



**National Bank  
of the Kyrgyz Republic**

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

**November 2017**

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**Bishkek**

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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 on the general assessment on the stability and soundness of the financial system of the Kyrgyz Republic.

**Financial Stability** in this publication means smooth and continuous functioning 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 forming the main directions of the National Bank's 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 financial stability issues.

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## MAJOR CONCLUSIONS<sup>1</sup>

**At the end of the first half of 2017, the results of macroprudential analysis, econometric and financial forecasting modeling, and “reverse” stress tests indicated to the sustainability of the financial sector.**

**Country risk still remains moderate for the banking sector.** Deterioration of the macroeconomic environment in the countries - major trade partners of the Kyrgyz Republic can indirectly influence the banking sector due to potential deterioration in the financial performance of the banks' clients in Kyrgyzstan.

**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.

**On the background of the low level of interbank lending “contagion”<sup>2</sup> risk remains insignificant.** This is also due to the presence of collateral in case of interbank lending and weak interlinkages between the commercial banks of the Kyrgyz Republic.

**The results of stress tests of the banking sector of the Kyrgyz Republic indicated its soundness to certain macroeconomic shocks.** According to conducted stress-tests most of the banks still demonstrated sustainability to combined macroeconomic shocks.

**The banking sector of the Kyrgyz Republic still retains the financial strength.** The results of econometric and financial forecasting modeling, as well as “reverse” stress tests still indicate the availability of financial safety buffer at the end of the first half of 2017 compared with the first half of 2016.

**According to the results of the first half of 2017, the payments systems of the Kyrgyz Republic operated normally,** the level of system risks in the financial infrastructure was assessed as moderate.

**An increase of the price index for residential real estate was observed in the real estate market.**

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<sup>1</sup> The data of periodic regulatory bank reporting are used in this publication taking into account adjustments introduced by the banks for the previous periods.

<sup>2</sup> “Contagion” risk in case of interbank lending is particularly meant.

## I. MACROECONOMIC AND FINANCIAL ENVIRONMENT

### 1.1. Macroeconomic Conditions and Risks

*Saturation of the domestic market with agricultural goods and the policy of the National Bank of the Kyrgyz Republic to restrain excess supply of money to the economy conditioned moderate inflation rates.*

*Despite positive dynamics of economic growth in the first half of 2017, macroeconomic risks are still observed in the country. Meanwhile, weak diversification of the economy and dependence of the economy on external macroeconomic environment are the main restraining factors.*

#### *Gross Domestic Product*

Generally, rapid economic growth was observed at the end of the first half of 2017. In the second quarter, there was a slight slowdown in the economic growth compared with the first half of 2017. Observed slowdown was mainly due to long-lasting recession in the communication sector. In the reporting period GDP<sup>3</sup> increased by 6.4 percent (in the first half of 2016, GDP decreased 3.1 percent), excluding companies for the development of gold mining “Kumtor”, GDP increased by 3.1 percent (in the first half of 2016, GDP increased by 1.0 percent). The difference in the growth rates shows preservation of the significant influence of Kumtor enterprises on the economy as a whole, as well as on export.

The sectors of industry (5.2 p.p.), trade (0.7 p.p.), construction (0.3 p.p.) and agriculture (0.1 p.p.) made the most significant positive contribution to economic growth, meanwhile, the sector of communication made a negative contribution to economic growth (-1.2 p.p.).

The deflator decreased by 5.8 p.p. compared with the first half of 2016 and made 0.8 percent.

In January-June 2017, the industrial sector grew by 31.3 percent compared with the same period of 2016 mainly due to increase in extraction of minerals (77.6 percent) and in production volumes of processing industries (31.4 percent).

Agricultural production grew by 1.2 percent compared to an increase by 1.6 percent in the first half of 2016. Growth was due to increased production in the livestock sector.

Growth in the construction sector made 4.8 percent; this process was accompanied by increase in fixed capital investments by 4.1 percent. Growth in the construction sector was due to increase in subcontracting works, other capital construction and construction repair works and expenses, as well as total and current renovation of buildings and structures. In the reporting period, the volume of investments financed from internal sources increased by 0.1 percent and from external sources by 17.0 percent.

Increase in the sector of transportation (5.4 percent) and in the sector of trade (3.9 percent) contributed to the growth in the sphere of service by 0.02 percent. Meanwhile, reduction was observed in the sphere of communication (-25.9 percent).

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<sup>3</sup> Preliminary data.



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

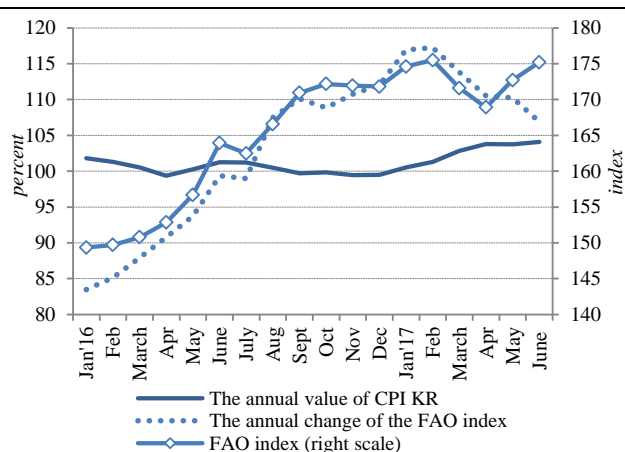
	January-June					
	2016			2017		
	Share, percent	Growth rate, percent	Contri- bution in growth, perc. points	Share, percent	Growth rate, percent	Contri- bution in growth, perc. points
<b>GDP</b>	<b>100.0</b>	<b>-3.1</b>	<b>-3.1</b>	<b>100.0</b>	<b>6.4</b>	<b>6.4</b>
Agriculture, forestry and fishery	9.5	1.6	0.2	8.9	1.2	0.1
Industry	16.6	-20.0	-4.2	20.7	31.3	5.2
Mining	0.9	30.0	0.3	1.7	77.6	0.7
Processing sectors (Processing industry)	13.5	-23.8	-4.2	16.7	31.4	4.2
Provision (supply) of electric energy, gas, steam and conditioned air	1.9	-11.9	-0.3	2.1	12.1	0.2
Water supply, waste treatment and processing, receipt of recyclable materials	0.2	6.3	0.02	0.2	3.4	0.01
Construction	6.6	6.7	0.4	6.5	4.8	0.3
Services	54.6	1.8	0.9	52.3	0.02	0.01
Wholesale and retail trade; repair of cars and motor-cycles	16.9	5.2	0.9	16.9	3.9	0.7
Transportation activity and storage of cargo	4.6	-2.7	-0.1	4.6	5.4	0.3
Information and communication	4.8	-3.1	-0.2	3.8	-25.9	-1.2
Activity of hotels and restaurants	1.6	6.1	0.1	1.5	6.8	0.1
Financial intermediation and insurance	0.2	1.3	0.0	0.2	1.3	0.0
Operations with real estate	3.3	-1.8	-0.06	3.1	-2.0	-0.07
Professional, scientific and technical activity	1.8	0.8	0.01	1.6	0.5	0.01
Administrative and auxiliary activity	0.5	-1.7	-0.01	0.4	-2.6	-0.01
State administration and defence; obligatory social security	6.6	0.9	0.05	6.3	0.6	0.0
Education	8.9	2.6	0.2	8.4	2.6	0.2
Healthcare and social servicing of population	3.4	1.4	0.04	3.5	1.3	0.04
Art, entertainment and rest	0.7	1.4	0.01	0.7	2.3	0.02
Other servicing activity	1.4	-1.9	-0.03	1.4	-2.3	-0.03
Net (exclusive of subsidies) taxes on products	12.7	-3.1	-0.4	11.6	6.4	0.8

Source: NSC KR

### *Inflation*

In early 2017, the inflation rose from a near-zero level, and since April 2017 it made approximately 4.0 percent. Dynamics of the inflation rate was largely formed under the influence of changes in prices for food products and, in particular, prices for vegetables and fruits. Prices for fruit and vegetable products increased significantly due to lower supply-demand ratio of vegetables in the first half of 2017 and the low base of 2016; moreover, there was also a moderate increase in prices for meat products in annual terms. As a result, the price index in the food group of goods moved from the negative zone to the positive zone, which contributed to an increase in the inflation rate. A number of indicators showed a relatively weak consumer demand in the Kyrgyz Republic, which, together with a slowdown in inflation expectations, explains a decrease in the growth of the inflation rate basic components down to 4-5 percent from 7-8 percent in the previous years.

**Chart 1.1.1. Dynamics of the Kyrgyz CPI and the FAO Index**



Source: NSC KR, [www.fao.org](http://www.fao.org)

### State Budget

Since 2016, there was a significant increase in the Government's participation in stimulating economic growth. Despite the excess of current revenues over expenditures, relatively high expenditures on capital investments resulted in the state budget deficit, which in the first half of 2017 amounted to 2.0 percent of GDP. The structure of budget revenues remained unchanged: more than 50 percent of the budget revenues are formed due to taxation of foreign economic activity.

The public debt remains at a high level due to implementation of large investment projects with participation of the Government. At the end of June 2017, the total government debt was 60.8 percent of GDP<sup>4</sup>. At the same time, financing of target projects is implemented due to external borrowing from international financial organizations. The share of external debt in the structure of the general government debt was 91.2 percent, the share of internal debt – 8.8 percent.

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

	January-June 2016		January-June 2017	
	billions of KGS	% of GDP	billions of KGS	% of GDP
<b>Total incomes (including sales of nonfinancial assets)</b>	61.8	34.2	69.9	36.0
including incomes from operational activity	61.8	34.2	69.8	36.0
sale of nonfinancial assets	0.1	0.0	0.0	0.0
<b>Total expenditures (including purchase of nonfinancial assets)</b>	74.2	41.1	73.8	38.1
including expenditures for operational activity	56.4	31.2	59.3	30.6
purchase of nonfinancial assets	17.8	9.8	14.6	7.5
<b>Deficit(-) / Surplus (+)</b>	-12.4	-6.9	-4.0	-2.0
<b>Primary deficit(-) / surplus (+)</b>	-9.8	-5.4	-1.1	-0.6
<b>Budget financing</b>	20.5	11.4	11.7	6.0
External financing	9.1	5.1	6.3	3.3
Internal financing	11.4	6.3	5.4	2.8

Source: MF KR

<sup>4</sup> The indicator is calculated on the basis of sliding annual GDP data. US dollar equivalent of GDP is recalculated at the average exchange rate.

### *Macroeconomic Risks*

Recovery of economic growth in the EAEU countries - main trading partners of the Kyrgyz Republic was among the favorable factors that influenced economic growth in the first half of 2017, as a result there is improvement in the trade indicators of the Kyrgyz Republic. This trend indicates a positive impact and, accordingly, the possible preservation of positive growth rates by the end of 2017. In addition, GDP, excluding companies for the development of gold mining “Kumtor”, demonstrates sustainable growth. At the same time, macroeconomic risks remain due to preservation of structural problems in the economy and an uncertain situation in the world economy. On the part of internal factors, despite the positive value of remittances in the first half of 2017, domestic demand remains negative. Moreover, the total GDP still depended on the volume of work of companies for the development of gold mining “Kumtor”.

Wide amplitude of change in prices for food products is the main factor of profound deviations of the inflation rate from the target values. Prices for food products depend on the harvest in the Kyrgyz Republic, as well as on the situation in the international food markets, often demonstrating significant fluctuations. Since food products account for about half (46 percent) of the consumer basket of households in the Kyrgyz Republic, this has a significant impact on the inflation rate. Strengthening trade relations with trading partner countries presents the potential for complementing and compensating supply and demand for goods between countries, however, there are risks of transferring the inflationary effect of a shortage of goods in the foreign markets to the market of the Kyrgyz Republic. In view of the large share of goods imported in the domestic markets of the Kyrgyz Republic, exchange rate fluctuations and prices established in the foreign markets can also have a significant impact on the inflation rate of the Kyrgyz Republic.

Despite the moderate policy of increasing government expenditures and the Kyrgyz Republic’s debt amortization to the Russian Federation on previously received loans, the country’s debt burden remains at a high level, which creates certain risks. Large amounts of the country’s debt can have a negative impact on the state’s solvency, thereby weakening the sustainability of public finances.

## 1.2. Structure of the Financial Sector

Institutional structure of the financial sector in the Kyrgyz Republic is represented by commercial banks and other financial institutions (nonbanking 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)

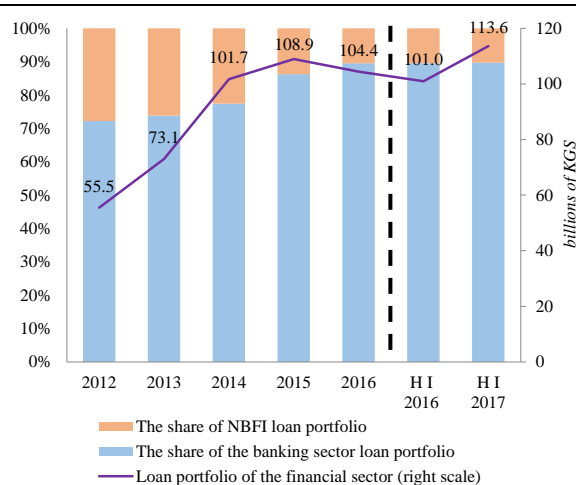
Financial institutions	2014	2015	2016	H I 2016	H I 2017
<b>Commercial banks</b>	23	24	25	25	25
<b>Other financial companies, including:</b>	689	656	704	663	690
<i>Nonbanking financial institutions (NBFIs), including:</i>	660	627	673	633	659
Micro-financial organizations, including:	215	172	162	168	159
micro-crediting companies	154	109	103	106	101
micro-crediting agencies	56	57	53	56	52
micro-financial companies	5	6	6	6	6
“FCCU” OJSC	1	1	1	1	1
Credit unions	135	125	116	119	114
Exchange offices	309	329	394	345	385
<i>Insurance companies</i>	17	17	19	18	19
<i>Investments funds</i>	9	9	9	9	9
<i>Stock exchanges</i>	1	1	1	1	1
<i>Pension funds</i>	2	2	2	2	2

Source: NBKR, NSC KR

As of the end of the first half of 2017, assets of the banks and nonbanking financial institutions constituted KGS 197.8 billion or 42.0 percent of GDP.

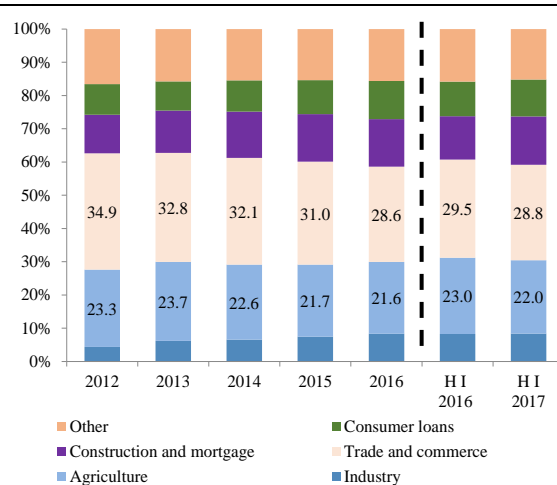
In the first half of 2017, the total loan portfolio of the banks and nonbanking financial institutions constituted KGS 113.6 billion or 24.1 percent of GDP. The share of the banks' loans in the loan portfolio of the financial sector increased by 0.2 p.p. and at the end of the first half of 2017 made 89.7 percent (Chart 1.2.1).

