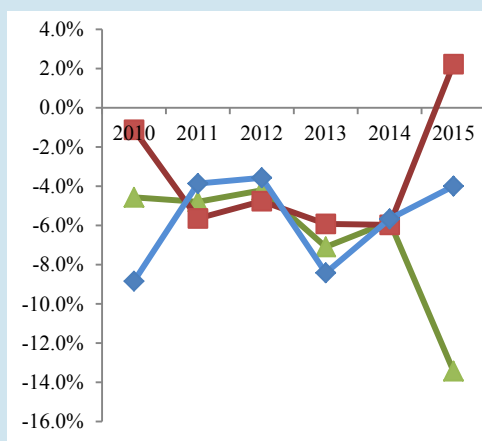
Exclusive of “irreducible” balance

Inclusive of “irreducible” balance

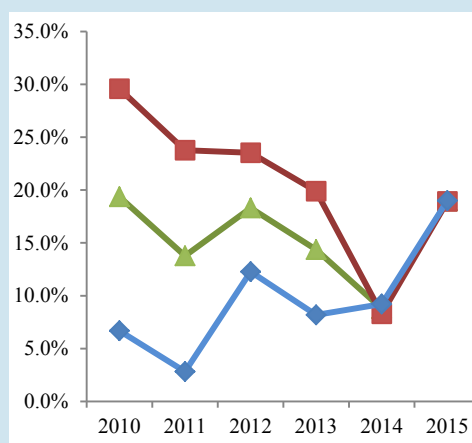
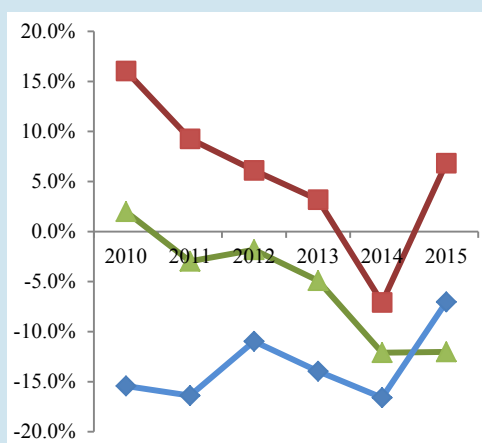
Demand:



Up to 1 month:



Up to 12 months:



—▲— General —■— in national currency —◆— in foreign currency

2.2.3. Concentration Risk

Generally, as of December 31, 2015, slight increase of *concentration risk* was observed compared with 2014.

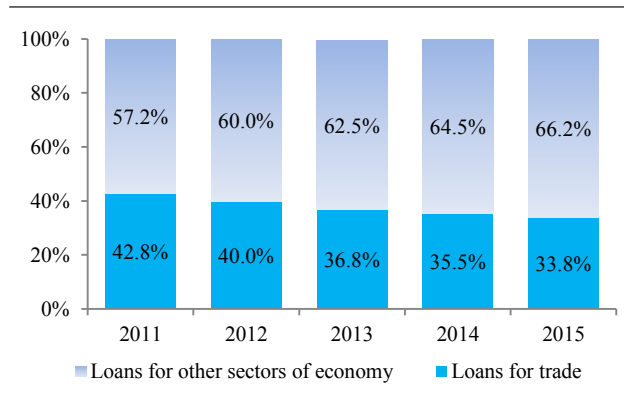
Concentration of the Largest Sources of Financing

The results of “reverse” stress testing show that some banks could not withstand the shock related to outflow from one to five largest sources of financing²⁵ (liquidity ratio decreases below the level of 30 percent).

Loan Concentration

Potential default from one to five largest borrowers²⁶ in separate banks may decrease regulatory capital below economic standard of the NBKR.

Chart 2.2.10. Sectoral Concentration of the Loan Portfolio

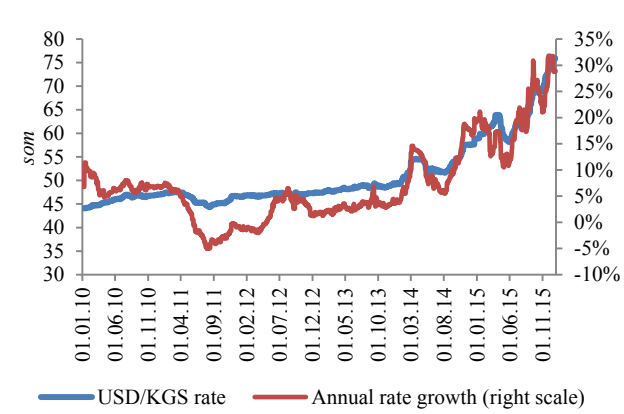


Insignificant decrease of the level of trade loans concentration was observed in the sectoral structure of loan portfolio amid increase of lending to the agricultural sector. Based on the results of 2015, the share of loans for trade decreased from 35.5 percent to 33.8 percent (Chart 2.2.10).

2.2.4. Currency Risk

At the end of 2015, *direct currency risk* of the banking sector was at a moderate level.

Chart 2.2.11. Dynamics of USD/KGS Nominal Exchange Rate



In general, the banks kept open currency positions of assets and liabilities within the limits of prudential standards of the National Bank of the Kyrgyz Republic.

The risk of currency position overestimation in the banking sector is minimum (VaR: 0.1–0.9 percent of the net total capital, Chart 2.2.11).

²⁵ The largest sources of financing (LSF) are the funds of creditors and depositors (received loans, settlement accounts, demand deposits and fixed deposits).

²⁶ Total debt of five largest borrowers of the bank is meant.

Chart 2.2.12. Dynamics of Open Currency Position (OCP) and Revaluation Risk (VaR) in percent of NTC

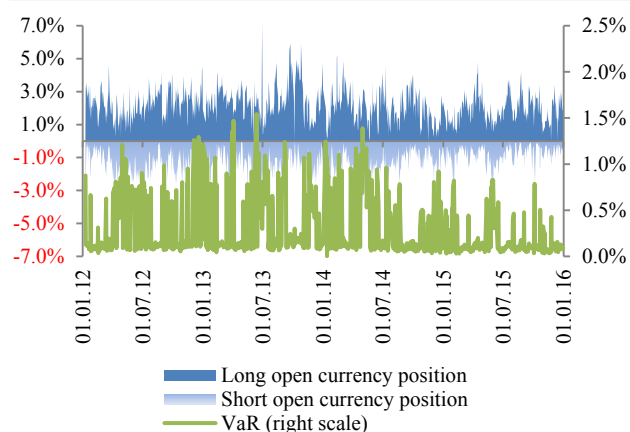
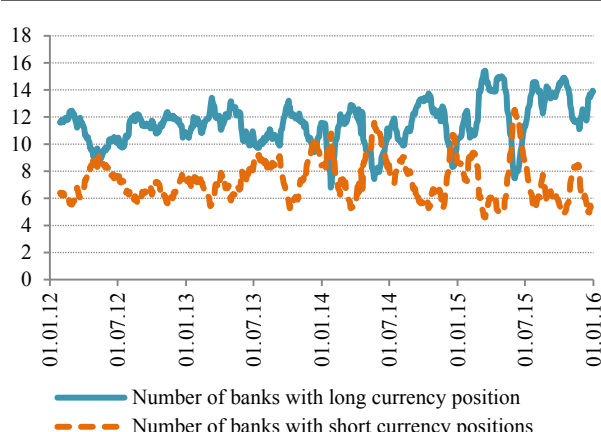


Chart 2.2.13. Currency Position of the Banks units



Box 6. Credit Risk Through Indirect Currency Risk

As of the end of 2015, 39.4 percent of the total loan portfolio was accounted for the loans, which were repaid in foreign currency, while the income of the borrowers generated in the national currency (Chart 2.2.14). This volume of the loan portfolio was potentially exposed to credit risk through exposure to currency risk (so-called indirect currency risk).

Indirect confirmation of the impact made by the currency risk on the credit risk is given in Chart 2.2.15 that displays the proportion of classified loans by groups of loans:

- Group 1 - 4.8 percent, basic incomes of the borrower are generated in the national currency, and the loans are repaid in foreign currency;
- Group 2 - 3.2 percent, basic incomes and loans payable by the borrower, are in the same currency.

Chart 2.2.14. Loan Portfolio by Groups of Loans*

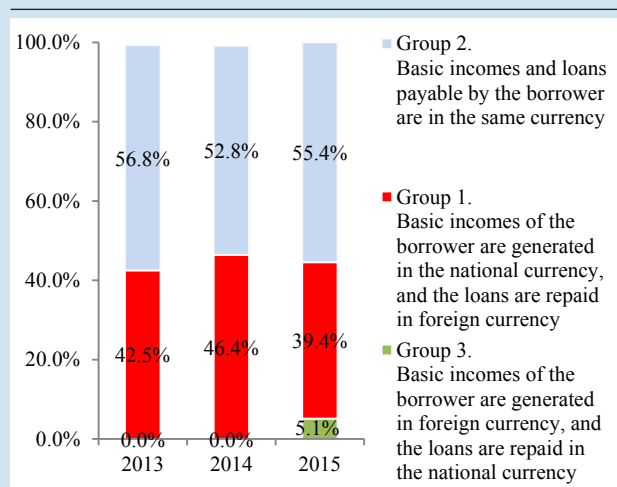
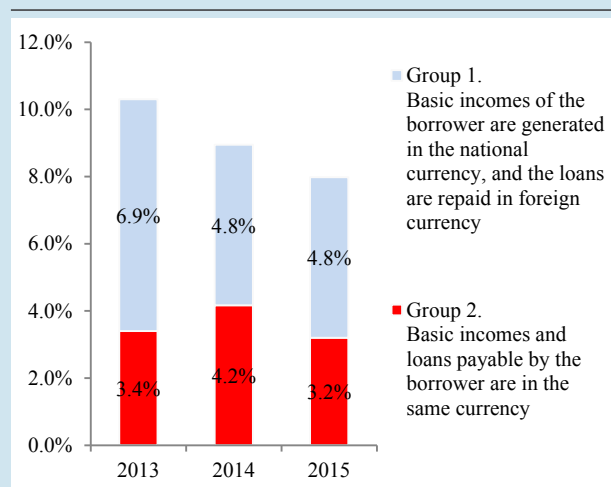