**Chart 1.2.1. Structure of the Loan Portfolio**



Source: NBKR

**Chart 1.2.2. Sectoral Structure of the Loan Portfolio in the Financial Sector**



Source: NBKR

The high concentration was still observed in the trading sector and agriculture within the sectoral structure of the loan portfolio in the financial sector. The aggregate share of the loan portfolio in the financial sector of the above-noted sectors of the economy at the end of the first half of 2017 constituted 50.8 percent of total issued loans or KGS 57.7 billion (Chart 1.2.2).

### 1.3. Financial Markets

*In the first half of 2017, the situation in the domestic foreign exchange market was relatively stable, despite the increase key interest rate of the Federal Reserve System.*

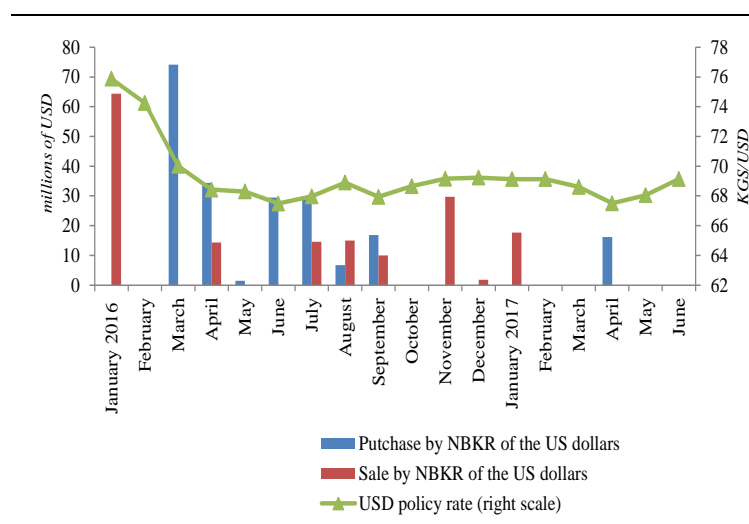
*There was a decline in the activity of market participants in the interbank credit market, which resulted in a reduction in the volume of repo operations with a decrease in their value. Moreover, there was also a decrease in transactions conducted in the national currency.*

*Increased demand for government securities resulted in decrease of profitability of these securities. Meanwhile, the demand for the National Bank Notes decreased.*

#### 1.3.1. Currency and Money Market

##### Currency Market

**Chart 1.3.1.1. Dynamics of Interventions of the NBKR in the US Dollar Market**



Despite the policy of the US Federal Reserve System to tighten monetary policy (the base rate was increased twice in the first half of 2017 by 0.25 p.p.) and implementation of the soft monetary policy of the Central Bank of the Russian Federation and the National Bank of the Republic of Kazakhstan in the reporting period, significant changes of the exchange rate were not observed in the domestic currency market of the Kyrgyz Republic. Moreover, there was a weakening of internal pressure on the Kyrgyz som, due to the decreased demand for foreign currency.

The official exchange rate of the US dollar decreased in the first half of

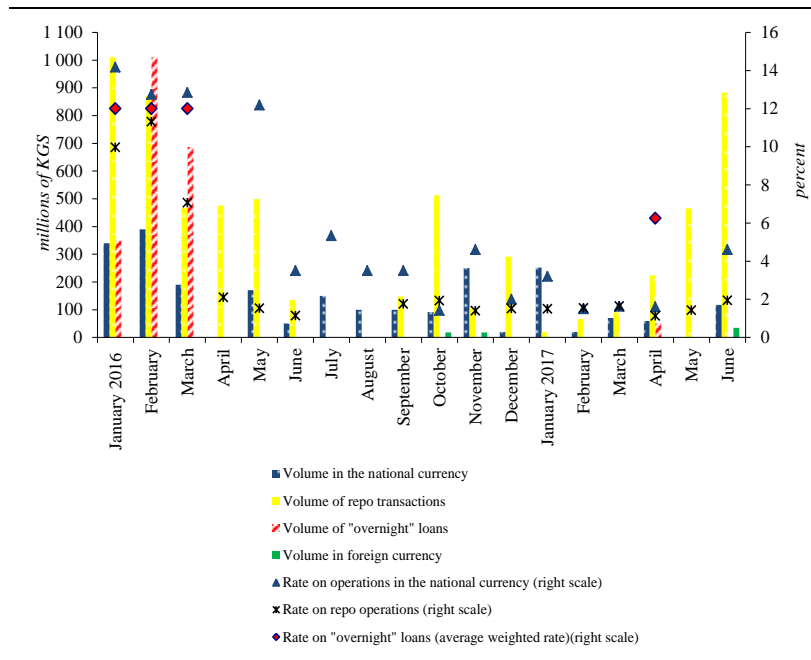
2017 by 0.1 percent, from KGS 69.2301 to KGS 69.1367/USD 1.

As before, the National Bank conducted foreign exchange market interventions, both on selling and buying foreign currency to smooth sharp fluctuations of the exchange rate. In the first half of 2017, net sale of foreign currency by the National Bank amounted to USD 1.5 million: the volume of operations on purchase of the foreign currency by the commercial banks amounted to USD 16.2 million, on sale – USD 17.7 million.

##### Money Market

In the reporting period, activity of the commercial banks decreased on the background of existing high level of excess liquidity in the banking sector in the interbank borrowings market. In general, repo transaction still prevailed in the interbank market. Meanwhile, in the reporting period repo transactions decreased by 49.5 percent compared with the same indicator of 2016 and amounted to KGS 1.7 billion at the average weighted rate of 1.7 percent (-5.6 p.p.). Since overnight loan is not an investment loan and it is provided to the commercial banks in order to support short-term liquidity, the volume of loans issued by the National Bank in the first half of 2017 decreased due to the presence of excess liquidity in the banking system. As a result, the volume of overnight loans declined down to KGS 50.0 million, a decrease by 97.6 percent compared with the same indicator of 2016.

**Chart 1.3.1.2. Dynamics of Operations and Interest Rates in the Interbank Credit Market**

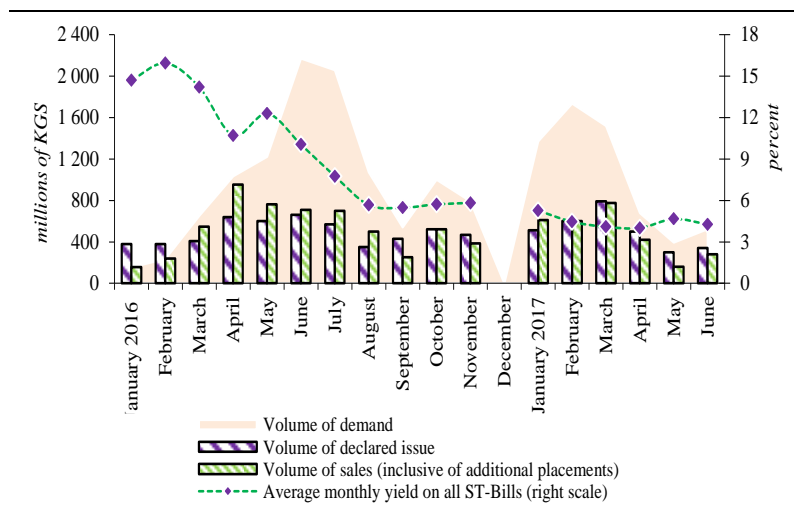


The volume of the standard credit interbank transactions in the national currency decreased down to KGS 518.4 million (-54.5 percent) at the average weighted rate of 3.1 percent (-9.6 p.p.). In the reporting period, the transactions in foreign currency amounted to KGS 34.1 million at the average weighted rate of 4.0 percent; meanwhile, the transactions were not conducted in the same period of 2016.

Due to high risk of excess liquidity, overnight deposits increased by 68.0 percent compared with the first half of 2016 and amounted to KGS 1,244.1 billion.

### 1.3.2. Securities Market

**Chart 1.3.2.1. Dynamics of Demand, Supply and Yield of ST-Bills**

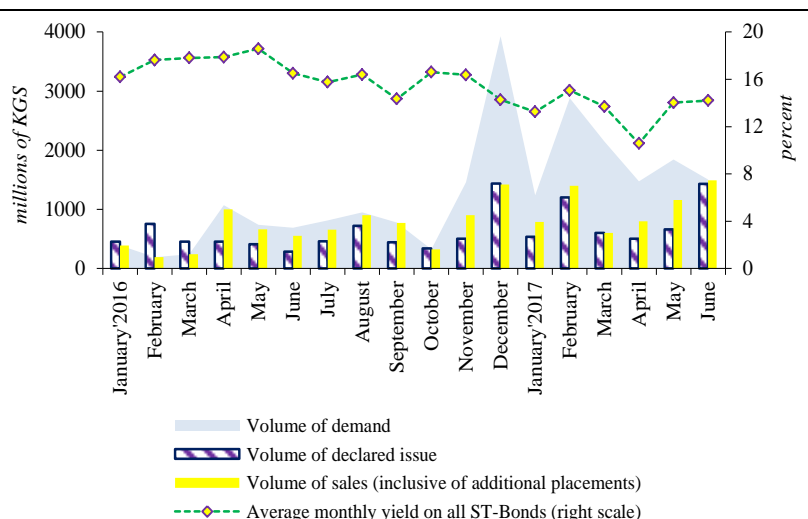


At the auctions conducted in January-June 2017, the total volume of declared issue of the state treasury bills (hereinafter referred to as ST-Bills) increased by 0.6 percent compared with the same indicator of 2016, up to KGS 3.1 billion. Given increase of demand by 17.7 times on the part of the participants of the securities market, the volume of actual sales (including additional placement) decreased by 15.5 percent compared to the same indicator of 2016 and amounted to KGS 2.8 billion.

Thus, at the end of the first half of 2017, the volume of ST-Bills in circulation decreased by 5.9 percent year-to-date and amounted to KGS 4.1 billion. The commercial banks are the major group of the ST-Bills holders with the total share of 82.9 percent (+17.1 p.p.), the share of institutional investors made 16.4 percent (-16.9 p.p.), resident legal entities – 0.7 percent (-0.2 p.p.).

Significant excess of demand over supply of the state treasury bills was accompanied by a decline in profitability of securities on all types of maturity – in the first half of 2017, the average monthly profitability of the ST-Bills made 4.6 percent (-8.4 p.p. compared with the same indicator of 2016).

**Chart 1.3.2.2. Dynamics of Demand, Supply and Yield of ST-Bonds**



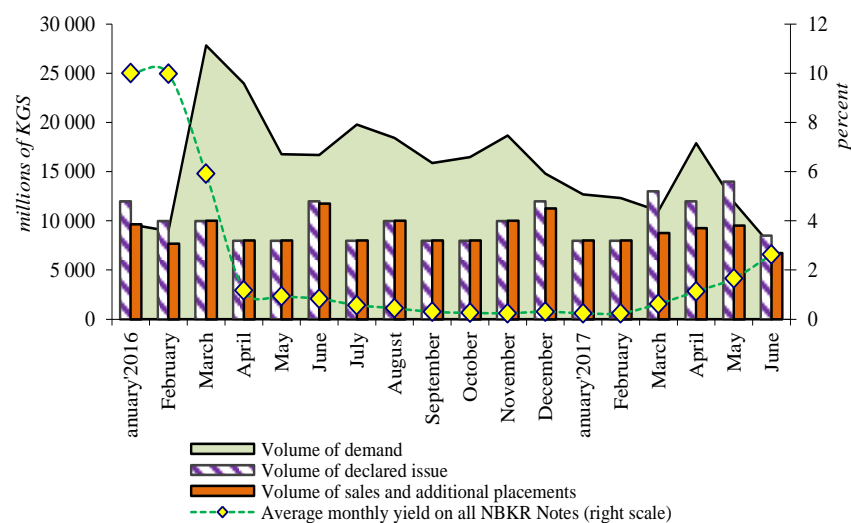
In the first half of 2017, the total volume of supply of the state treasury bonds (hereinafter referred to as ST-Bonds) issued by the Ministry of Finance increased by 76.5 percent compared to the same indicator of 2016 and amounted to KGS 4.9 billion. This segment, like the state treasury bills market, demonstrated significant increase in demand by 3.3 times compared with the same indicator of 2016.

The ST-Bonds additional placement conducted by the Ministry of Finance adjusted the total

sales, which finally exceeded the supply of these securities by 26.6 percent and amounted to KGS 6.2 billion (by 2.1 times compared with the same indicator of 2016). Finally, the volume of state treasury bonds in circulation increased by 27.7 percent year-to-date, up to KGS 17.5 billion.

Decreased profitability of ST-Bills was accompanied by a decline in profitability of ST-Bonds on the background of excess of demand for these securities over supply thereof, down to 13.5 percent (-4.0 p.p.).

**Chart 1.3.2.3. Demand and Placement of the National Bank of the Kyrgyz Republic Notes**



In the reporting period, 7-and 28-day notes of the National Bank of the Kyrgyz Republic (in the first half of 2016, 7-and 14-day notes of the National Bank of the Kyrgyz Republic) were offered for placement in the amount of KGS 63.5 billion in line with the conducted monetary policy, an increase by 5.8 percent compared to the indicator of 2016.

Sales of the National Bank notes decreased by 8.7 percent, down to KGS 50.3 billion on the background

of declined demand for these notes by 29.5 percent (down to KGS 73.2 billion). Thus, sales of 7-day notes amounted to KGS 36.6 billion (-28.2 percent) and 28-day notes – KGS 13.6 billion.

The results of the auctions conducted in the first half of 2017 showed that the total weighted average revenue was 1.1 percent, a decrease by 3.7 p.p. compared with the same indicator of 2016.



## 1.4. Real Estate Market

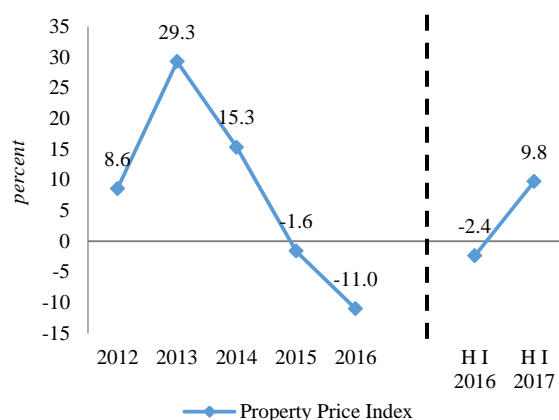
The real estate market of the Kyrgyz Republic experienced increase of the price index <sup>5</sup>, due to growth in prices for apartments (in the reporting period, prices increased by 6.8 p.p.), and individual houses (an increase by 14.4 p.p.) compared with the first half of 2016.

Increase of the price level for the real estate and decrease in the level of the average wage negatively influenced the housing affordability index.

Risks to the financial sector from the real estate market remain moderate.

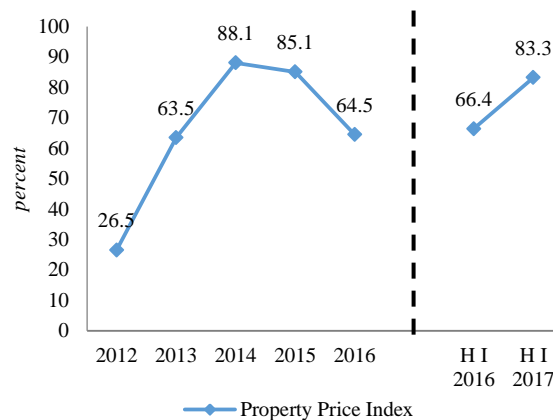
At the end of the first half of 2017, increase in property price index compared with the first half of 2016 was observed in the Kyrgyz Republic (Chart 1.4.1 and Chart 1.4.2).