Chart 2.2.15. Share of Classified Loans by Groups of Loans*

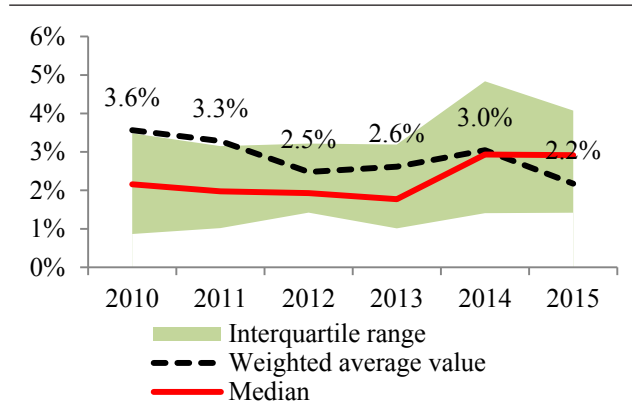


* Source: since 2015 the data are calculated on the basis of section 37 of the PRBR, the data prior to 2015 were calculated of the basis of questionnaires.

2.2.5. Interest Rate Risk

At the end of 2015, interest rate risk decreased slightly.

Chart 2.2.16. Dynamics of Interest Rate Risk (VaR) in percent of NTC



Slight increase of interest rate risk (VaR) from 3.0 percent to 2.2 percent of net total capital was resulted from decrease of gaps by maturities between financial assets and liabilities vulnerable to interest rates dynamics.

Average value of interest rate risk during the period of 2010 – 2015 was within accessible limits (2-4 percent of net total capital).

Chart 2.2.17. Dynamics of Average Weighted Interest Rate of Individuals' Time Deposits, in percent

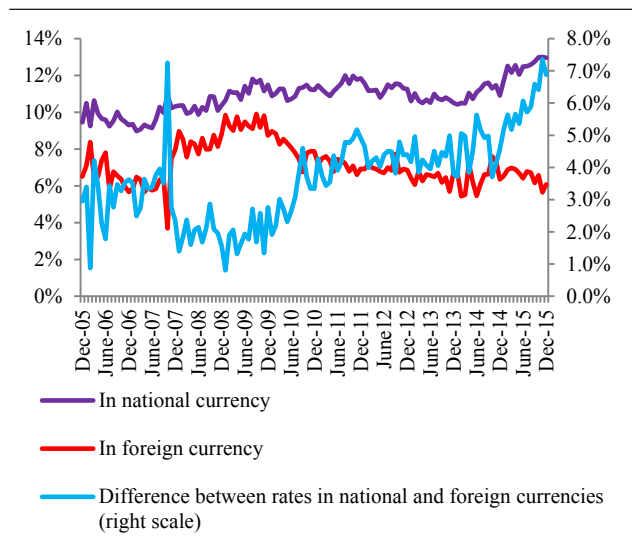
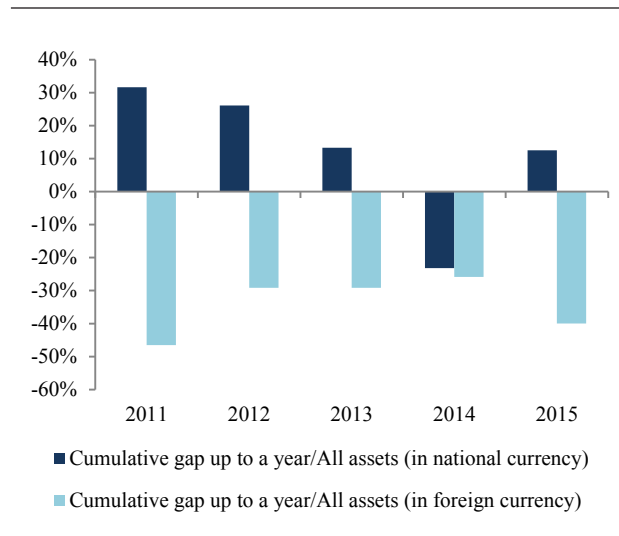


Chart 2.2.18. Cumulative Gap of Assets and Liabilities Exposed to Interest Rate Risk

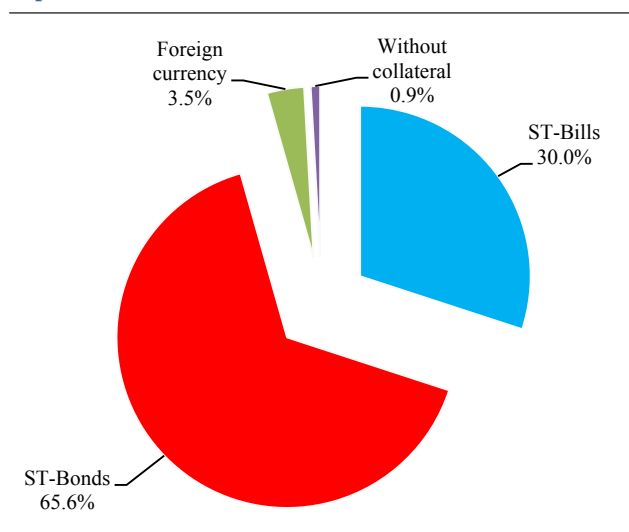


2.2.6. Contagion Risk

The purpose of this analysis is to assess the risk of “contagion” in case of interbank lending, which can set off chain-reaction upon occurrence of problems with liquidity.

In the reporting period, the volume of transactions in the interbank market made between the resident banks amounted to KGS 33.6 billion, having decreased by 33.0 percent compared with 2014.

Chart 2.2.19. Distribution of Interbank Loan Transactions Made during 2015 between Resident Banks, Depending on Collateral in percent



The loans in the interbank market are covered by collateral in the form of highly liquid government securities or foreign exchange (Chart 2.2.19) in the banking sector of Kyrgyzstan. According to our estimates, the banks of Kyrgyzstan almost do not grant interbank loans without collateral.

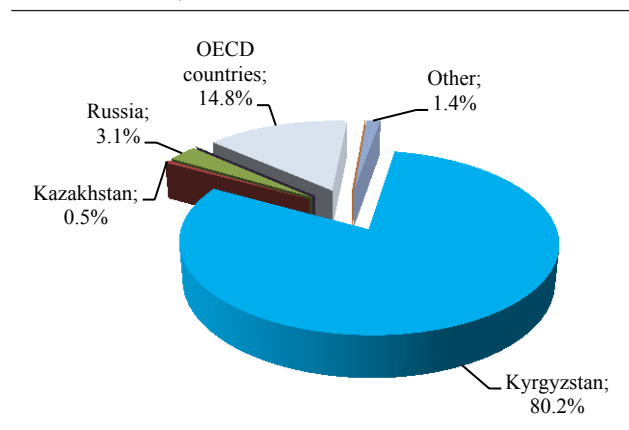
In general, the probability of the contagion risk materialization in the interbank credit market of Kyrgyzstan is minimal, which is caused by highly liquid collateral and insignificant volume of transactions.

2.2.7. Country Risk

The banking sector of the Kyrgyz Republic as of December 31, 2015 remained relatively isolated and weakly integrated in the global financial markets.

Foreign assets. In general, the volume of disposed assets of non-residents constituted KGS 36.1 billion or 20.5 percent of total banking sector assets. The highest concentration of placements was observed in the OECD countries – 14.8 percent of total assets.

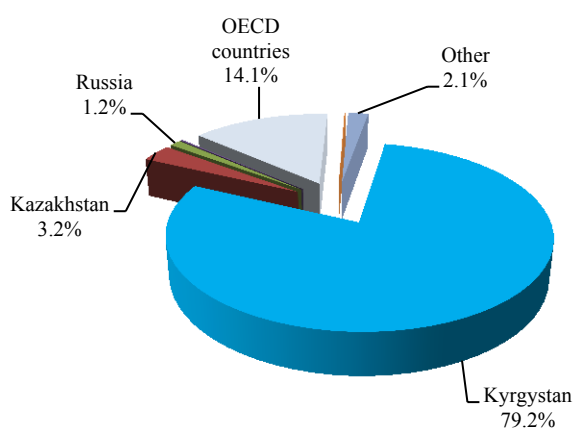
Chart 2.2.20. Geographic Structure of Assets as of December 31, 2015



The main share of the assets placed abroad was focused on correspondent or deposit accounts and constituted KGS 34.2 billion or 94.7 percent of total disposed assets of non-residents.

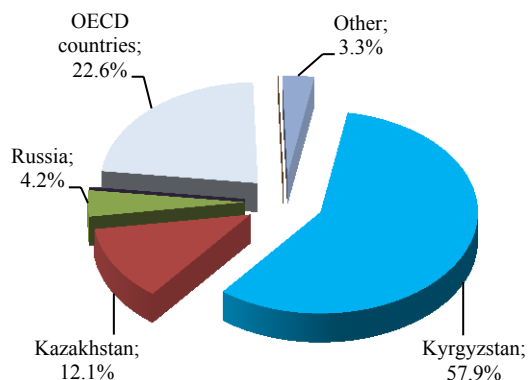
Meanwhile, 73.0 percent of total assets disposed aboard accounted for 5 banks.