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



Source: SRS GKR, NBKR calculations

**Chart 1.4.2. Basis Price Index Growth Rate in the Real Estate Market <sup>6</sup>**



Source: SRS GKR, NBKR calculations

As of June 30, 2017, the average price for 1 square meter of housing (apartments) in Bishkek increased by 4.4 percent and in Osh – by 15.9 percent compared with the first half of 2016 (Chart 1.4.3). The average price for 1 square meter of individual houses in Bishkek increased by 9.4 percent and in Osh – by 31.1 percent, (Chart 1.4.4).

<sup>5</sup> The Laspeyres index method was used in developing 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 type of real estate;

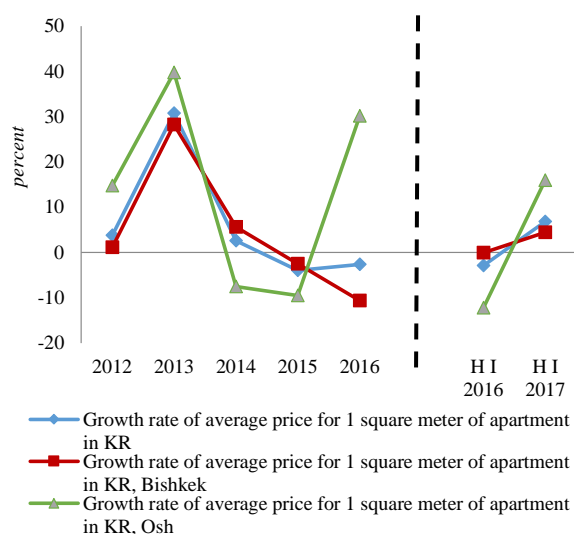
$Q_{oi}$  = number of real estate of type  $i$  in the base period;

$P_{oi}$  = price of real estate of type  $i$  in the base period;

$P_{ti}$  = price of the real estate of type  $i$  in the current period.

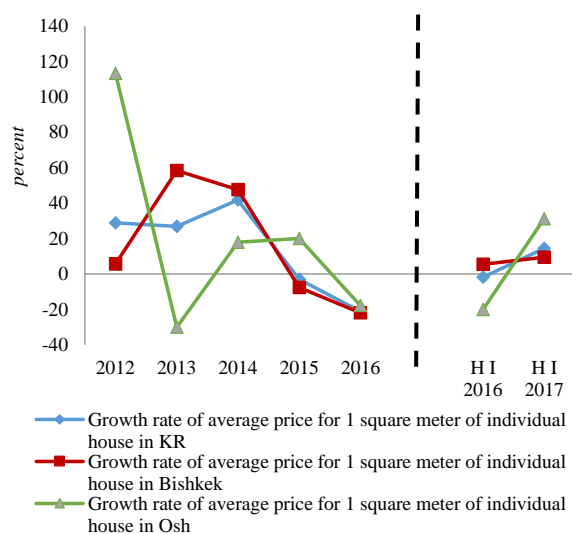
<sup>6</sup> The year 2010 was taken as the basis period.

**Chart 1.4.3. Dynamics of Price Changes for Apartments**



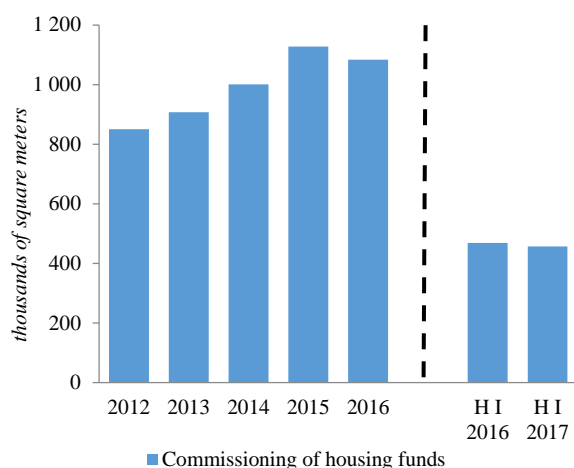
Source: SRS GKR, NSC KR, NBKR calculations

**Chart 1.4.4. Dynamics of Price Changes for Individual Houses**



Source: SRS GKR, NSC KR, NBKR calculations

**Chart 1.4.5. Dynamics of Housing Commissioning**



Source: SRS GKR, NSC KR, NBKR calculations

Note: data for the reporting period

At the end of the first half of 2017, the decrease in the aggregate level of commissioning of housing funds constituted 2.6 percent compared with the first half of 2016 (Chart 1.4.5). The main share of commissioned housing still accounted for Bishkek city and Chui oblast, Osh city and Osh oblast (Table 1.4.1).

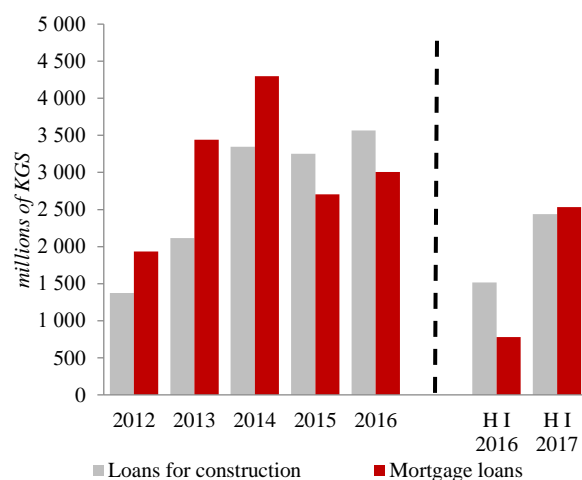
**Table 1.4.1. Geographic Structure of Commissioned Housing**

	Total commissioned area thous. sq.m	Share of total area, %	Total commissioned area thous. sq.m	Share of total area, %
Bishkek city and Chui region				
Osh city and Osh region	85.4	18.2	99.2	21.7
Other regions of KR	141.1	30.1	170.0	37.2
<b>Total</b>	<b>468.8</b>	<b>100.0</b>	<b>456.6</b>	<b>100.0</b>

Source: NSC KR

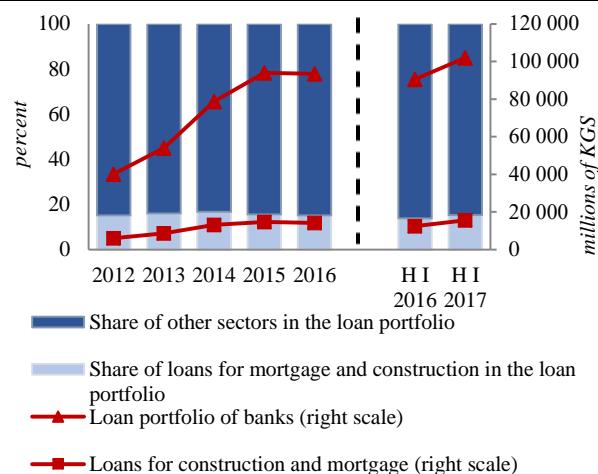
The total mortgage loans and loans issued to finance the construction constituted KGS 5.0 billion (Chart 1.4.6).

**Chart 1.4.6. Loans Provided for Construction and Mortgage**



Source: NBKR  
Note: data for the reporting period

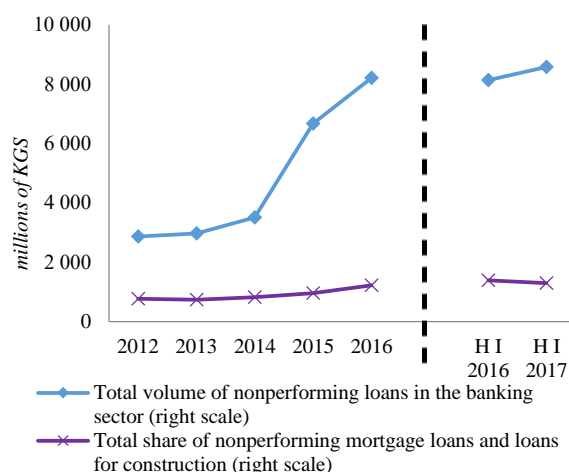
**Chart 1.4.7. Total Share of Loans for Mortgage and Construction in the Loan Portfolio of Commercial Banks**



Source: NBKR  
Note: data for the end of the reporting period

As of June 30, 2017, total loans of the commercial banks for mortgage and construction increased by 25.0 percent compared with the first half of 2016 and amounted to KGS 15.6 billion. Meanwhile, the total share of loans for construction and mortgage in the loan portfolio of the commercial banks increased by 1.5 p. p. compared with the first half of 2016 and constituted 15.3 percent (Chart 1.4.7).

**Chart 1.4.8. Dynamics of Nonperforming Loans**



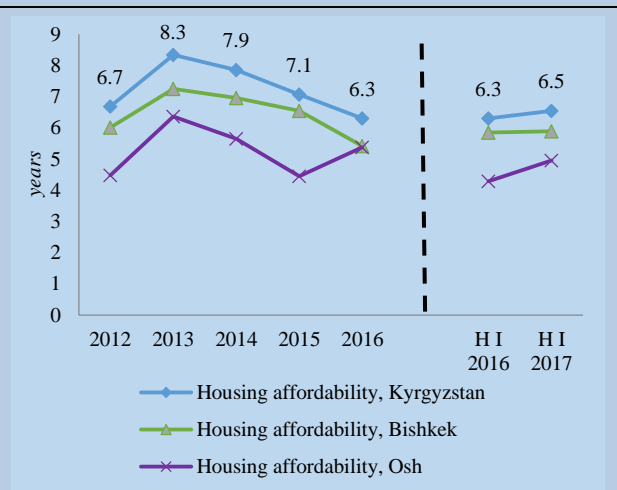
Source: NBKR

As of June 30, 2017, the total volume of nonperforming loans for mortgage and construction amounted to KGS 1,298.9 million (Chart 1.4.8).

### Box 1. Housing Affordability Index

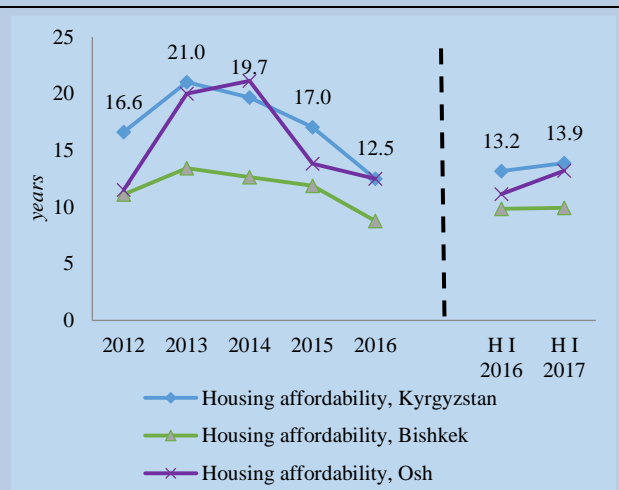
As of June 30, 2017, the housing affordability in the Kyrgyz Republic decreased slightly (index value increased by 0.2 years) compared with the first half of 2016. This is due to outstripping growth rates in prices for real estate over growth rates of average monthly wage (Chart 1.4.9).

**Chart 1.4.9. Housing (Apartments) Affordability Index without Minimal Consumer Budget**



Source: NSC KR, SRS GKR, NBKR calculations

**Chart 1.4.10. Housing (Apartments) Affordability Index including Minimal Consumer Budget**



Source: NSC KR, SRS GKR, NBKR calculations

According to the results of the first half of 2017, to purchase an apartment of 54 square meters in the Kyrgyz Republic one should save all wages for 6.5 years.

By the end of the reporting period, a family in the Kyrgyz Republic with the minimum consumer budget of KGS 15,157.2 (42.9 percent of total family income) will need 13.9 years in order to purchase housing (Chart 1.4.10).

### Box 2. Stress Testing of Impact from Price Changes in the Real Estate Market on the Banking Sector<sup>7</sup>

As of June 30, 2017, the share of loans, secured by pledged real estate, constituted 53.5 percent of the total volume of loans (exclusive of “FINCA Bank” CJSC and “Bank Companion” CJSC).

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

Stress testing<sup>8</sup> is focused on quantitative assessment of possible losses from outstanding loans and identification of the most vulnerable banks (groups of banks).

#### Scheme 1. Results of Stress Testing of Impact from Price Changes in the Real Estate Market on the Level of Credit Risk of the Banking Sector

Scenario	Potential losses of the banking sector	Potential losses of large banks	Risk of capital adequacy ratio violation*
"Historical" scenario* (decrease in price for real estate by 23% per a year)	-----	-----	3 banks
"Alternative" scenario (decrease in price for real estate by 40% per 2 years)	-----	-----	4 banks
"Negative" scenario (decrease in price for real estate by 50% per a year)	KGS-18.6 billion	KGS-3.4 billion	10 banks

\* 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 potentially suffer losses, was calculated. The banking sector potentially suffers losses if prices for the real estate decrease by 23 percent, large banks – by 40 percent.

#### Scheme 2. Comparative Analysis of the Results of Stress Test with the Stress Test Conducted on December 31, 2016.

	Stress test as of December 31, 2016	Stress test as of June 30, 2017
<b>Banking sector</b>	Scenario 1: ----- Scenario 2: ----- Scenario 3: KGS-10.5 billion	Scenario 1: ----- Scenario 2: ----- Scenario 3: KGS-18.6 billion
<b>Large banks</b>	Scenario 1 and 2: ----- Scenario 3: KGS-3.8 billion	Scenario 1 and 2: ----- Scenario 3: KGS-3.4 billion
Banks subjected to credit risk most of all in case of decrease in prices	<i>6 banks</i>	<i>6 banks</i>
The level of decrease in prices, when losses occur	<i>in the banking sector: 33%</i>	<i>in the banking sector: 23%</i>
The level of decrease in prices, when the risk of capital adequacy ratio violation occurs	<i>in the banking sector: 57%</i>	<i>in the banking sector: 50%</i>

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.

<sup>7</sup> Stress test was conducted on the basis of the commercial banks' data provided in the course of the survey as of June 30, 2017.

<sup>8</sup> According to the data provided in the course of the commercial banks' survey.

## II. BANKING SECTOR

*Growth of major indicators of the banking sector: assets, loan portfolio and resource base was observed in the first half of 2017 compared with the same period of 2016.*

*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.*

*Generally, the results of stress testing indicate a moderate level of risk in the banking sector.*

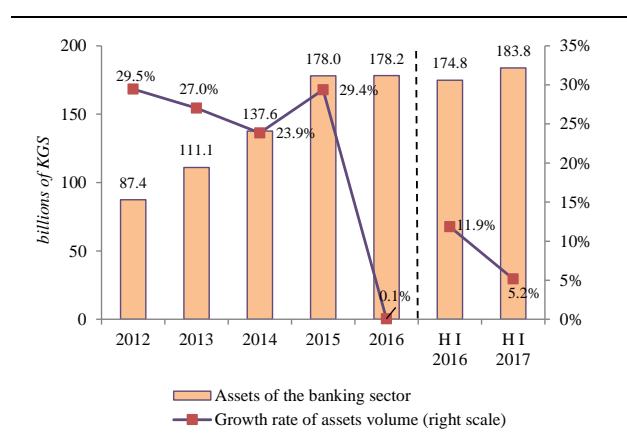
### 2.1. Major Trends

As of June 30, 2017<sup>9</sup> 25 commercial banks (including the Bishkek branch of the National Bank of Pakistan) and 319 of their branches worked in the territory of the Kyrgyz Republic, among which there were 17 banks with foreign participation in the capital, including 14 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.

#### 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 the first half of 2017 amounted to KGS 183.8 billion, having increased by 5.2 percent compared with the first half of 2016 (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 loan portfolio by 12.7 percent or KGS 11.5 billion;
- the securities by 18.3 percent or KGS 2.4 billion.

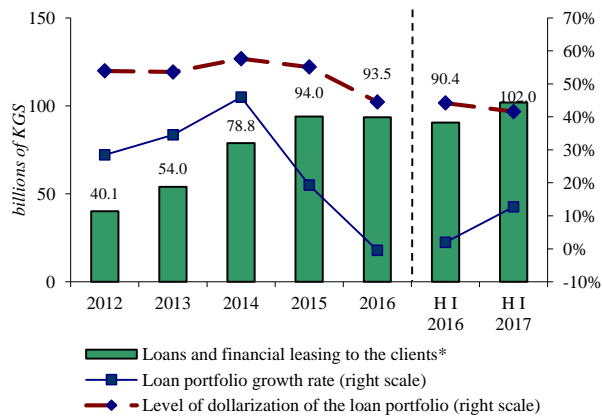
The share of loan portfolio in the structure of assets constituted 55.5 percent.

<sup>9</sup> The data are submitted according to periodic regulatory reporting of the commercial banks (PRBR).

### Loan Portfolio

At the end of the first half of 2017, the level of dollarization of the loan portfolio in the banking sector decreased by 2.6 p.p. compared with the first half of 2016 and amounted to 41.6 percent (Chart 2.1.2).

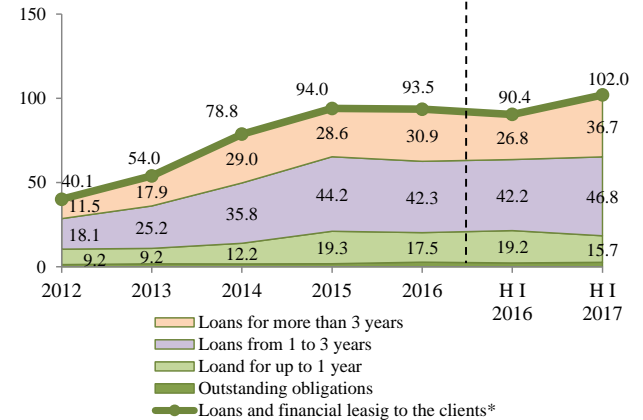
**Chart 2.1.2. Dynamics of Loan Portfolio in the Banking Sector**



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

**Chart 2.1.3. 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 45.9 percent or KGS 46.8 billion at end of the first half of 2017 (Chart 2.1.3).

### Liabilities

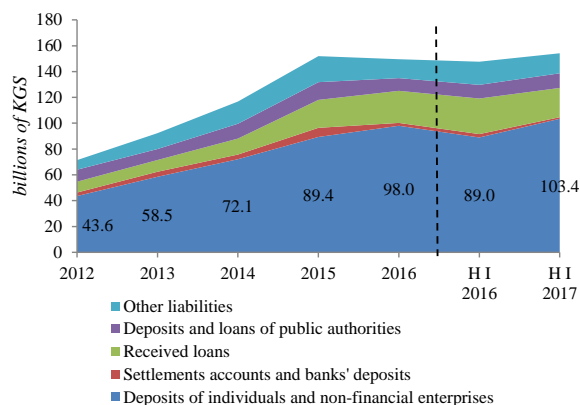
At the end of the first half of 2017, liabilities of the banking sector of the Kyrgyz Republic amounted to KGS 154.2 billion, having increased by 4.4 percent compared with the first half of 2016.

At the end of the first half of 2017, deposits of individuals and non-financial enterprises increased by 16.2 percent and amounted to KGS 103.4 billion (Chart 2.1.4). The share of individuals' and non-financial enterprises' deposits in the banks' liabilities amounted to 67.1 percent.

The share of liabilities in foreign currency in the total volume of attracted funds decreased by 5.9 p.p. and amounted to 45.2 percent or KGS 69.6 billion (Chart 2.1.5).

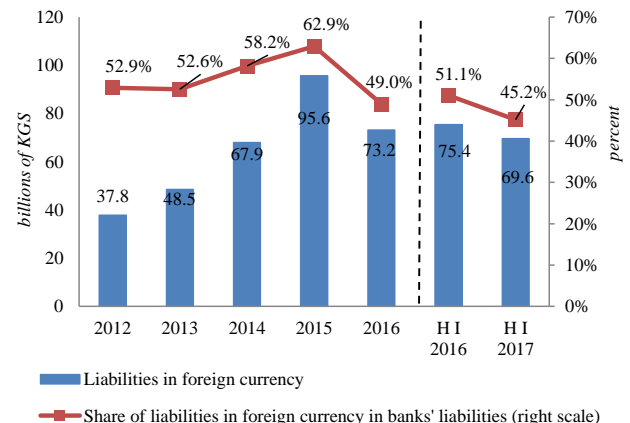
**Chart 2.1.4. Structure of Banks' Liabilities by the Reserve Sources**

billions of KGS



**Chart 2.1.5. Banks' Liabilities in Foreign Currency**

billions of KGS



### Financial Results

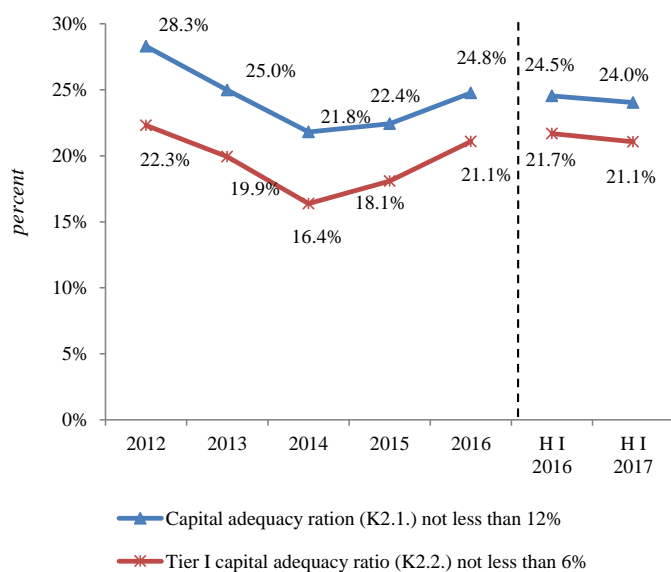
The improvement of profitability indicators<sup>10</sup> at the end of the first half of 2017 was observed compared with the same period of 2016:

- ROA constituted 0.7 percent;
- ROE formed at the level of 4.5 percent.

Net profit of the banking sector amounted to KGS 633.1 million.

### Capital Adequacy

**Chart 2.1.6. Dynamics of Capital Adequacy Ratios**  
percent



With statutory minimum capital adequacy at 12.0 percent, at the end of the first half of 2017, this figure amounted to 24.0 percent (Chart 2.1.6), having slightly increased by 0.5 p.p compared with the first half of 2016.

Decrease of capital adequacy was due to outstripping growth rates of risk weighted assets and off-balance sheet liabilities (+10.4%) over growth rates of net total capital (+8.1 per percent).

At the same time, the actual level of capital adequacy in the banking sector generally formed according to the results of the first half of 2017 can further increase the volume of risky and earning assets by 2.0 times, without exceeding established level of capital adequacy.

The abovementioned information indicates 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.

<sup>10</sup> ROA, ROE indicators are presented in annual terms.



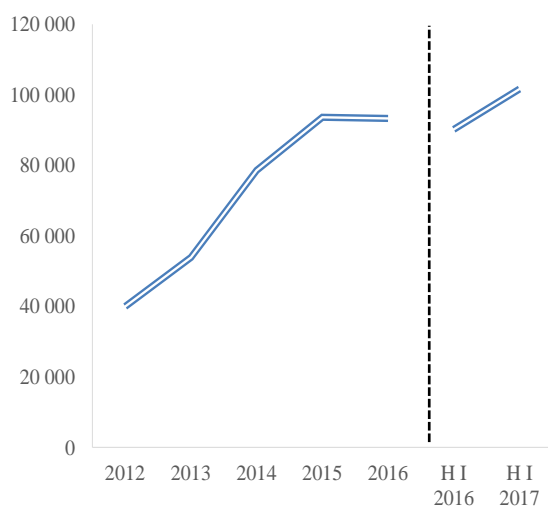
## 2.2. Banking Sector Risks

### 2.2.1. Credit Risk

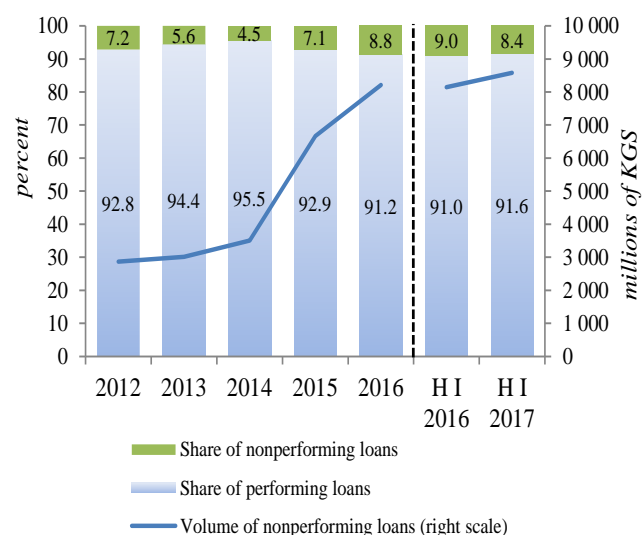
A credit risk is one of the main risks that accompany banking activity.

The share of nonperforming loans in the loan portfolio of banks decreased from 9.0 percent to 8.4 percent compared with the same period of 2016 (Chart 2.2.2).

**Chart 2.2.1. Dynamics of Loan Portfolio**  
millions of KGS



**Chart 2.2.2. Loan Portfolio Quality**

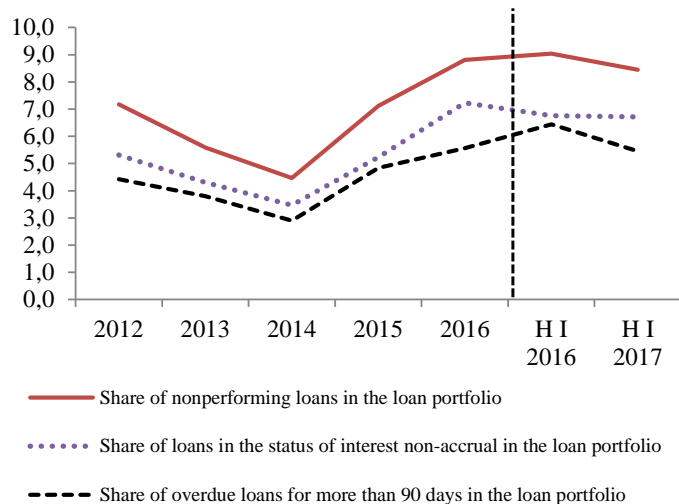


In order to assess the quality of the loan portfolio, the commercial banks use a loan classification system<sup>11</sup>, which contributes to determining the possible level of potential losses from bad loans and compensating them in time through creation of appropriate reserves (Chart 2.2.3).

At the end of the first half of 2017, the indicator of the risk of default on assets (the ratio of special loan loss provisions and loan portfolio) constituted 4.7 percent.

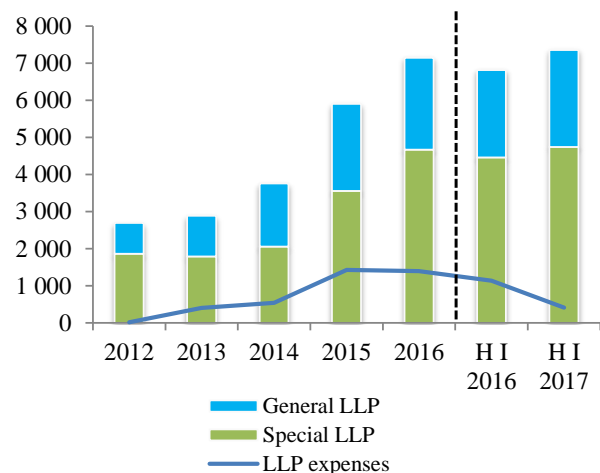
<sup>11</sup> In order to assess the quality of the loan portfolio, all loans are usually divided into six categories, depending on the client's current capacity to fulfill the obligations to the bank (listed in declining order of classification): normal, satisfactory, under supervision, substandard, 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 "nonperforming". For each of six categories, the bank has to create a reserve corresponding to this category defined as a percentage of loans issued.

**Chart 2.2.3. Indicators of the Loan Portfolio Quality**  
percent

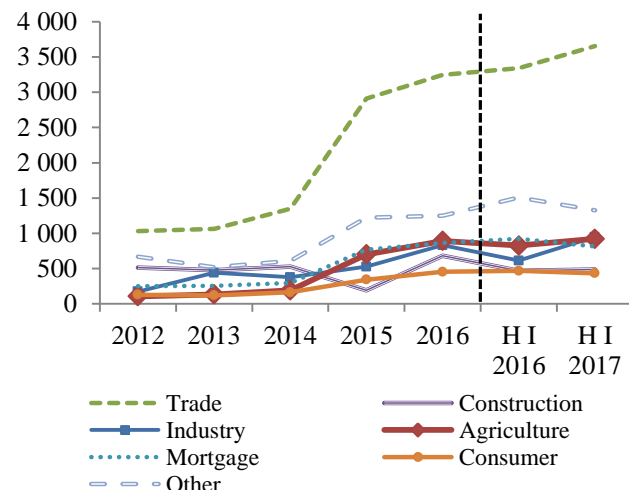


Aggregate reserves created by the commercial banks constituted 7.2 percent of the total loan portfolio (as of the end of the first half of 2016 this index constituted 7.6 percent). Meanwhile, the share of special loan loss provision in the reporting period constituted 64.5 percent of the total reserves (Chart 2.2.4).

**Chart 2.2.4. Total and Special Reserves**  
millions of KGS



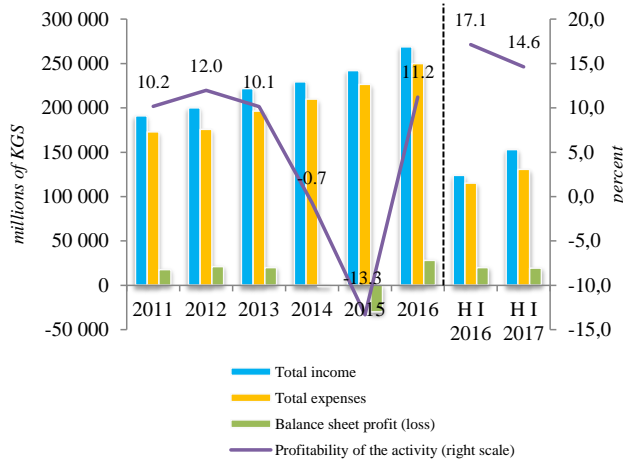
**Chart 2.2.5. Volume of Nonperforming Loans by Sectors of Economy**  
millions of KGS



As of the end of the first half of 2017, the highest concentration of credit risks was still observed in the trade sector of economy (Chart 2.2.5).

Financial Condition/Performance of Medium and Large Enterprises

Chart 2.2.6. Results of Financial and Business Activity of the Enterprises



Source: NSC KR, NBKR calculations

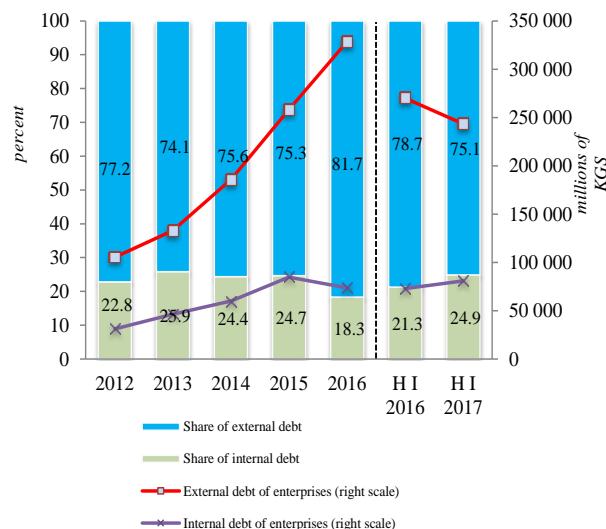
- profitability of the enterprises made 14.6 percent.