Chart 2.2.21. Geographic Structure of Liabilities as of December 31, 2015



At the end of 2015, banks' liabilities to non-residents of the Kyrgyz Republic totaled KGS 30.8 billion or 20.8 percent of the total liabilities of the banking sector. Main volume of the resources was drawn from non-resident banks in the form of loans and deposits, which amounted to KGS 28.8 billion or 93.7 percent of the total liabilities to non-residents.

Chart 2.2.22. Authorized Capital by Countries as of December 31, 2015



At the end of 2015, foreign capital amounted to KGS 6.9 billion or 42.1 percent of the total authorized capital of the banking sector.

2.3. “Reverse” Stress Testing of the Banking Sector

2.3.1. “Reverse” Stress Testing of Credit Risk²⁷

Maximum allowable share of “unclassified” loans²⁸ in the loan portfolio, which upon categorized as “classified” loans can reduce the CAR down to the threshold level of 12 percent, was calculated by means of the “reverse” stress testing of the credit risk.

This method allows detecting a buffer stock of capital (net total capital) of banks, which can cover the additional allocations to LLP in connection with the transformation of “unclassified” loans into the category of “classified” loans²⁹.

Moreover, the maximum growth rate of “classified” loans, where capital adequacy (K 2.1) will be reduced to the threshold level of 12 percent, can be calculated by means of this method.

Based on the results of the “reverse” stress testing of the banking sector as of December 31, 2015, the maximum allowable share of “unclassified” loans, transferring to the category of “classified” in the banking sector, amounted to approximately 30.9 percent (Chart 2.3.1).

Thus, the banking sector can sustain a significant deterioration in the quality of the loan portfolio, which may require the creation of additional LLP approximately up to 46.5 percent of net total capital (Chart 2.3.2).

Chart 2.3.1. Maximum Possible Share of “Performing”³⁰ Loans that May Become “Classified” Loans³¹, in percent of unclassified loans

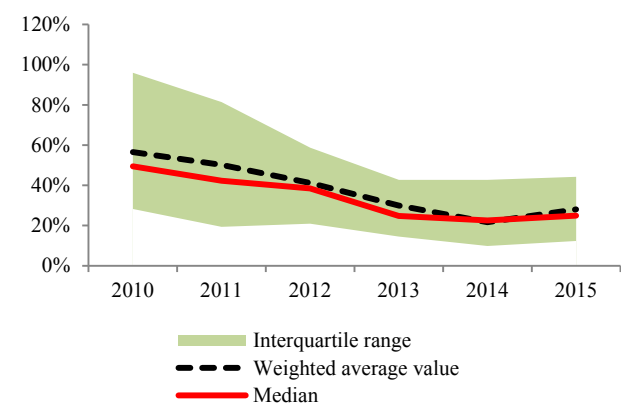
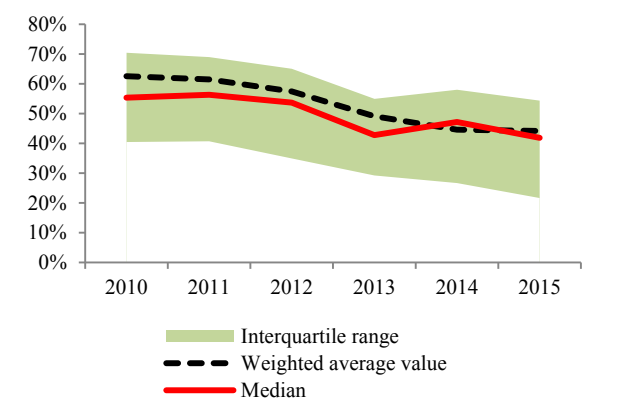


Chart 2.3.2. Additional LLP, in Creating thereof CAR Decreases to 12 Percent, in percent of NTC



²⁷ Exclusive of troubled banks.

²⁸ Exclusive of “normal” loan category, which are risk free.

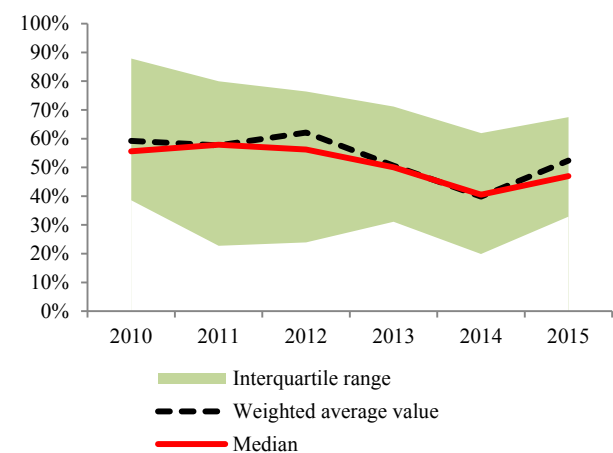
²⁹ Herewith, transition of “performing” loans to the category of “classified” loans is fulfilled smoothly by three categories (“substandard”, “doubtful” and “losses”)..

³⁰ Exclusive of “normal” loan category.

³¹ When CAR decreases to the level of 12 percent.

2.3.2. “Reverse” Stress Testing of the Liquidity Risk

Chart 2.3.3. Scope of Potential Outflow of Deposits when K3 May Drop to 30 Percent
in percent of the total volume of clients’ deposits



The reserve of liquid assets, which can cover a massive outflow of deposits of the population and non-financial enterprises, without violating the NBKR prudential standard on the current liquidity, was calculated for the evaluation of the liquidity risk in the banking sector:

Shock is the maximum volume of the outflow of the individuals’ and non-financial enterprises’ deposits, which may reduce the liquidity ratio down to the threshold level of 30 percent.

The results of the “reverse” stress testing show (Chart 2.3.3), that as of the end of 2015 the actual amount of liquid assets of the banking sector was able to cover the outflow of an average of 53.2 percent of total deposits of population and non-financial enterprises (Table 2.3.1).

2.3.3. “Reverse” Stress Testing of the Market Risk

In general, the results of the “reverse” stress testing of the market risk indicate that the banking sector at the end of 2015 still has little sensitivity to the direct interest rate and currency risks.

Interest Rate Risk

Scenario 1 – decrease of average weighted interest rate on loans, when the level of capital adequacy decreases to the threshold level (12 percent).

The results of the “reverse” stress testing indicate little sensitivity of the banking sector to the direct interest rate risk. Decrease of the average interest rates on loans by 14.2 p. p. can reduce the level of capital adequacy ratio to 12 percent (Table 2.3.1).

Generally, the results of the “reverse” stress testing show that the banking sector is characterized by low level of interest rate risk.

Currency Risk (Revaluation Risk)

Maximum increase/decrease level of the U.S. dollar exchange rate, which will influence capital adequacy and net profit, was calculated for valuation of the currency risk in the banking sector.

Scenario 1 – maximum increase/decrease level of the USD/KGS exchange rate, when the level of capital adequacy (K2.1) declines to the threshold level (12 percent).

Calculations of the “reverse” stress testing indicate that the banking sector is characterized by low risk of assets and liabilities revaluation and confirms availability of low sensitivity to direct currency risk (Table 2.3.1).

Scenario 2 – maximum increase/decrease level of the USD/KGS exchange rate, when net profit of the commercial banks decreases to the zero level.

The results of stress testing indicate that the commercial banks can stand the impact of direct foreign exchange rate (Table 2.3.1).

Table 2.3.1. General Results of the “Reverse” Stress Tests as of December 31, 2015

		Banking sector
Credit risk		
Scenario1	Share of unclassified loans transferring to the category of “classified” loans, <i>in percent</i>	30.9
Interest rate risk		
Scenario 1	Decrease of interest rate on loans, when CAR declines to 12%, <i>in percentage points</i>	14.2
Currency risk		
Scenario 1	Growth rate of USD/KGS (\pm) exchange rate, when CAR declines to 12%, <i>in percent</i>	Commercial banks overcome the effect of the direct currency risk (change of currency rate for more than 100 percent)
Scenario 2	Growth rate of USD/ KGS (\pm) exchange rate, when net profit declines, <i>in percent</i>	
Liquidity risk		
Scenario 1	Outflow of clients’ deposit share of the total deposits, when current liquidity ratio declines to 30%, <i>in percent</i>	53.2

III. NON-BANKING FINANCIAL INSTITUTIONS

In general, the state of the NBFIs system is assessed as rather stable. Decrease of major indicators: assets, loan portfolio, resource base is observed. Stress test results indicate that the credit risk of the NBFIs is moderate.

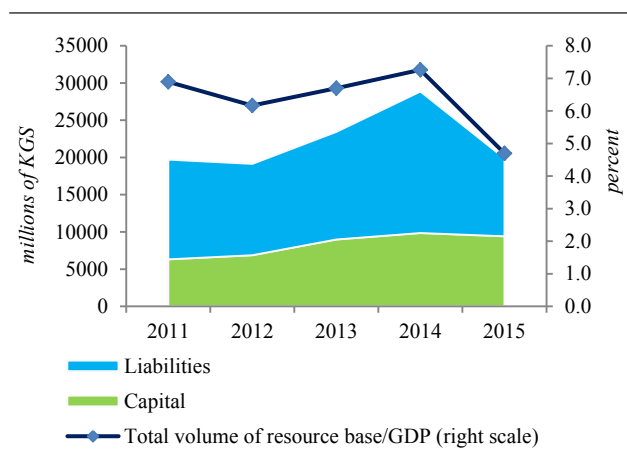
The weighted average interest rates on loans of the microfinance organizations and credit unions increased compared with 2014 (MFO – by 2.2 p.p. compared with 2014, CU – by 2.3 p.p.).