At the end of the first half of 2017, the total debt of the enterprises in the corporate sector decreased by 5.5 percent compared with the first half of 2016 and amounted to KGS 324.2 billion or 68.8 percent of GDP.

At the end of the reporting period, the external debt of the corporate sector decreased by 9.9 percent compared with the first half of 2016 and amounted to KGS 243.4 billion or 51.6 percent of GDP (Chart 2.2.7 and 2.2.8).

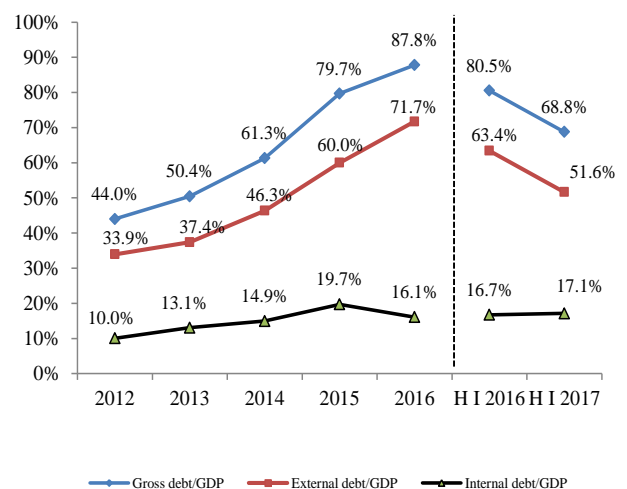
At the end of the first half of 2017, the internal debt of the enterprises in the corporate sector inclined by 10.6 percent compared with the same period of 2016 and amounted to KGS 80.8 billion, or 17.1 percent of GDP.

Chart 2.2.7. Dynamics of External and Internal Debt of the Corporate Sector



Source: NSC KR, NBKR calculations

Chart 2.2.8. Indicators of Debt Soundness of the Corporate Sector

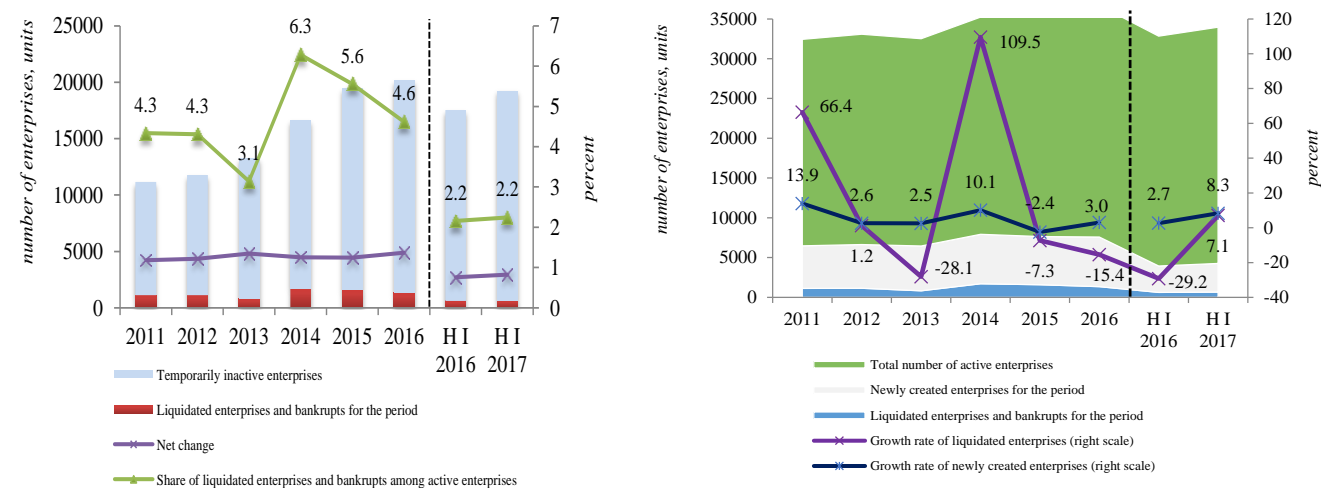


Source: NSC KR, NBKR calculations

### Business Activity of the Corporate Sector

In the reporting period, a slight slowdown of the business activity was observed in the corporate sector. In particular, the growth was observed in the number of temporarily inactive (idle) enterprises (by 10.0 percent compared with the first half of 2016), as well as there was an increase in the number of newly created enterprises (by 7.1 percent compared with the first half of 2016).

Chart 2.2.9. Business Activity of the Corporate Sector

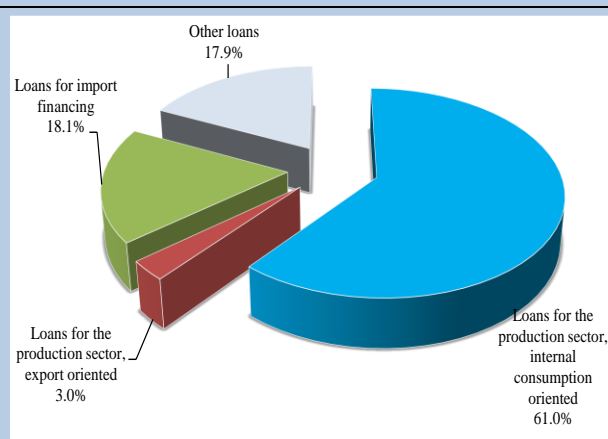


Source: NSC KR, NBKR calculations

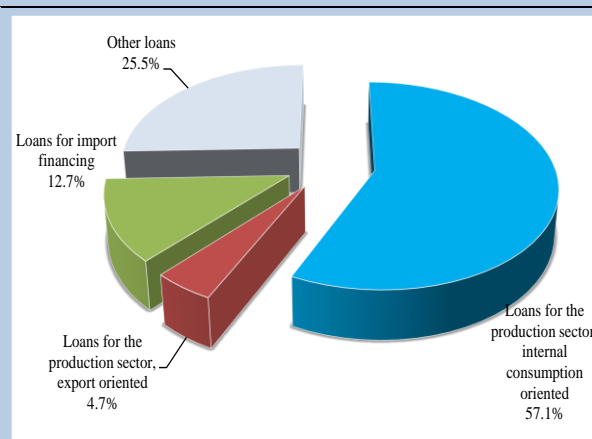
### Box 3. The Survey Results of the Commercial Banks Clients

At the end of the first half of 2017, a significant share of loans (57.1 percent of total borrowers' loans) given to the borrowers was still concentrated in the manufacturing sector of the economy<sup>12</sup>, thereby reflecting contribution of the banking sector in creation of the country's GDP; more than 1/10 of issued loans (12.7 percent) are forwarded for financing of imports (Chart 2.2.11).

**Chart 2.2.10 Sectoral Structure of Loans as of June 30, 2016**

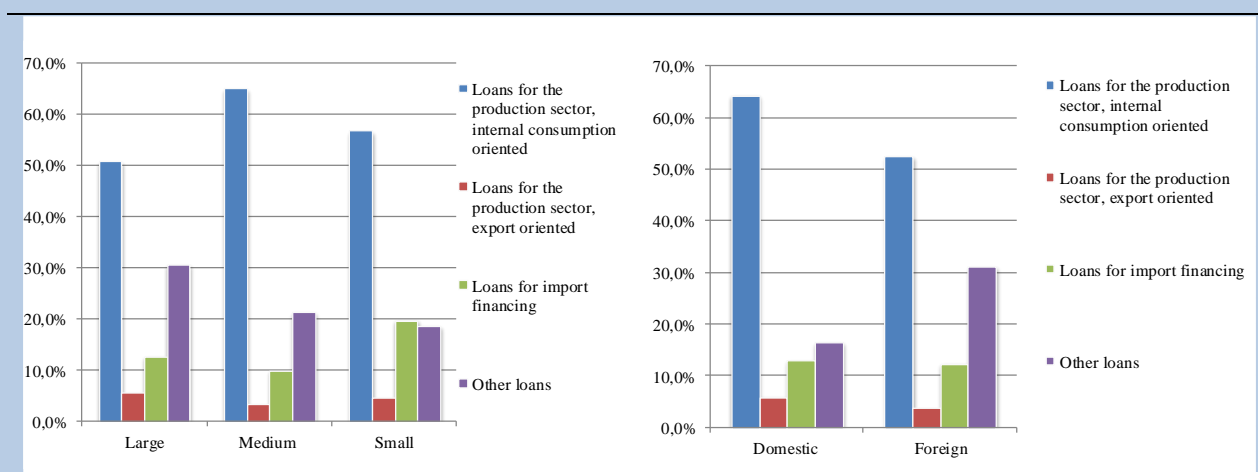


**Chart 2.2.11. Sectoral Structure of Loans as of June 30, 2017**



Domestic banks forward 64.3 percent of the loan portfolio to the manufacturing sector (GDP) and 13.1 percent – to finance imports. Generally, foreign banks also provided loans to the manufacturing sector of economy (52.5 percent). In the reviewed period, the share of loans forwarded to finance imports constituted 12.5 percent of the loan portfolio (Chart 2.2.12).

**Chart 2.2.17. Sectoral Structure of Loans by the Groups of Banks and Forms of Ownership as of June 30, 2017**



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

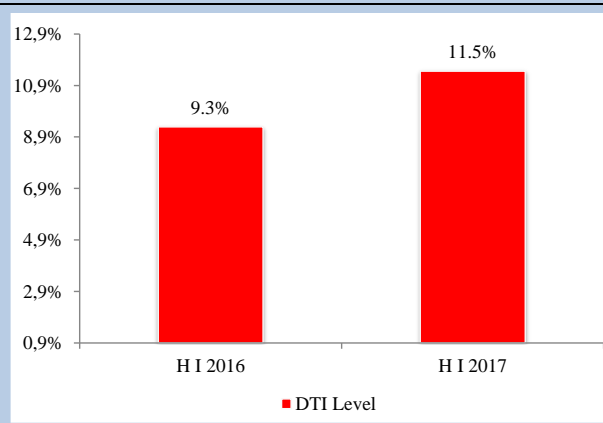
<sup>12</sup> The production sector means the activity of the bank clients connected with the production of goods and services (construction, communication and automobile repair shop services, transport services, real estate leasing, hotels, restaurants, etc.).

#### Box 4. Results of LTV and DTI Survey of Commercial Banks Clients

##### Borrowers solvency

At the end of the first half of 2017, the level of debt burden of 15 banks' largest clients calculated through DTI index constituted 11.5 percent.

**Chart 2.2.18. DTI Level on 15 Banks' Largest Borrowers**



By the groups of banks, the largest debt burden was observed in the major borrowers of the *large* and *medium banks* (11.5 percent of the borrowers' basic income) (Table 2.2.1). At the same time, the lowest level of debt burden was observed in the major borrowers of the *small banks*.

**Table 2.2.1. Debt Burden of the Banks Clients\* in the first half of 2017**

Loan balance, billions of KGS	22,577.3	8,246.4	9,777.5	4,553.5
Share of loans in 15 largest borrowers in the total volume of loan portfolio in the banking sector, in %	22.2%	17.3%	24.5%	32.5%
Ratio of expenses for loan debt servicing to the borrowers' total income, in %	11.5%	11.5%	11.5%	11.4%

Source: Data of the commercial banks, NBKR calculations

\* data for 15 largest borrowers of each commercial bank

The level of debt burden in the foreign banks was higher than in the domestic banks (Table 2.2.2).

**Table 2.2.2. Debt Burden in the Domestic and Foreign Banks at the end of the first half of 2017\***

	Domestic banks	Foreign banks
Loan balance, billions of KGS	5,746.4	16,830.9
Share of loans in 15 largest borrowers in the total volume of loan portfolio in the banking sector, in %	14.9%	26.7%
Ratio of expenses for loan debt servicing to the borrowers' total income, in %	6.8%	15.7%

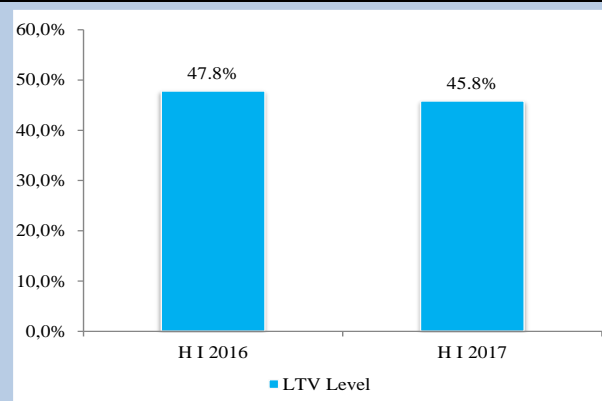
Source: Data of the commercial banks, NBKR calculations

\* data for 15 largest borrowers of each commercial bank

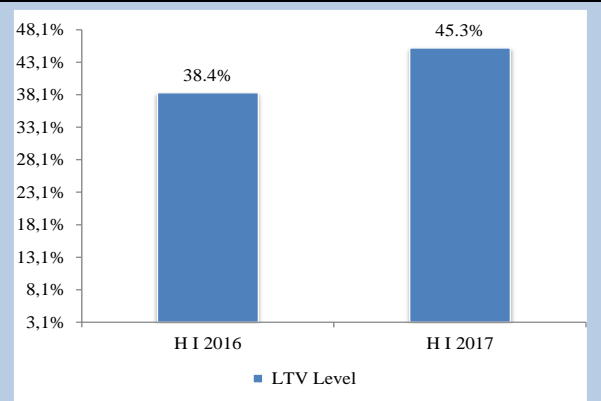
##### Security of the borrowers' loans

At the end of the first half of 2017, the LTV actual level in the banking sector amounted to 45.8 percent. The existing level of collateral indicates a relatively high level of the loans secured the pledged property (Chart 2.2.14).

**Chart 2.2.14. LTV Level on All Borrowers of the Banking Sector**

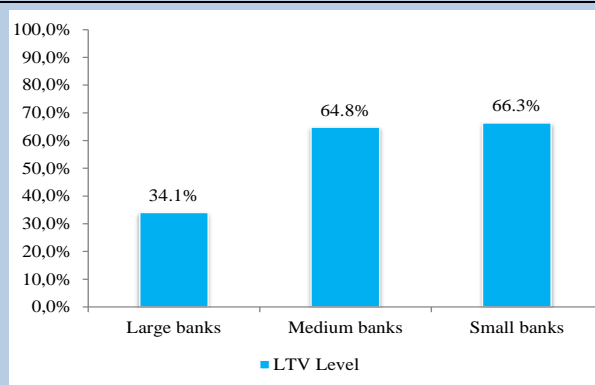


**Chart 2.2.15. LTV Level on 15 Largest Borrowers of the Banking Sector**

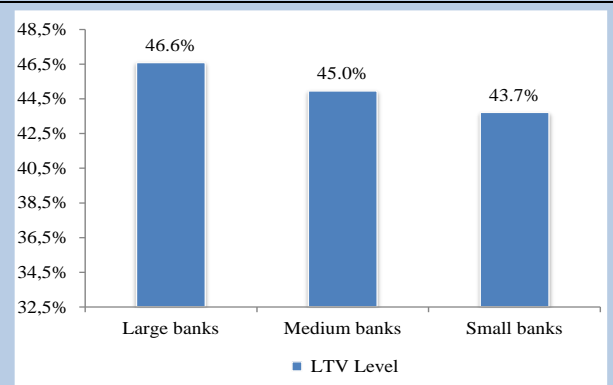


Meanwhile, the LTV value in the large banks is lower than in the medium and small banks and in the banking sector as a whole (Chart 2.2.16).