3.1. Main Trends

The system of non-banking financial institutions subjected to licensing and regulation by the National Bank as of December 31, 2015 in the Kyrgyz Republic included: a specialized financial institution - “FCCU” OJSC; 125 credit unions; 172 microfinance organizations (including 6 microfinance companies, 109 microcredit companies and 57 microcredit agencies) and 329 exchange offices.

Resources

Chart 3.1.1. Dynamics of NBFIs Liabilities and Capital



At the end of 2015, NBFIs liabilities decreased by 44.9 percent compared with 2014 and were formed in the amount of KGS 10 473.1 million³². In 2015, NBFIs capital decreased by 4.4 percent and totaled KGS 9 411.2 million (Chart 3.1.1).

Resource base reduction was mainly due to withdrawal by “FINCA MCC” CJSC from NBFIs membership and reorganization thereof into “FINCA Bank” CJSC.

Source: NBKR

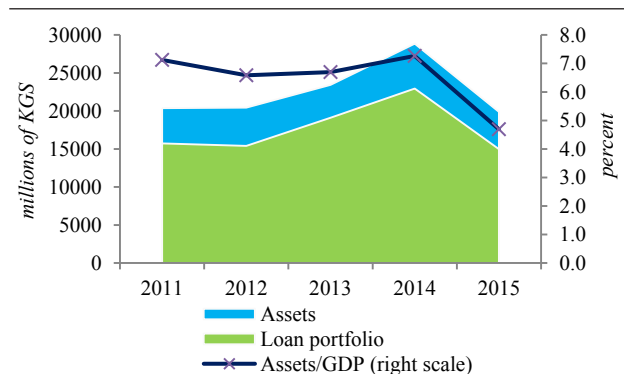
Note: since 2015 data are specified exclusive of “Finca MCC” CJSC

The main volume of the resource base of the NBFIs was accounted for the loans received from non-residents (as of December 31, 2015 the share of these loans constituted 72.8 percent).

³² Exclusive of “FCCU” OJSC

Assets

Chart 3.1.2. Dynamics of NBFIs Assets and Loans



Source: NBKR

Note: since 2015 data are specified exclusive of "Finca MCC" CJSC

According to periodic regulatory reporting, the total assets of NBFIs in 2015 decreased by 31.1 percent and amounted to KGS 19 884.3 million³³. This decrease was due to reduction in the loan portfolio of NBFIs (Chart 3.1.2).

The main activity of NBFIs remains lending. As of December 31, 2015, the loan portfolio of NBFIs decreased by 34.7 percent and was formed in the amount of KGS 14 974.7 million (Table 3.1.1).

As of December 31, 2015, the number of borrowers decreased by 24.9 percent compared with 2014 and amounted to 334 831 borrowers.

Table 3.1.1. Structure of Assets in NBFIs

	31.12.2014		31.12.2015	
	millions of KGS	share, %	millions of KGS	share, %
Financial assets, including:	25,856.9	89.6	18,035.8	90.7
<i>net loans and borrowings*</i>	22,481.3	77.9	14,244.5	71.6
<i>correspondent accounts in commercial banks</i>	1,799.6	6.2	2,072.4	10.4
<i>deposits in commercial banks</i>	961.0	3.3	1,146.4	5.8
<i>other financial assets</i>	615.0	2.1	572.4	2.9
Non-financial assets, including:	2,997.8	10.4	1,848.5	9.3
<i>fixed assets</i>	899.9	3.1	620.5	3.1
<i>other non-financial assets</i>	2,097.9	7.3	1,228.0	6.2
Total assets	28,854.7	100.0	19,884.3	100.0

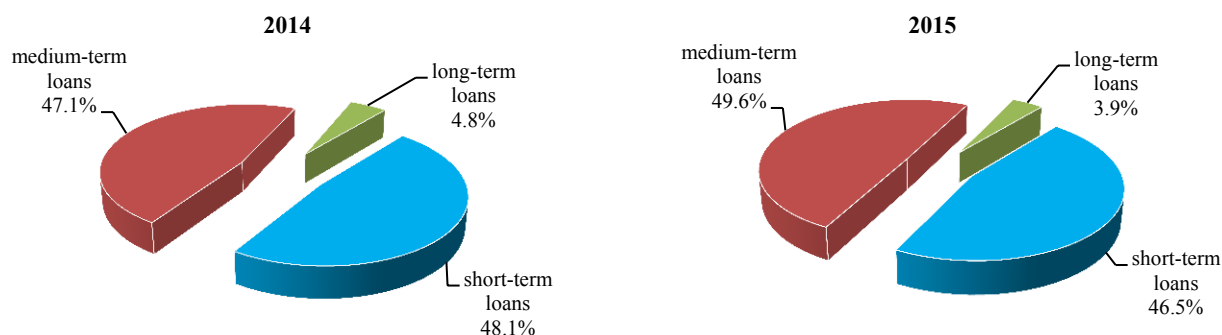
Source: NBKR

*exclusive of LLP

There have been slight changes in the structure of the loan maturity provided by NBFIs. As of December 31, 2015, an increase in the share of medium-term credit resources and the decline in short-term loans were observed (Chart 3.1.3).

³³ Exclusive of "FCCU" OJSC

Chart 3.1.3. Structure of the NBFIs Loan Portfolio by Maturity



Source: NBKR

Note: data for the period

The main oblasts where the major share of loan portfolio of NBFIs is concentrated (69.0 percent of total loan portfolio) are Bishkek city, Chui, Osh and Jalal-Abad oblasts (Table 3.1.2), with is due to the highest level of business activity in these oblasts of the republic.

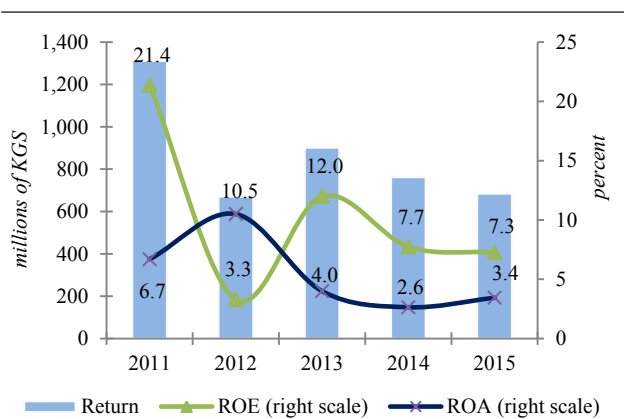
Table 3.1.2. Geographic Structure of the NBFIs Loan Portfolio

	31.12.2014		31.12.2015	
	millions of KGS	share, %	millions of KGS	share, %
Bishkek city and Chuy oblast	7693.5	33.5	5385.2	36.0
Jalal-Abad oblast	3645.3	15.9	2065.4	13.8
Osh oblast	3762.4	16.4	2875.0	19.2
Batken oblast	1604.9	7.0	864.9	5.8
Issyk-Kul oblast	2109.6	9.2	1418.9	9.5
Naryn oblast	1386.3	6.0	813.8	5.4
Talas oblast	1273.1	5.5	571.9	3.8
Outside Kyrgyzstan	1470.6	6.4	979.6	6.5
Total	22945.7	100.0	14974.7	100.0

Source: NBKR

Revenue Position³⁴

Chart 3.1.4. Dynamics of NBFIs Revenue Position*



Source: NBKR

*exclusive of FCCU

At the end of 2015 net profit of NBFIs decreased by 10.3 percent compared with 2014 and amounted to KGS 683.8 million. ROA at the end of the reporting period increased by 0.8 p.p. and amounted to 3.4 percent; ROE decreased by 0.4 p.p. and constituted 7.3 percent (Chart 3.1.4).

³⁴ ROA and ROE indices are provided in annual terms.

3.2. Risks of Non-banking Financial Institutions

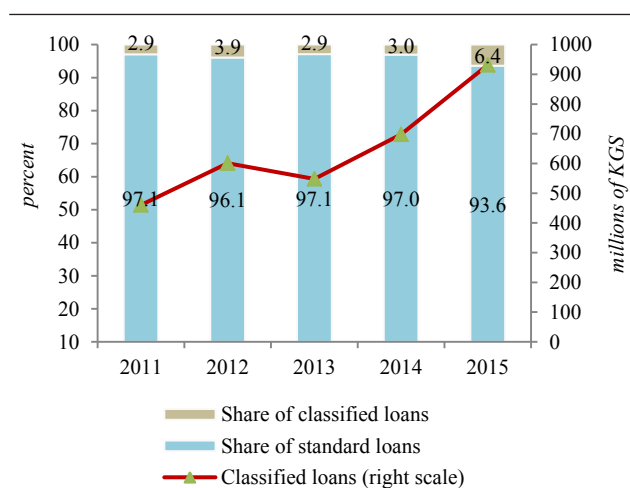
Major risk factors of the activities of NBFIs are the quality of the loan portfolio, sectoral and institutional concentration, as well as status of the external debt of NBFIs.

Quality of the Loan Portfolio of NBFIs

As of December 31, 2015, the share of classified loans in the loan portfolio of NBFIs constituted 6.4 percent, meanwhile, their nominal volume increased by KGS 237.0 million compared with 2014 (Chart 3.2.1).

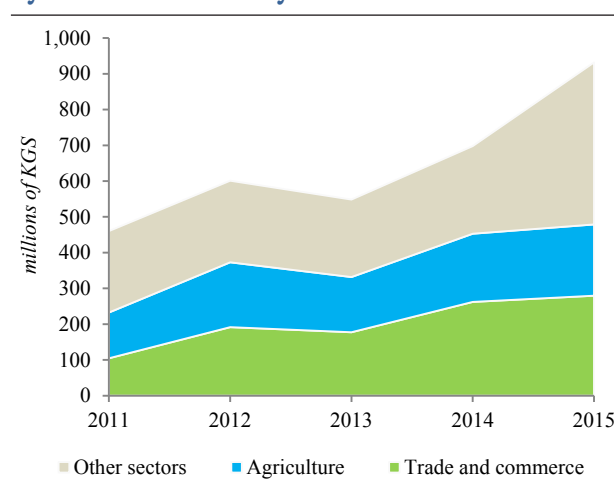
At the end of the reporting period, the structure of NBFIs classified loans noted increase in the share of non-performing loans in other sectors (by 15.3 p.p. compared with 2015). The share of non-performing loans in the total classified loans of NBFIs constituted 48.6 percent (Chart 3.2.2).

Chart 3.2.1. Quality of NBFIs Loan Portfolio



Source: NBKR

Chart 3.2.2. Structure of NBFIs Classified Loans by Sectors of Economy



Source: NBKR

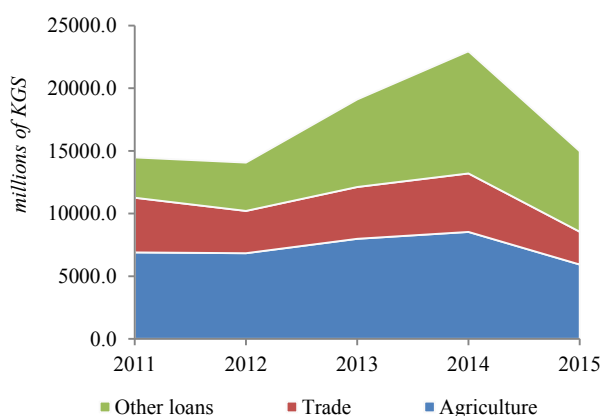
Sectoral Concentration

NBFIs loan portfolio is concentrated in agriculture (39.6 percent of NBFIs total loans), trade and consumer loans (17.5 percent and 16.3 percent of the total loan portfolio, respectively, Chart 3.2.3). Lending of agriculture is associated with a high risk because of their dependence of climate conditions.

Institutional Concentration

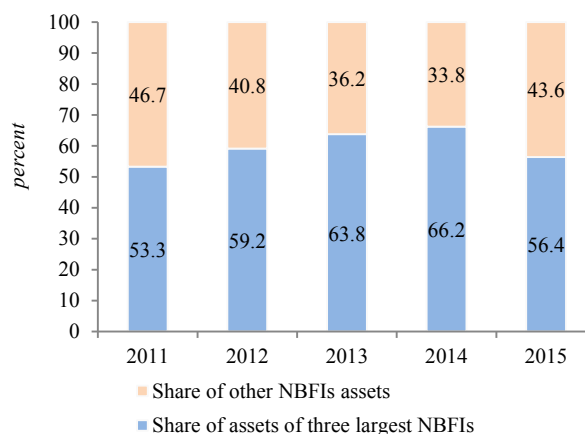
As of December 31, 2015, the share of assets of the three largest NBFIs decreased by 9.8 p.p. compared with 2014 and amounted to 56.4 percent of the total assets of NBFIs system (Chart 3.2.4).

Chart 3.2.3. Sectoral Structure of NBFIs Loan Portfolio



Source: NBKR

Chart 3.2.4. Institutional Structure of NBFIs Assets



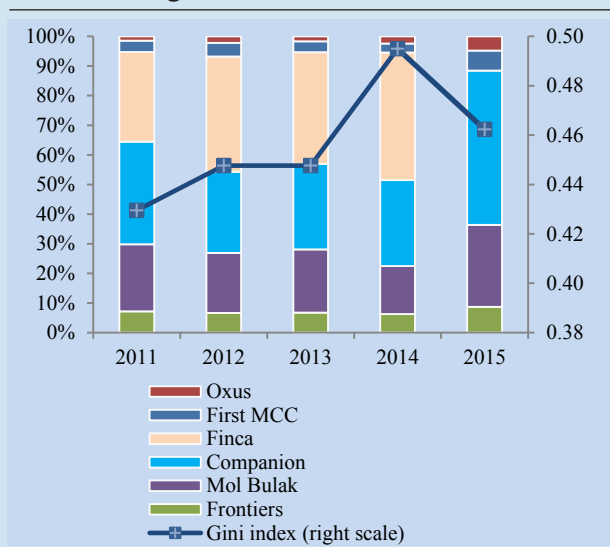
Source: NBKR

Box 7. Assessment of NBFIs System Activity on the Basis of Concentration Indices³⁵

– The Herfindahl-Hirschman Index

Herfindahl-Hirschman index was calculated for the purposes of concentration risk analysis in the NBFIs system³⁶. As of December 31, 2015, Herfindahl-Hirschman index for the NBFIs system constituted 1473.2 points. According to the rule of thumb³⁷, resulting value indicates availability of moderate concentration of NBFIs assets or average concentration of microfinance market.

Chart 3.2.5. Dynamics of the Gini Index and Assets of Largest NBFIs



Source: NBKR

*Data for 2015 are specified exclusive of "Finca MCC" CJSC

– The Gini Index

The Gini index was calculated for estimating the uniformity of the NBFIs assets distribution. As of December 31, 2015, the index value constituted 0.462, which reflected the moderate distribution of assets among the largest microfinance institutions. Meanwhile, decline of concentration level was observed in the reporting period (Chart 3.2.5).

³⁵ Concentration indices are calculated on the basis of data submitted by 5 largest NBFIs.

³⁶ $H = \sum_{i=1}^n (\text{share } i)^2$

³⁷ The following rule of thumb was used for determining the level of market concentration:

- index value is below 0.1 (or 1,000) – insignificant market concentration,
- index value is from 0.1 to 0.18 (or from 1,000 to 1,800) – average market concentration,
- index value is above 0.18 (or 1,800) – high market concentration.

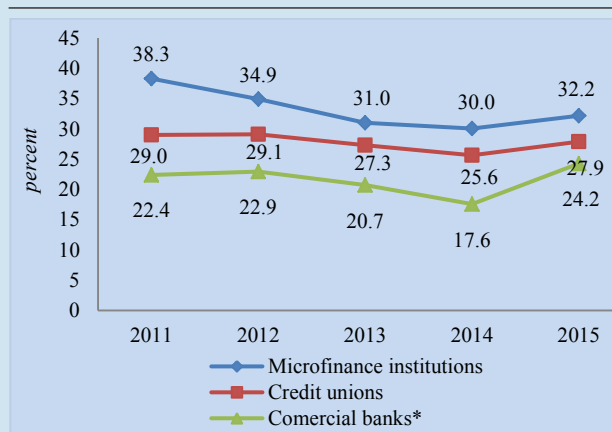
External Debt Status of NBFIs

As of December 31, 2015, the external debt of NBFIs amounted to USD 84.3 million. In the institutional structure of the external debt of NBFIs, a substantial proportion falls under five largest NBFIs established and funded by international financial institutions. Major part of the external debt of NBFIs are loans provided by the foreign commercial financial institutions (74.1 percent of total external debt of NBFIs), and the rest are loans of the international financial institutions (25.9 percent of total external debt of NBFIs).

At the end of 2015, external debt of the largest NBFIs decreased by 67.2 percent compared with 2014 and amounted to USD 81.4 million.

Box 8. Overview of Interest Rates, Net Cost and Profitability of the NBFIs Loans

Chart 3.2.6 Dynamics of Weighted Average Interest Rates on NBFIs Loans*



Source: NBKR

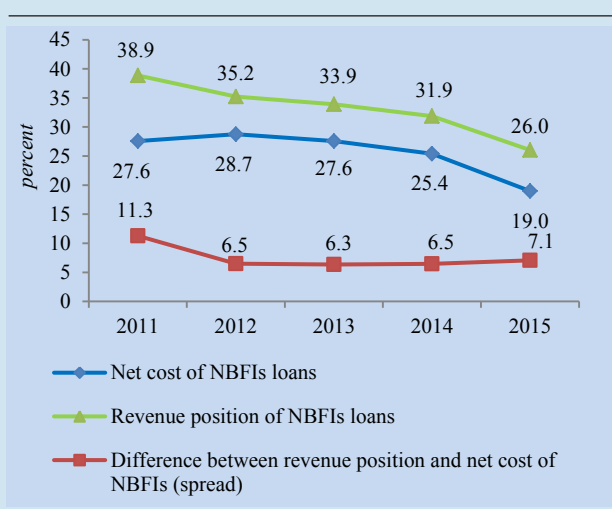
*interest rates are presented in the national currency

In the reporting period, the tendency of increase of interest rates on NBFIs loans was observed. The weighted average interest rates of MFIs increased by 2.2 p.p. and CU – by 2.3 p.p. (Chart 3.2.6).

As of December 31, 2015, the net cost³⁸ of loan resource of NBFIs decreased by 6.4 p.p., due to decrease in the net cost of five largest NBFIs loans by 11.8 p.p. (Charts 3.2.7 and 3.2.8).

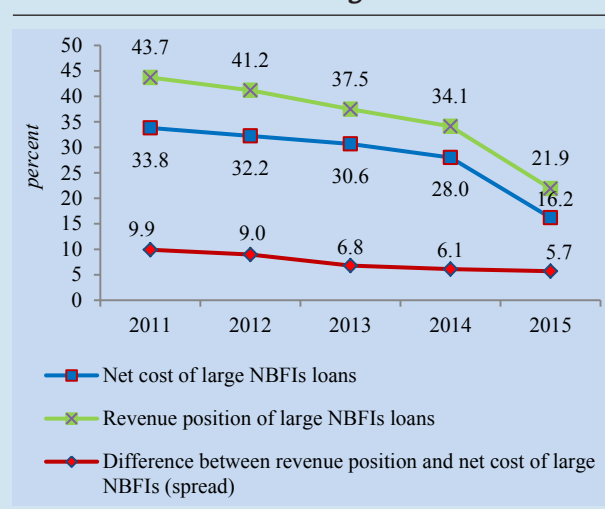
Meanwhile, the net cost of the largest NBFIs loans was lower than the average net cost of loans in the NBFIs system in general.