**Chart 2.2.16. LTV Level on All Borrowers by the Banks' Groups in the first half of 2017**



**Chart 2.2.17. LTV Level on 15 Largest Borrowers by the Banks' Groups in the first half of 2017**

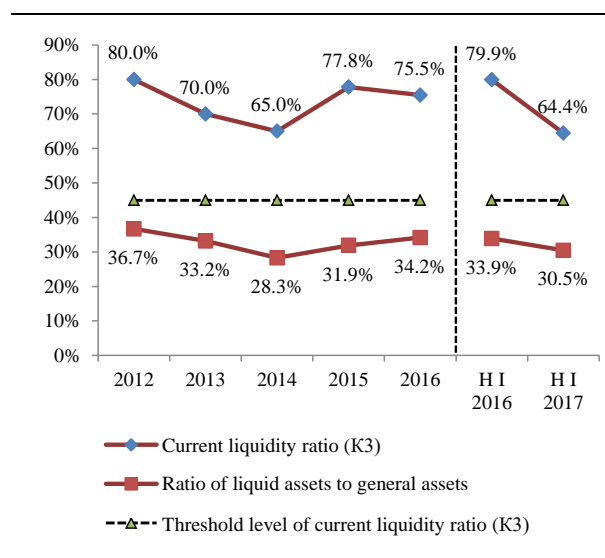


### 2.2.2. Liquidity Risk

Public confidence in the banking sector depends on the timely implementation of obligations by the banks, which suggests availability of sufficient liquidity in the banks. For regulatory purposes, liquidity risk is assessed using economic current liquidity ratio<sup>13</sup>.

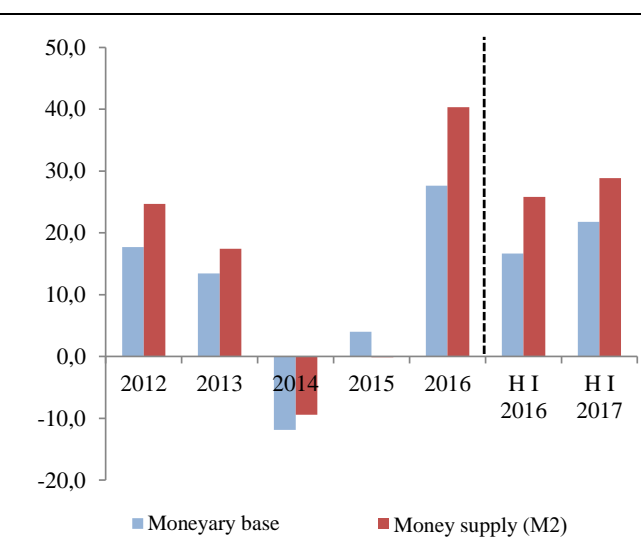
At the end of the first half of 2017, current liquidity ratio decreased from 79.9 percent (as of the end of the first half of 2016) to 64.4 percent (Chart 2.2.18).

**Chart 2.2.18. Liquidity Indicators in the Banking Sector**



**Chart 2.2.19. Growth Rates of Money Supply (M2) and Monetary Base**

percent



Liquidity ratio of the banking sector decreased due to excess of current liabilities over liquid assets growth rates.

**Table 2.2.3. Maturity of Financial Assets and Liabilities**

as of June 30, 2017, millions of KGS

Name	Maturity					Grand total
	up to 1 month	1-3 months	3-6 months	6-12 months	more than 12 months	
Total financial assets	64,539	9,157	10,147	17,284	89,580	190,707
Including loans and financial leasing to the clients	4,273	4,567	7,037	13,300	72,433	101,609
Total financial liabilities	81,154	9,134	16,236	15,455	28,713	150,691
Including deposits of individuals and fixed deposits of legal entities	32,125	5,119	7,885	10,796	11,651	67,576
Gap	-16,614	23	-6,089	1,829	60,867	40,016
Including on loans and deposits	-27,852	-552	-849	2,504	60,781	34,033

<sup>13</sup> Economic current liquidity ratio is one of the mandatory standards for the bank established by the 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 45 percent of short-term liabilities.



### 2.2.3. Concentration Risk

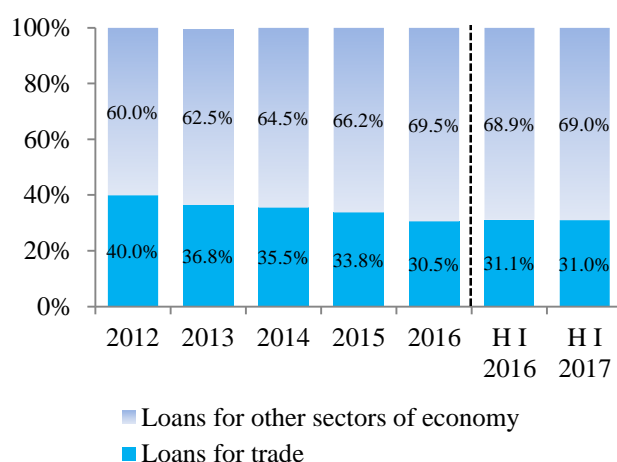
#### Concentration of the Largest Sources of Financing

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 financing<sup>14</sup> (liquidity ratio decreases below the threshold level of 45 percent).

#### Loan Concentration

Potential default from one to five largest borrowers<sup>15</sup> in separate banks may decrease regulatory capital below economic standard of the NBKR.

**Chart 2.2.20. Sectoral Concentration of the Loan Portfolio**



Moderate 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. At the end of the first half of 2017, the share of loans for trade in the total loan portfolio decreased slightly and constituted 31.0 (Chart 2.2.20).

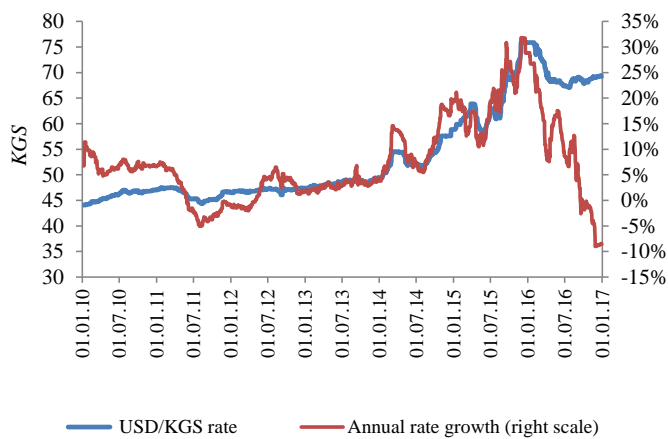
<sup>14</sup> The largest sources of financing (LSF) are the funds of creditors and depositors (received loans, settlement accounts, demand deposits and fixed deposits).

<sup>15</sup> Total debt of five largest borrowers of the bank is meant.

### 2.2.4. Currency Risk

At the end of the first half of 2017, *direct currency risk* of the banking sector was at a moderate level.

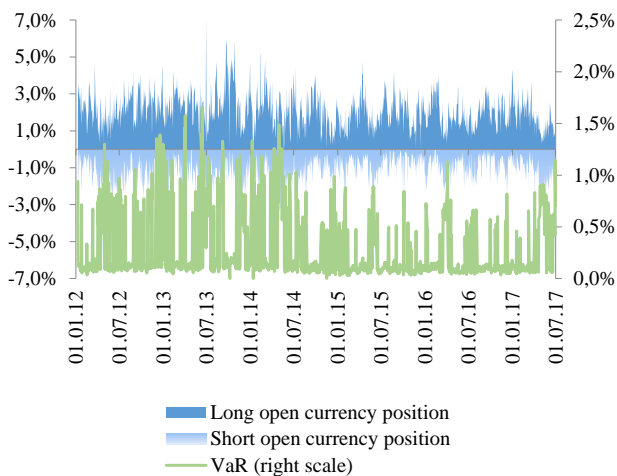
**Chart 2.2.21. Dynamics of USD/KGS Nominal Exchange Rate**



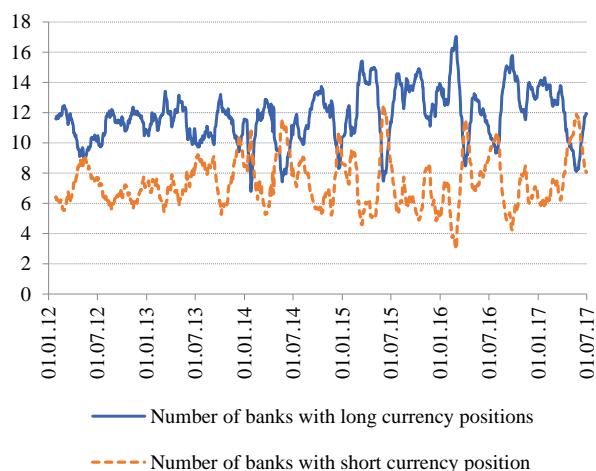
In general, the banks kept open currency positions of assets and liabilities within the limits of prudential standards of the National Bank of the Kyrgyz Republic.

The risk of currency position overestimation in the banking sector is minimum (VaR: 0.1–1.1 percent of the net total capital, Chart 2.2.22).

**Chart 2.2.22. Dynamics of Open Currency Position (OCP) and Revaluation Risk (VaR) in percent of NTC**



**Chart 2.2.23. Currency Position of the Banks units**



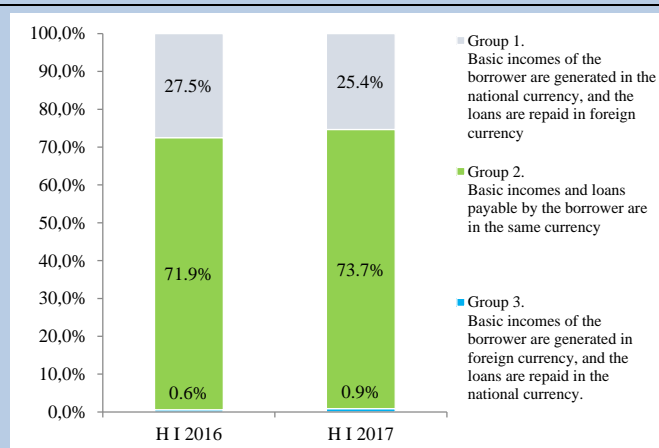
### Box 5. Credit Risk Through Indirect Currency Risk

As of June 30, 2017, 25.4 percent of the total loan portfolio was accounted for the loans, which were repaid in foreign currency, while the income of the borrowers was generated in the national currency (Chart 2.2.24). This volume of the loan portfolio was potentially exposed to credit risk through exposure to currency risk (so-called indirect currency risk).

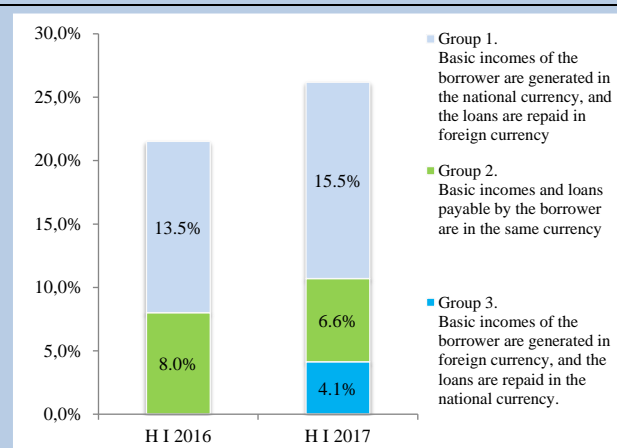
Indirect confirmation of the impact made by the currency risk on the credit risk is given in Chart 2.2.25 that displays the proportion of nonperforming loans by groups of loans:

- Group 1 – 15.5 percent, basic incomes of the borrower are generated in the national currency, and the loans are repaid in foreign currency;
- Group 2 – 6.6 percent, basic incomes and loans payable by the borrower, are in the same currency;
- Group 3 – 4.1 percent, basic incomes of the borrower are generated in foreign currency, and the loans are repaid in the national currency;

**Chart 2.2.24. Loan Portfolio by Groups of Loans\***



**Chart 2.2.25. Share of Nonperforming Loans by Groups of Loans\*\***



Source: data are calculated based on section 37 of the PRBR, the volume of loan portfolio is specified exclusive of overdraft loans.

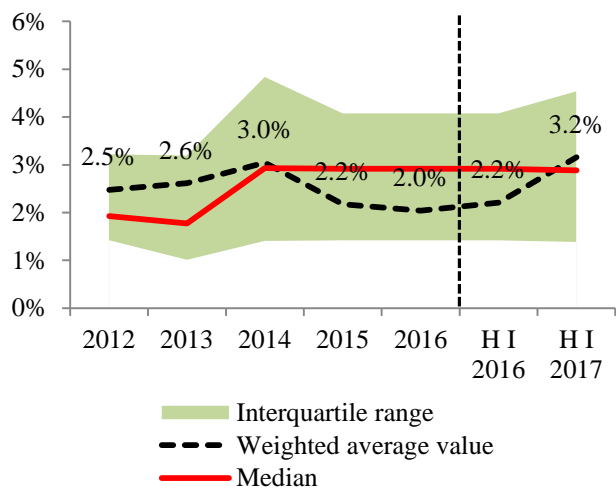
\* Breaking of loans into group is presented in this chart. For example, the volume of loans for Group 1 as of the reporting date amounted to KGS 25.5 billion or 25.4 percent of the total loan portfolio (KGS 100.6 billion).

\*\* This chart shows the shares of nonperforming loans in the loan portfolio by each group of loans. For example, the volume of nonperforming loans for Group 1 as of the reporting date amounted to KGS 3.9 billion or 15.5 percent of the total loan portfolio for Group 1 (KGS 25.5 billion).

### 2.2.5. Interest Rate Risk

At the end of the first half of 2017, interest rate risk was moderate.

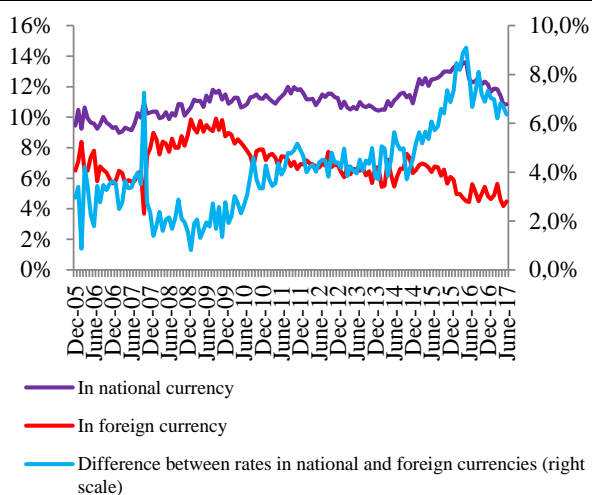
**Chart 2.2.26. Dynamics of Interest Rate Risk (VaR) in percent of NTC**



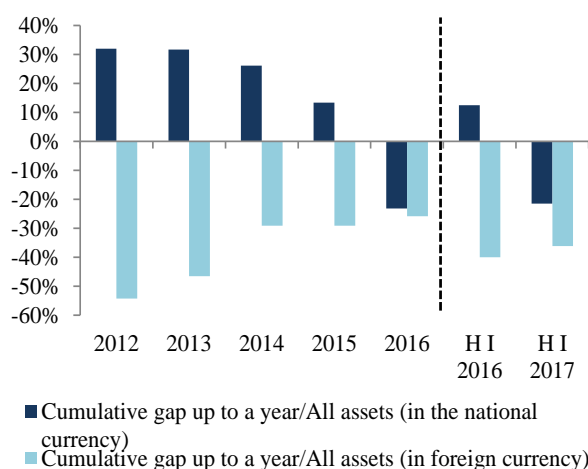
Slight increase of interest rate risk (VaR) from 2.2 percent to 3.2 percent of net total capital was resulted from increase of gaps by maturities between financial assets and liabilities vulnerable to interest rates dynamics.