Chart 3.2.7. Dynamics of Net Cost and Yield of NBFIs Credit Resources



Source: NBKR

Chart 3.2.8. Dynamics of Net Cost and Yield of Credit Resources of the Largest NBFIs



Source: NBKR

Generally, decrease rates of the NBFIs interest revenue exceeding decrease rates of the annual average loan portfolio affected decrease of NBFIs loan profitability (Charts 3.2.7 and 3.2.8).

³⁸ Loans net cost or breakeven point = (Gross expenditures – Non-credit incomes)/Annual average loan portfolio.

³⁹ Loan profitability is calculated as a ratio of interest incomes to annual average loan portfolio.

3.3. Stress Testing of the NBFIs System

Stress Testing of the NBFIs Credit Risk

Stress testing, in which the effect of deterioration of the loan portfolio quality on the NBFIs system as a whole is computed, was conducted.

Three scenarios were considered when conducting stress testing:

Scenario 1: 50% of loans transition from one category to another;

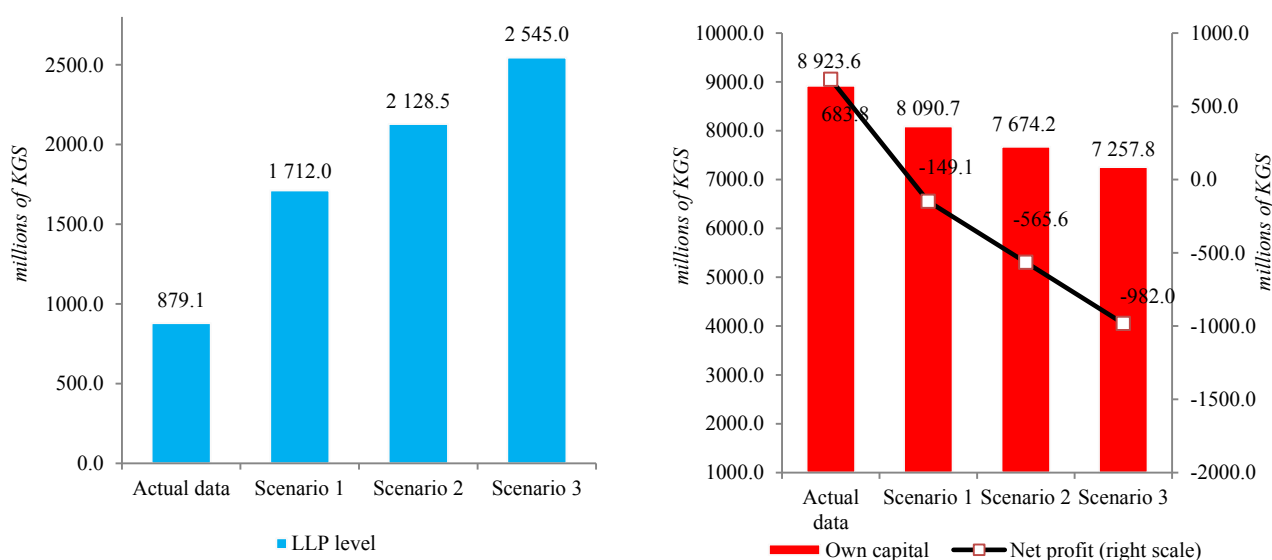
Scenario 2: 75% of loans transition from one category to another;

Scenario 3: 100% of loans transition from one category to another.

The transition of loans from one category to another occurs uniformly by the following categories: “standard”, “under supervision”, “substandard”, “doubtful” and “losses”.

The level of LLP⁴⁰ in the loan portfolio of NBFIs increased from 94.7 to 189.5 percent, depending on the scenario in conducting this stress testing (Chart 3.2.1).

Chart 3.3.1. Results of Stress Testing of the Credit Risk as of December 31, 2015



Source: NBKR, NBKR calculations

It should be noted that the deterioration of the loan portfolio quality entails a gradual decline in equity and net profit of NBFIs. In the case of the first scenario, the NBFIs become unprofitable and suffer losses in the amount of KGS 149.1 million. Implementation of the second and third scenario may result in increase of losses up to KGS 565.6 million and KGS 982.0 million, respectively (Chart 3.2.1).

³⁷ MFIs create general and special LLPs for relevant categories of classifications implementing the following allocations indicated in percentage from the amount of assets:

- Standard – from 0% to 5%
- Assets under supervision – 10%
- Substandard – 25%
- Doubtful – 50%
- Losses – 100%

Table 3.3.1. Results of Stress Testing of the Credit Risk, percent

	Share of classified loans in the loan portfolio of NBFIs
Scenario 1: transition of 50% of loans from one category to another	13.4
Scenario 2: transition of 75% of loans from one category to another	17.0
Scenario 3: transition of 100% of loans from one category to another	20.7

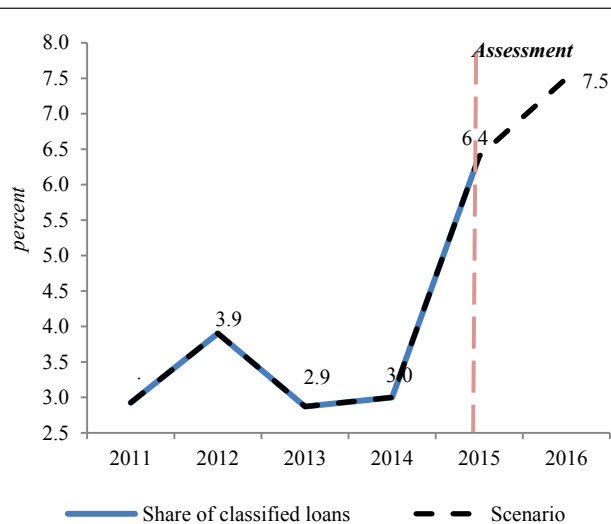
Source: NBKR, NBKR calculations

Implementation of the first scenario may result in an increase in the share of non-performing loans in the loan portfolio of NBFIs by 7.2 p.p., to the level of 13.4 percent. In the case of the second scenario, non-performing loans may increase by 10.8 p.p., to the level of 17.0 percent, and in the implementation of the third scenario – by 14.5 p.p. and may reach the level of 20.7 percent.

Stress Testing of the Loan Risk of NBFIs Based on the Econometric Model

This stress testing was carried out on the basis of an econometric model, which characterizes the dependence of NBFIs classified loans on macroeconomic factors.

Chart 3.3.2. Dynamics of NBFIs Troubled Loans



Source: NBKR

In order to assess the impact of macroeconomic shock on the dynamics of the NBFIs classified loans share the following scenario was considered:

- Reducing the rate of GDP growth by 10 percent.

An increase in the share of non-performing loans in the loan portfolio by 1.1 p.p., up to the level of 7.5 percent may occur in the process of this scenario implementation.

IV. PAYMENT SYSTEMS

In the reporting period, the Law of the Kyrgyz Republic “On Payment System of the Kyrgyz Republic” (hereinafter – the Law), entered into force, moreover, measures were taken to improve the regulatory legal framework on the payment system, on the interaction with the operators of payment systems and payment organizations within the framework of procedure for licensing and registration thereof, on oversight over the payment system, on intensifying cooperation with the central banks of the EEC member states on implementation of oversight over the payment systems. The aforementioned measures are aimed at minimizing the financial and operational risks in the payment system of the Kyrgyz Republic and are a constituent part of scheduled set of measures.

The level of financial risks in the systemically important payment systems was minimum and conditioned by remaining sufficient level of liquidity on the correspondent accounts of the participants in the National Bank, which provided uninterrupted carrying out of interbank payments in the national currency.

Effective and uninterrupted payment system is one of the main factors, which determine stability of the financial sector in the country.

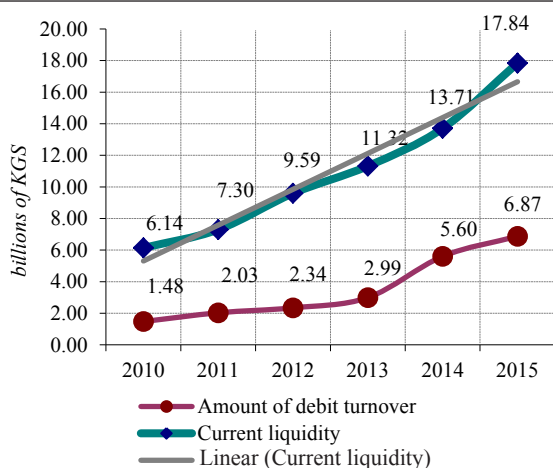
As of December 31, 2015, the following components of the payment system were operating in the Kyrgyz Republic:

1. Large Value Payment System of the National Bank – Real Time Gross Settlement (RTGS).
2. Systems of Retail payments: the System of Batch Clearing of Small Retail and Regular Payments (SBC), Systems of Payment Cards Settlement, Money Transfer Systems.
3. Financial Messages Routing Infrastructure (SWIFT Multi-User Node, Inter-bank Communication Network).

In 2015, RTGS functioned normally.