Average value of interest rate risk during the period of 2011 – first half of 2017 was within accessible limits (2-4 percent of net total capital).

**Chart 2.2.27. Dynamics of Average Weighted Interest Rate of Individuals' Time Deposits percent**



**Chart 2.2.28. Cumulative Gap of Assets and Liabilities Exposed to Interest Rate Risk**

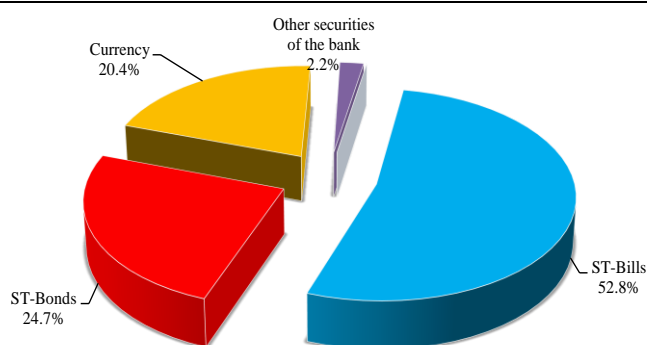


### 2.2.6. “Contagion” Risk

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

At the end of the first half of 2017, the volume of transactions in the interbank market made between the resident banks amounted to KGS 2.3 billion<sup>16</sup>, having decreased by 50.0 percent compared with the first half of 2016.

**Chart 2.2.29. Distribution of Interbank Loan Transactions Made during the first half of 2017 between Resident Banks, Depending on Collateral percent**



The loans in the interbank market are generally covered by collateral in the form of highly liquid government securities or foreign exchange (Chart 2.2.29) in the banking sector of Kyrgyzstan.

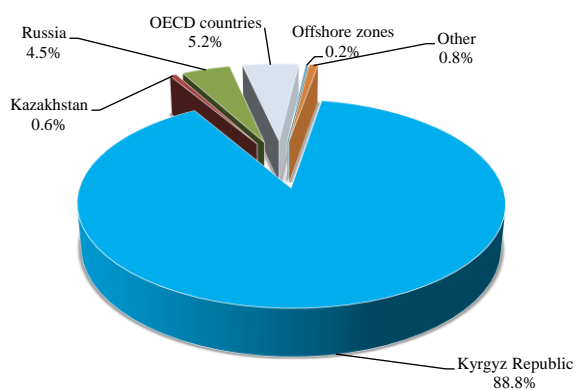
In general, the probability of the “contagion” risk materialization in the interbank credit market of Kyrgyzstan is minimal, which is caused by highly liquid collateral and insignificant volume of transactions.

<sup>16</sup> The total volume of transactions made between the resident banks during the first half of 2017 is meant here.

### 2.2.7. Country Risk<sup>17</sup>

In general, the volume of disposed assets of non-residents constituted KGS 21.5 billion or 11.2 percent of total banking sector assets. The highest concentration of placement was observed in the OECD countries – 5.1 percent (KGS 9.9 billion) of total assets in the banking sector of the Kyrgyz Republic.

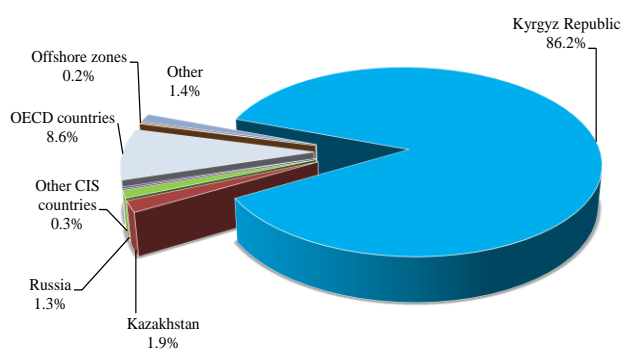
**Chart 2.2.30. Geographic Structure of Assets as of June 30, 2017**  
percent



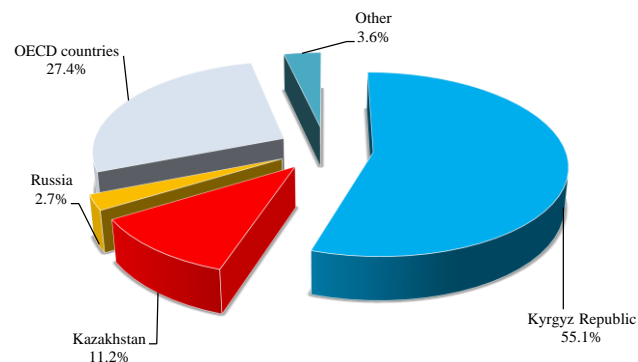
The main share of the assets placed abroad was focused on correspondent or deposit accounts and constituted KGS 18.7 billion or 87.1 percent of total placed assets of non-residents.

At the end of the first half of 2017, banks' liabilities to non-residents of the Kyrgyz Republic totaled KGS 20.7 billion or 13.8 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 18.5 billion or 89.2 percent of the total liabilities to non-residents.

**Chart 2.2.31. Geographic Structure of Liabilities as of June 30, 2017**  
percent



**Chart 2.2.32. Authorized Capital by Countries as of June 30, 2017**  
percent



At the end of the first half of 2017, foreign capital amounted to KGS 9.1 billion or 45.1 percent of the total authorized capital of the banking sector.

<sup>17</sup> Data are given of the basis of section 1 of the PRBR.

## 2.3. “Reverse” Stress Testing of the Banking Sector

### 2.3.1. “Reverse” Stress Testing of Credit Risk<sup>18</sup>

Maximum allowable share of “performing” loans<sup>19</sup> in the loan portfolio, which upon categorized as “nonperforming” 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 “performing” loans into the category of “nonperforming” loans<sup>20</sup>.

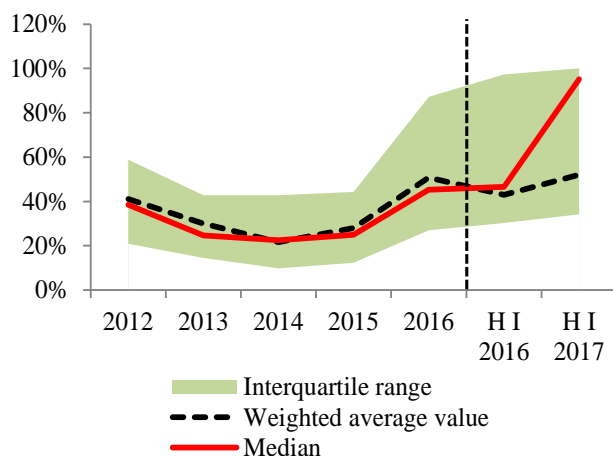
Moreover, the maximum growth rate of “nonperforming” loans, where capital adequacy (K 2.1) will be reduced to the threshold level of 12 percent, can be calculated by means of this method.

Based on the results of the “reverse” stress testing of the banking sector as of the end of the first half of 2017, the maximum allowable share of “performing” loans, transferring to the category of “nonperforming” in the banking sector, amounted to approximately 52.0 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 49.2 percent of net total capital (Chart 2.3.2).

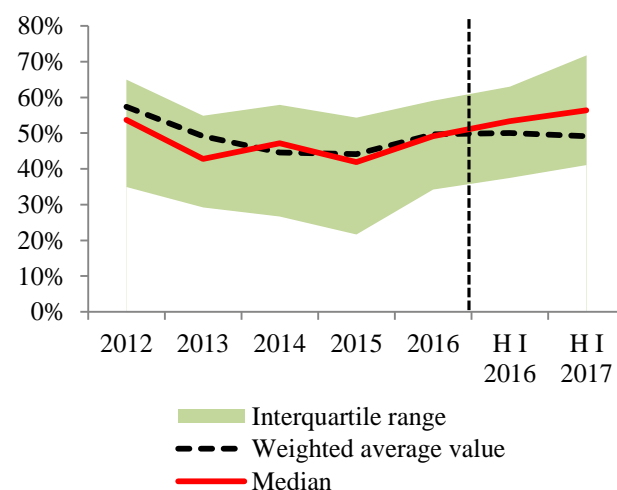
**Chart 2.3.1. Maximum Possible Share of “Performing”<sup>21</sup> Loans that May Become “Nonperforming” Loans<sup>22</sup>**

*in percent of performing loans*



**Chart 2.3.2. Additional LLP, in Creating thereof CAR Decreases to 12 Percent**

*in percent of NTC*



<sup>18</sup> Exclusive of troubled banks.

<sup>19</sup> Exclusive of “normal” loan category, which are risk free.

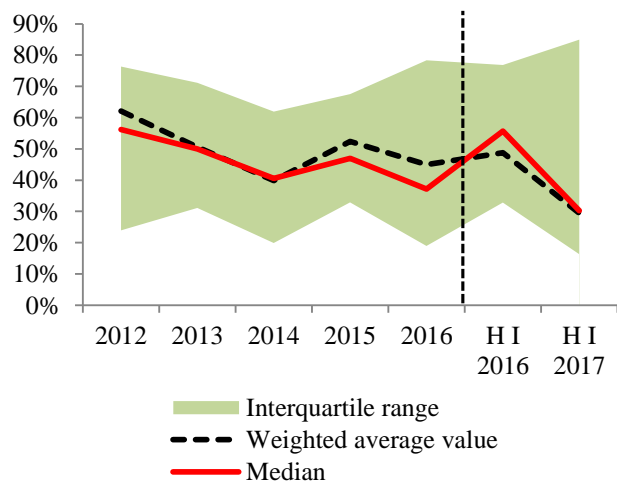
<sup>20</sup> Herewith, transition of “performing” loans to the category of “nonperforming” loans is fulfilled smoothly by three categories (“substandard”, “doubtful” and “losses”).

<sup>21</sup> Exclusive of “normal” loan category.

<sup>22</sup> When CAR decreases to the threshold level of 12 percent.

### 2.3.2. “Reverse” Stress Testing of Liquidity Risk

**Chart 2.3.3. Scope of Potential Outflow of Deposits when K3 May Drop to 45 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 45 percent.

The results of the “reverse” stress testing show (Chart 2.3.3), that as of the end of the first half of 2017 the actual amount of liquid assets of the banking sector was able to cover the outflow of an average of 29.6 percent of total deposits of population and non-financial enterprises (Table 2.3.1).



### 2.3.3. “Reverse” Stress Testing of Market Risk

In general, the results of the “reverse” stress testing of the market risk indicate that the banking sector as of June 30, 2017 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 16.3 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 June 30, 2017**

		Banking sector
<b>Credit risk</b>		
Scenario1	Share of performing loans transferring to the category of "nonperforming" loans, <i>in percent</i>	52.0
<b>Interest rate risk</b>		
Scenario1	Decrease of weighted average interest rate on loans, when CAR declines to 12%, <i>in percentage points</i> .	16.3
<b>Currency risk</b>		
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>	
<b>Liquidity risk</b>		
Scenario 1	Outflow of clients' deposit share of the total deposits, when current liquidity ratio declines to 45%, <i>in percent</i>	29.6

### III. NONBANKING FINANCIAL INSTITUTIONS

*In general, the state of the nonbanking financial institutions (NBFIs) system is assessed as rather stable. Increase of major indicators: assets, loan portfolio, capital is observed. Stress test results indicate that the credit risk of the NBFIs system is moderate.*

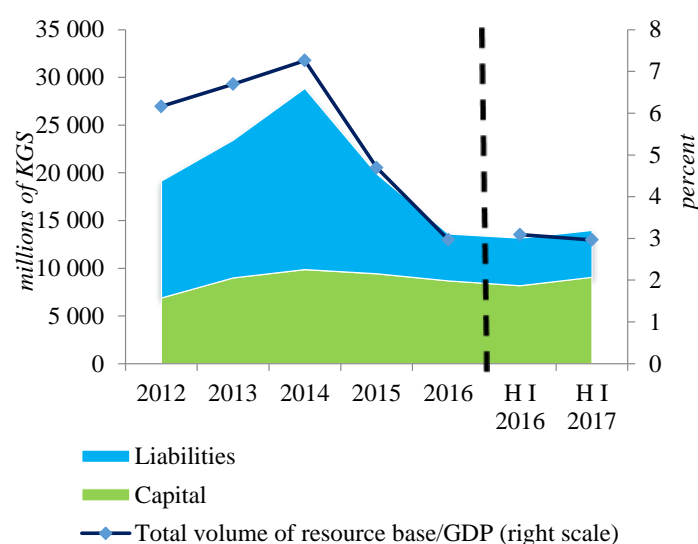
*The weighted average interest rates on loans of the microfinance organizations and credit unions decreased compared with the first half of 2016.*

#### 3.1. Main Trends

The system of nonbanking financial institutions subjected to licensing and regulation by the National Bank as of June 30, 2017 in the Kyrgyz Republic included: a specialized financial institution – “FCCU” OJSC; 114 credit unions; 159 microfinance organizations (including 6 microfinance companies, 101 microcredit companies and 52 microcredit agencies) and 385 exchange offices.

#### Resources

Chart 3.1.1. Dynamics of NBFIs Liabilities and Capital



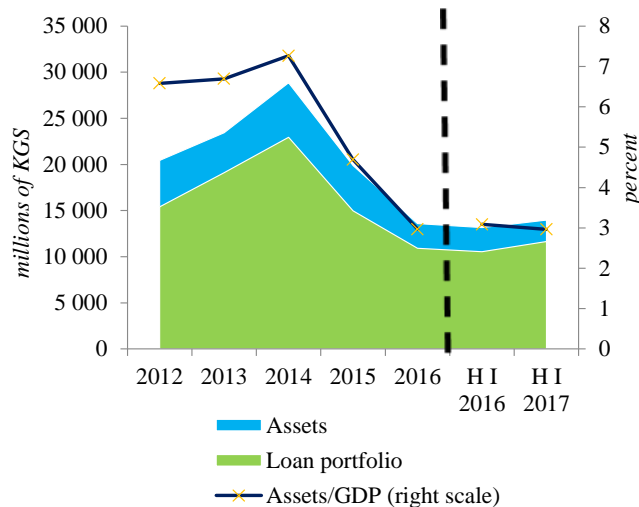
At the end of the first half of 2017, NBFIs liabilities decreased by 1.9 percent compared with the first half of 2016 and were formed in the amount of KGS 4,908.1 million. In the first half of 2017, NBFIs capital increased by 11.1 percent and totaled KGS 9,064.4 million (Chart 3.1.1).

Source: NBKR

Note: since 2015 data are specified exclusive of “MCC FINCA” CJSC, since 2016 – exclusive of “MFC Companion” CJSC

Assets

Chart 3.1.2. Dynamics of NBFIs Assets and Loans



Source: NBKR

Note: since 2015 data are specified exclusive of "MCC FINCA" CJSC, since 2016 – exclusive of "MFC Companion" CJSC

As of June 30, 2017, the decrease in the share of short-term credit resources and the increase in the share of medium-term loans was observed. The share of long-term loans remained almost unchanged (Chart 3.1.3).