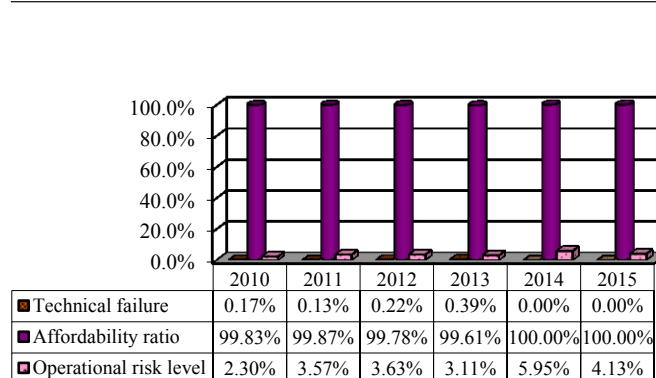
The level of financial risk in RTGS remained low due to high level of liquid funds on the participants’ accounts in relation to the turnover in the system (liquidity ratio was 2.60, the turnover ratio – 0.39). Average daily volume of liquid assets of participants showed an increase by 30.14 percent (compared to the same period of 2014) and amounted to KGS 17.84 billion.

Chart 4.1. Dynamics of Changes of Daily Average Indicator of Payment Volumes and Liquidity in the RTGS



Source: NBKR calculations

Chart 4.2. Ratio of Affordability and Operational Risk in the RTGS

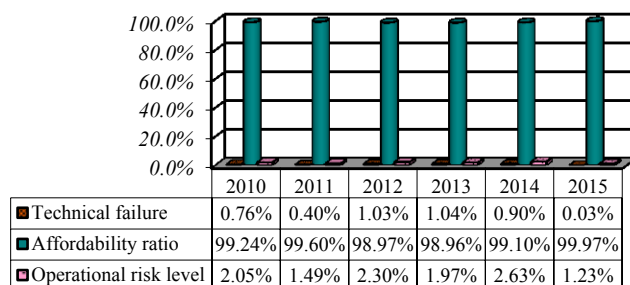


Source: NBKR calculations

In 2015, RTGS functioned normally. The results of monitoring in 2015 showed that affordability ratio of the system remained high and constituted 100.0 percent, and the level of operational risk, taking into account prolongation of the transaction day, constituted 4.13 percent.

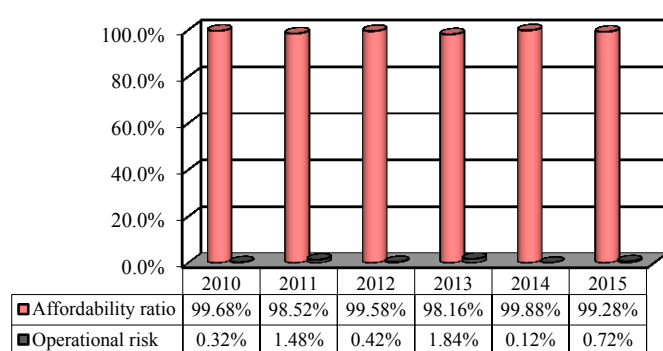
In functioning of the SBC the level of financial risks in the reporting period was also low. Reserves exhibited by the participants to cover a debit net position were 4 times higher than the required level. According to the results of monitoring of the SBC system functioning, the system accessibility index in 2015 remained high and constituted 99.97 percent (in 2014 – 99.10 percent), meanwhile, due to extending the work schedule, operational risk level was 1.23 percent, having decreased by 1.4 percentage points compared with the same index of 2014.

Chart 4.3. Ratio of Affordability Index and Operational Risks in the SBS



Source: NBKR calculations

Chart 4.4. Ratio of Affordability Index and Operational Risk in the UIP



Source: NBKR calculations

Systems of Bank Payment Cards Settlements. As of December 31, 2015, 5 international payment systems (Visa, MasterCard, American Express, Union Pay and Zolotaya Korona) and the national system “ElCart” operated in the Kyrgyz Republic.

According to the results of subsequent monitoring and analysis of operations in ***the national system “ElCart”*** during 2015, the system affordability index constituted 99.28 percent, and the level of operational risks constituted 0.72 percent.

During 2015, receipt and transfer of money without opening an account in the commercial banks was carried out by means of 19 ***international money transfer systems.***

The volume of received remittances constituted KGS 118.83 billion, the volume of transferred remittances – KGS 31.54 billion. Number and volume of incoming remittances compared to 2014 showed decrease by 12.13 and 3.93 percent, respectively. The volume of transferred remittances decreased by 3.29 percent as well. Growth by 18.38 percent was observed in the number of transferred remittances.

Regarding ***local money transfers***, relatively even distribution among five of fourteen local money transfer systems is currently observed, the banks of Kyrgyzstan are operators thereof.

7 channels of transfer and receipt of ***cross-border payments/remittances*** functioned in the reporting period. However, the main flow of financial messages accounted for SWIFT telecommunication network (more than 90 percent of the total number and volume of cross-border payments).

The results of monitoring over the functioning of the the Kyrgyz Republic payment system show that in 2015 all significant payment systems functioned normally and did not cause any systemic risk.

V. IMPROVEMENT OF THE REGULATION OVER THE FINANCIAL SECTOR

In the reporting period, work was carried out to improve regulatory and legal framework for regulation of the financial institutions. Special emphasis was focused on the issues of risk management, establishment of prudential regulations, introduction of additional requirements for the loans in foreign currency in order to reduce dollarization of the economy as well as to bring the normative and legal acts in line with amendments introduced in the legislation of the Kyrgyz Republic.

Licensing of Banks' Activities

New requirements for the minimum authorized capital and own funds for newly opened and existing commercial banks were established and the deadlines for formation thereof were determined to ensure sustainability, security and reliability of the banking system and to raise public confidence in the commercial banks.

The National Bank approved amendments and addenda to the Regulation "On licensing of banks' activities", aimed at simplifying the procedures for opening and functioning of branches, savings banks and field cash departments of the commercial banks. Amendments and addenda were introduced in the aforementioned normative and legal act in respect of licensing of the operations with precious metals in order to provide the commercial banks with an opportunity to implement operations with refined small bars.

Moreover, the Regulation "On procedure of providing capital by the non-resident bank to its branch" was approved in order to establish requirements for placement of capital allocated for the branch by the resident bank as restricted use funds in the National Bank.

Prudential Regulations and Requirements

Amendments and addenda were approved in the number of the regulatory and legal acts in order to strengthen the requirements for the banks in order to ensure liquidity, maintain an additional capital reserves (indicator "capital buffer"), to reduce dollarization and minimize indirect currency risks, when providing loans in foreign currency to the clients, whose income is generated in the national currency, and improve the quality of loans.

Amendments and additions envisage increase in the value of liquidity ratio, introduction of short-term liquidity ratios for the banks, as well as quick liquidity ratio for individual banks in order to minimize the risks in their activities. The requirement for support of "additional capital stock in the bank" (indicator "capital buffer") in order to pay dividends was strengthened. The requirements for newly issued loans in foreign currency were strengthened, according to these requirements the banks shall create larger volumes of reserve for new loans in foreign currency and smaller volumes of reserves in case of repeated restructuring of loans in foreign currency into loans in the national currency, and in case of repeated restructuring in respect of other types of amendments in the loan agreement (change of the interest rate, of the loan repayment), provided that certain conditions are met. These measures shall encourage banks to provide loans in the national currency to the borrowers, whose incomes are formed mainly in the national currency, as well as to comply with the clients' wishes on loans restructuring.

Loans in US Dollars

The National Bank strengthened the requirements for newly issued loans in foreign currency and diminished the requirements for new loans in the national currency in order to reduce dollarization of the economy and minimize indirect currency risks when providing loans in foreign currency. In particular, the banks shall create larger volumes of reserves for new loans in the national currency and in case of restructuring the loans in foreign currency into the loans in the national currency, provided if certain

conditions are met. Thus, lending banks shall pay particular attention to the structure of the client's income: the volume of the total income, which the client receives in the national and foreign currency.

Risk Management

Amendments and addenda were approved in the Regulation "On minimum requirements for operational risk management in the commercial banks of the Kyrgyz Republic" in order to bring it in conformity with the international standards on banking supervision, as well as taking into account the incidents, which occurred in several local banks with payment/processing centers located abroad. Requirements for the banks' policy on operational risk management and on application of outsourcing services by the banks were strengthened through introduction of amendments and addenda.

Enforcement Actions

In the reporting period, amendments and addenda were introduced in a number of normative and legal acts concerning the rules for application of the enforcement actions to the officials and/or significant participants of the bank in accordance with the legislation of the Kyrgyz Republic, as well as concerning establishment of the procedure for recognition of the bank's activity as an unhealthy and unsafe banking practices within the framework of improving the normative and legal acts of the National Bank on application of enforcement actions to the commercial banks and non-banking financial institutions.

Regulatory Banking Reporting

Amendments and addenda were approved in the Regulation "On periodic regulatory banking reporting" in order to examine the share of loans issued by the commercial banks in foreign currency, where there is a substantial currency risk in lending. Amendments envisage introduction of requirements on providing by the commercial banks the information on currency structure of the borrowers' incomes and on the number of clients' loans restructurings.

Contract Financing

In order to create conditions for development of the banking products and to reduce the associated risks of the bank, the amendments and addenda were introduced in the certain regulatory and legal acts related to the lending activities on providing the banking product such as contractual financing.

Deposit Protection System

Amendments and addenda were introduced in the Manual for management of database on obligations of the bank to the depositors in order to bring thereof in line with the amendments and addenda introduced in the Law of the Republic of Kazakhstan "On protections of bank deposits", these amendments and addenda envisage inclusion of the accounts of individual entrepreneurs in the deposit protection system. Moreover, the terms for submitting information about deposits of individuals and individual entrepreneurs by the special administrator to the Agency for deposits protection of the Kyrgyz Republic at the occurrence of warranty case.

Regulation of Non-banking Financial Institutions

In order to maintain stability in the microfinance sector amendments were introduced in the normative and legal acts governing the licensing of microfinance organizations and credit unions, which stipulate that in case of making a decision on voluntary liquidation, microfinance organizations and credit unions shall fulfil all obligations to the creditors, as well as to financial institutions.

The National Bank approved the new versions of the provisions regulating the registration and licensing of microfinance organizations and credit unions in order to improve the regulatory and legal framework governing the activities of the non-banking financial institutions. The existing rules with respect to the licensing of non-banking financial institutions were normalized and clarified in these

regulations, moreover, some amendments and addenda, aimed at improving the filing and examination of documents for obtaining a certificate/license and other licensing procedures, were introduced.

Moreover, prudential standards for microfinance and microcredit companies on the funds borrowing from the founders (shareholders) were established in the reporting period. Amendments and addenda were approved in the Regulation “On minimal requirements for conducting an external audit of microfinance organizations in the Kyrgyz Republic” in order to bring thereof in conformity with the Law of the Kyrgyz Republic “On audit activity” and improve the quality of financial reporting by microfinance companies and microcredit agencies. These amendments and addenda related to the establishment of appropriate criteria, which will make microcredit companies and microcredit agencies carry out external audit of their activities on an annual basis.

Amendments and addenda were introduced in the relevant normative and legal acts in order to set requirements for establishment of the Audit Committee, as well as the criteria for independence of the Board of Directors members in the specialized financial institution Financial Company Credit Unions OJSC.

Within the framework of protecting the rights of the consumers of financial services amendments and addenda were introduced in the Regulation “On minimum requirements for credit risk management in the credit unions” with regard to setting the requirements for the credit union agreement and the procedure of conclusion thereof. Introduction of amendments and addenda is conditioned by the usual practice in some credit unions to charge interest on the initial loan amount, which results in more expensive borrowing.

Islamic Principles of Financing

In order to further advance the Islamic principles of the banking and financing, amendments were adopted in the normative and legal acts on regulation of the banks’ activities operating under the Islamic principles of the banking and financing. These amendments were introduced in order to reduce the level of dollarization of the economy and to minimize the indirect currency risks, when crediting in foreign currency. Moreover, the requirements for establishment of the loan loss provisions for specific loans were amended.

Amendments were approved in the normative and legal acts on regulation of non-banking financial institutions operating based on the Islamic principles of the banking and financing. Approved amendments related to standardization of the model agreements between a financial institution and a client, establishment of the requirements for credit risk management and compliance with the limits of open currency positions.

Financial Soundness Indicators of the Kyrgyz Republic

(in percent)

	2011	2012	2013	2014	2015
Banking sector					
Indicators of the capital adequacy					
Regulatory capital to assets, weighted by risk	30.3	28.3	24.5	21.8	22.4
Tier I capital to assets, weighted by risk	24.6	22.3	19.5	16.4	18.1
Equity to total assets	21.6	19.7	17.0	16.2	15.6
Ratio of classified loans to equity	21.9	16.8	6.5	6.6	11.3
Equity to total liabilities	27.6	24.4	20.7	19.5	18.6
Quality of assets					
Ratio of classified loans to loan portfolio	10.2	7.2	5.5	4.5	7.1
Loan loss provisions to loan portfolio	6.3	4.7	3.3	2.6	3.8
Loan loss provisions to classified loans	61.6	64.9	59.6	58.8	53.3
Ratio of currency loans to loan portfolio	55.2	53.7	53.6	57.6	55.1
Returns indicators					
ROA	3.0	3.0	2.8	2.6	1.5
ROE	17.7	18.5	18.0	18.7	10.8
Interest margin to total income	45.0	44.7	57.3	58.6	47.6
Spread between reference rate on deposits and loans	9.4	8.0	7.7	7.9	7.1
Liquidity indicators					
Ratio of high liquid assets to total assets	35.0	36.8	33.2	28.3	31.9
Ratio of high liquid assets to short-term liabilities	74.9	80.0	69.9	65.0	77.8
Sensitivity of market risk					
Ratio of net foreign exchange position to equity	4.1	2.4	5.6	8.3	-2.1
Other financial corporations*					
Ratio of assets to total assets of the financial system	23.0	18.7	17.2	17.1	9.9
Ratio of assets to GDP	7.1	6.6	6.7	8.0	4.7
Corporate sector (medium- and large-sized enterprises)					
Return on assets (ROA)	5.9	6.7	5.5	-0.3	n/a
Return on equity (ROE)	12.7	16.3	16.4	-1.2	n/a
Ratio of total liabilities to equity (leverage)**	2.1	2.1	2.1	2.9	n/a
Current liquidity ratio	1.4	1.4	1.3	1.2	n/a
Households sector					
Ratio of the households' debt to GDP	8.5	9.1	13.4	18.1	n/a
Ratio of households' debt to disposable income	13.2	13.4	21.8	27.3	n/a

Source: NBKR, NSC KR, calculations: NBKR

*- other financial corporations are presented by NBFIs

** - equity of the corporate sector is represented exclusive of shares of Centerra Gold Company

GLOSSARY AND ABBREVIATIONS

A *bank deposit* is the amount of money, accepted by a financial and credit institution under contract from another person on the terms of repayment, payment and maturity. Deposits can be term and demand. Demand deposits are made without specifying the shelf life, and time deposits are made for a certain period.

A *bank loan* is money provided by a bank for a fixed period under the terms of repayment and payment of loan interest.

A *foreign exchange market* is a market in which the purchase/sale of foreign currencies is made. By the economic content, it is a sector of the money market, where supply and demand for a specific product such as currency are balanced. According to its purpose and form of organization, it is a set of specific institutions and mechanisms that in concert provide an opportunity to freely sell and/or buy domestic and foreign currency on the basis of supply and demand.

A *money market* is a market in which there is the giving and receiving of funds in the form of loans and securities for a short term within the range of participants.

Deposit institutions are financial corporations, except the central bank, the main activity of which is to accept deposits and subsequently place these funds on their behalf.

Household is an individual or a group of individuals who live together, run a joint household, combine all or part of their income and property and who consume certain types of goods and services (mainly, housing and food). Households may exercise any economic activity, including the production.

Return on securities is the ratio of the annual return on the security to its market price; the rate of return received by the owner of the security.

Duration is the weighted average term to maturity of the instrument. It can be used as a measure of the sensitivity of the cost of financial assets to interest rate changes, but not as maturity as such.

The housing affordability index is an indicator of the state of the housing market in terms of the possibility of acquiring apartments by the people. Calculated as the ratio of the average market value of a standard apartment (total area of 54 sq. m.) to the average annual income of a family of three (two adults and a child).

The payment system affordability index is a measure of the availability of the system as access to services and information for users of the system on their demand. Downtime of the system due to technical failures, power outages, late opening or early closing of the trading day of the system reduce the time to access the system.

The liquidity ratio of payment systems characterizes sufficiency of liquid funds in the accounts of the participants of the system for the payments and settlements.

Macroprudential analysis is an assessment and monitoring of strong sides and vulnerable spots of the financial system taken as a whole.

Minimum consumer budget is the cost of a set of minimum benefits and services to the subsistence minimum.

Living wage is the valuation of the minimum set of benefits and services that are equal to the value of the minimum consumer basket, necessary for the preservation of human life and his/her health, and the amount of required payments and fees.

Disposable income is income that goes to private consumption and is free from tax. Personal disposable income is the difference between personal income and the amount of taxes or, appropriately, is the sum of consumption and the amount of savings.

A *real interest rate* is the nominal interest rate adjusted for inflation.

A *securities market* is organized exchanges and structures such as securities depository companies, accounting and clearing houses, as well as other companies that provide services related to the activities of the exchange. This category includes depositories and electronic clearing systems, the activity of which

is ensured by financial corporations and national self-regulatory organizations of oversight over the activities of stock exchanges and related institutional units or their regulation.

Stress tests are methods used for assessment of profiles vulnerability with respect to significant changes in the macroeconomic situation or exceptional but possible events.

An *unemployment rate* is the percentage of the actual number of unemployed to the total economically active population.

Financial assets include equity instruments and units/shares of investment funds, debt instruments, derivatives, stock options for employees and monetary gold.

A *financial market* is defined as a market in which economic actors sell and purchase financial claims in accordance with the established rules of behavior of participants.

VaR (Value at Risk) is maximum possible losses in monetary terms within a certain period of time.

ADB	– Asian Development Bank
GDP	– Gross Domestic Product
SRS GKR	– State Registration Service under the Government of the Kyrgyz Republic
POL	– Petroleum and Oil
GS	– Government Securities
EEU	– Eurasian Economic Union
HUS	– Housing and Utilities Sector
CJSC	– Closed Joint-Stock Company
CPI	– Consumer Price Index
CAR	– Capital Adequacy Ratio
KR	– Kyrgyz Republic
KSE	– Kyrgyz Stock Exchange
IMF	– International Monetary Fund
MY	– Marketing Year
MF KR	– Ministry of Finance of the Kyrgyz Republic
MFO	– Microfinance Organization
NBKR	– National Bank of the Kyrgyz Republic
NSC KR	– National Statistical Committee of the Kyrgyz Republic
NBFIs	– Non-banking Financial Institutions
NGS	– Non-Government Securities
OJSC	– Open Joint-Stock Company
OECD	– Organization for Economic Cooperation and Development
RK	– Republic of Kazakhstan
LLP	– Loan Loss Provisions
RF	– Russian Federation
CIS	– Commonwealth of Independent States
SFBR	– Specialized Fund for Banks Refinancing
USA	– United States of America
FAO	– Food Agriculture Organization of the United Nations
FI	– Financial Institution
CBRF	– Central Bank of the Russian Federation
NTC	– Net Total Capital