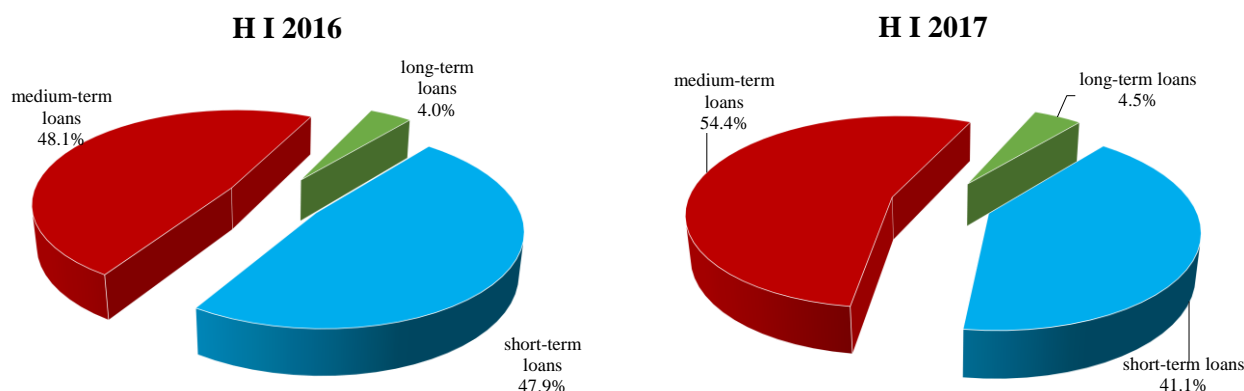
According to periodic regulatory reporting, the total assets of NBFIs in the first half of 2017 increased by 6.2 percent and amounted to KGS 13,972.5 million<sup>23</sup>. This decrease was due to growth in the loan portfolio of NBFIs (Chart 3.1.2).

The main activity of NBFIs remains lending. As of June 30, 2017, the loan portfolio of NBFIs increased by 10.5 percent and was formed in the amount of KGS 11,648.6 million (Table 3.1.1).

As of June 30, 2017, the number of borrowers increased by 5.4 percent compared with the first half of 2016 and amounted to 238,654 borrowers.

There have been slight changes in the structure of the loan maturity provided by NBFIs.

Chart 3.1.3. Structure of the NBFIs Loan Portfolio by Maturity



Source: NBKR

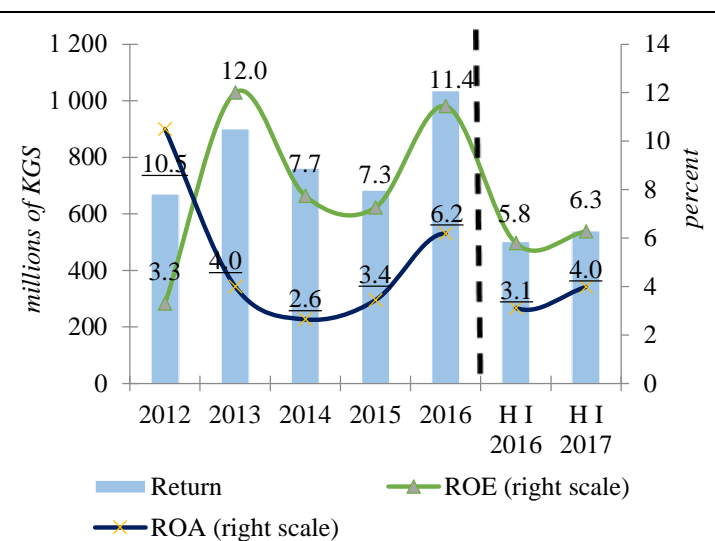
Note: data for the period

The main oblasts where the major share of loan portfolio of NBFIs is concentrated (78.3 percent of total credit portfolio) are Bishkek city, Chui, Osh and Jalal-Abad oblasts, which is due to the highest level of business activity in these oblasts of the republic.

<sup>23</sup> Exclusive of "FCCU" OJSC.

Revenue Position<sup>24</sup>

Chart 3.1.4. Dynamics of NBFIs Revenue Position\*



At the end of the first half of 2017 net profit of NBFIs increased by 7.6 percent compared with the first half of 2016 and amounted to KGS 540.3 million. ROA at the end of the reporting period increased by 0.9 p.p. and amounted to 4.0 percent; ROE increased by 0.5 p.p. and constituted 6.3 percent (Chart 3.1.4).

Source: NBKR

\*Exclusive of "FCCU" OJSC

<sup>24</sup> ROA and ROE indices are provided in annual terms.

### 3.2. Risks of Nonbanking Financial Institutions

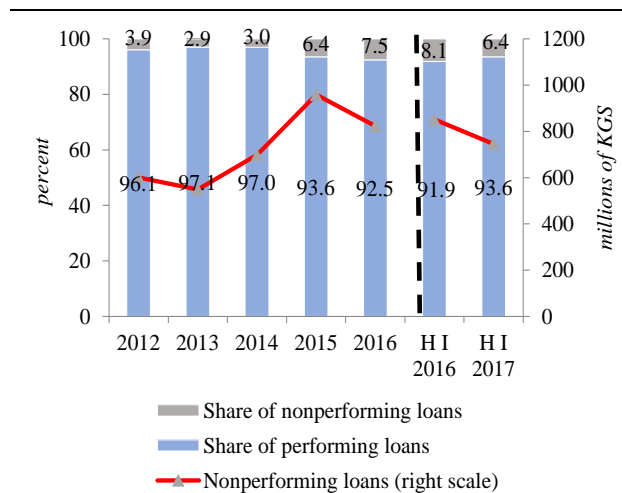
Major risk factors of the activities of NBFIs are the quality of the loan portfolio, sectoral and institutional concentration, as well as status of the external debt of NBFIs.

#### Quality of the Loan Portfolio of NBFIs

As of June 30, 2017, the share of nonperforming loans in the loan portfolio of NBFIs constituted 6.4 percent, meanwhile, their nominal volume decreased slightly by KGS 105.3 million compared with the first half of 2016 (Chart 3.2.1).

At the end of the reporting period, the structure of NBFIs nonperforming loans noted increase in the share of defaulting loans issued to agriculture (by 4.6 p.p. compared with the first half of 2016). The share of defaulting loans in the total nonperforming loans of NBFIs constituted 27.7 percent (Chart 3.2.2).

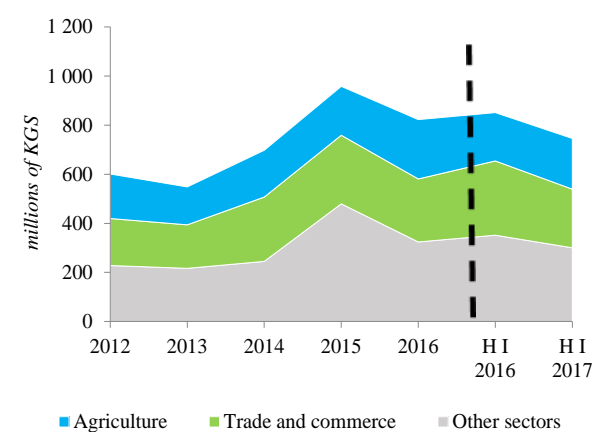
Chart 3.2.1. Quality of NBFIs Loan Portfolio



Source: NBKR

Note: since 2015 data are specified exclusive of “MCC FINCA” CJSC, since 2016 – exclusive of “MFC Companion” CJSC

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



Source: NBKR

Note: since 2015 data are specified exclusive of “MCC FINCA” CJSC, since 2016 – exclusive of “MFC Companion” CJSC

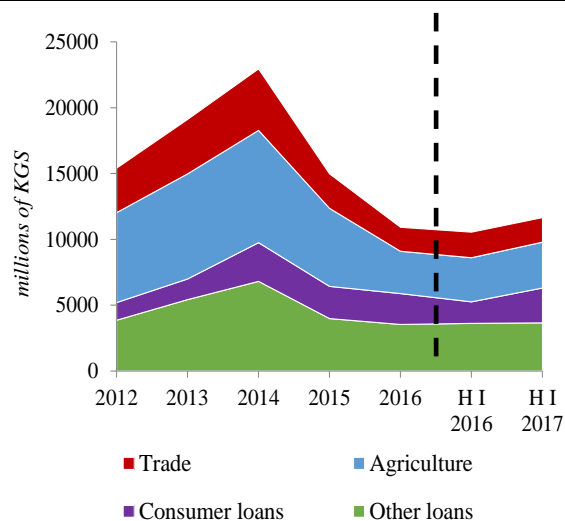
#### Sectoral Concentration

NBFIs loan portfolio is concentrated in agriculture (29.9 percent of NBFIs total loans), trade and consumer loans (16.0 percent and 22.7 percent of the total loan portfolio, accordingly, Chart 3.2.3). Lending of agriculture is associated with a high risk because of their dependence of climate conditions.

### Institutional Concentration

As of June 30, 2017, the share of assets of the three largest NBFIs increased by 3.1 p.p. compared with the same period of 2016 and amounted to 43.3 percent of the total assets of NBFIs system (Chart 3.2.4).

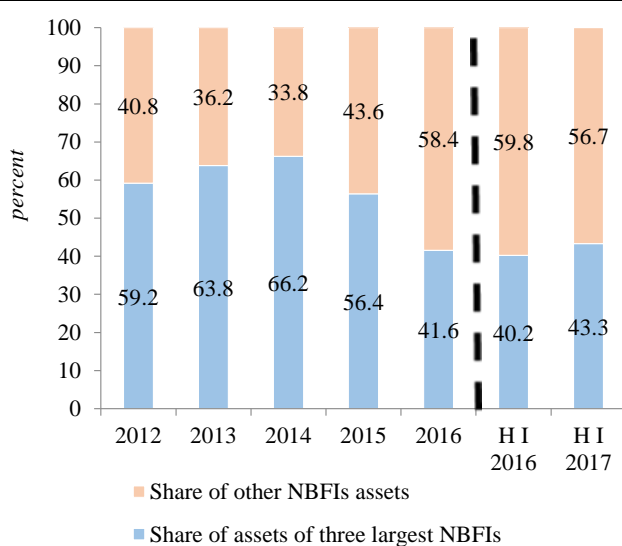
**Chart 3.2.3. Sectoral Structure of NBFIs Loan Portfolio**



Source: NBKR

Note: since 2015 data are specified exclusive of "MCC FINCA" CJSC, since 2016 – exclusive of "MFC Companion" CJSC

**Chart 3.2.4. Institutional Structure of NBFIs Assets**



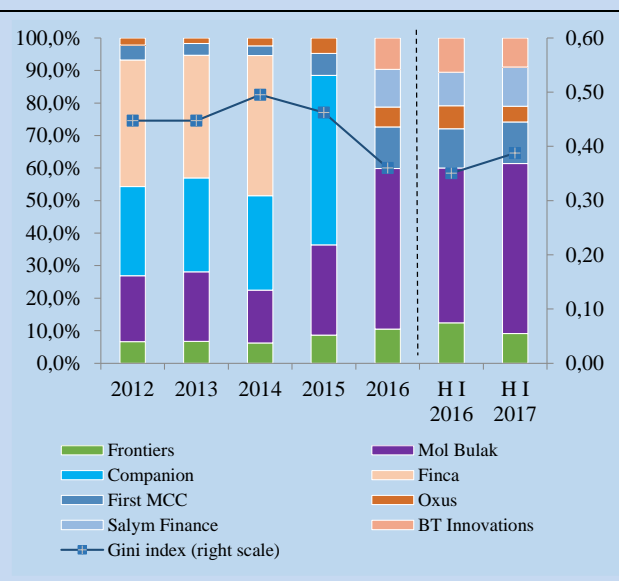
Source: NBKR

**Box 6. Concentration Indices based Assessment of Nonbanking Financial Institutions Activity<sup>25</sup>**

**The Herfindahl-Hirschman Index**

Herfindahl-Hirschman index was calculated for the purposes of concentration risk analysis in the NBFIs system<sup>26</sup>. As of June 30, 2017, Herfindahl-Hirschman index for the NBFIs system constituted 1,018.1 points. According to the rule of thumb<sup>27</sup>, resulting value indicates availability of moderate concentration of NBFIs assets or moderate concentration of microfinance market.

**Chart 3.2.5. Dynamics of the Gini Index and Assets of 6 Largest NBFIs**



**The Gini Index**

The Gini index was calculated for estimating the uniformity of the NBFIs assets distribution. As of June 30, 2017, the index value constituted 0.388, which reflected the moderate distribution of assets among the largest microfinance institutions. Meanwhile, increase of concentration level was observed in the reporting period (Chart 3.2.5).

Source: NBKR

Note: since 2015 data are specified exclusive of “MCC FINCA” CJSC, since 2016 – exclusive of “MFC Companion” CJSC

<sup>25</sup> Concentration indices are calculated on the basis of data submitted by 6 largest NBFIs.

<sup>26</sup>  $H = \sum_{i=1}^n (share_i)^2$ .

<sup>27</sup> 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 June 30, 2017, the external debt of NBFIs amounted to USD 22.1 million. Major part of the external debt of NBFIs are loans provided by the foreign commercial financial institutions (84.3 percent of total external debt of NBFIs), and the rest are loans of the international financial institutions (15.7 percent of total external debt of NBFIs).

At the end of the first half of 2017, external debt of the largest NBFIs increased by 0.7 percent compared with the first half of 2016 and amounted to USD 17.5 million.



### 3.3. Stress Testing of Nonbanking Financial Institutions

#### 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;

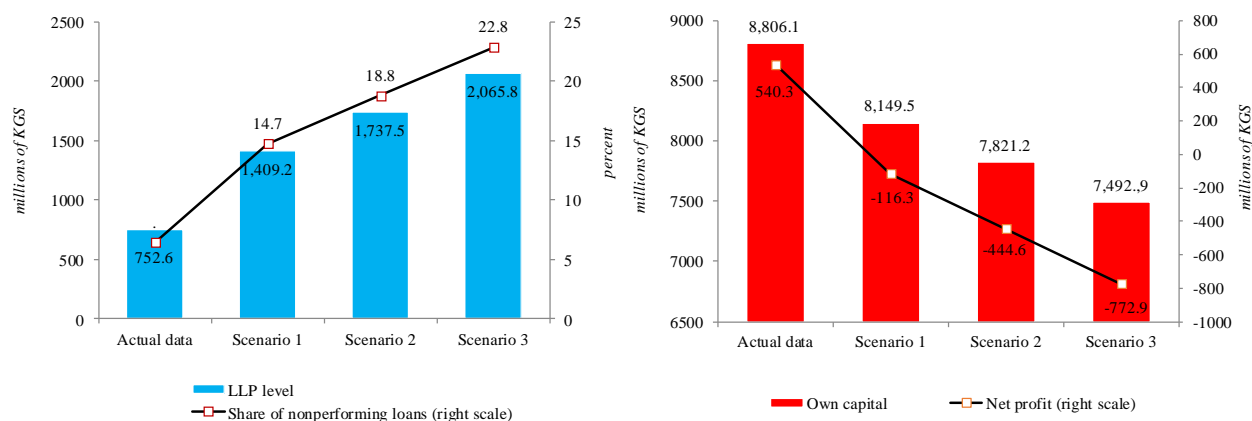
*Scenario 2:* 75% of loans transition from one category to another;

*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 loan loss provisions<sup>28</sup> in the loan portfolio of NBFIs increased from 87.2 to 174.5 percent, depending on the scenario in conducting this stress testing (Chart 3.3.1).

Chart 3.3.1. Results of Stress Testing of the Credit Risk as of June 30, 2017



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 start suffering losses in the amount of KGS 116.3 million. Potential implementation of the second and third scenario may result in increased losses of the NBFIs sector in the amount of up to KGS 444.6 million and KGS 772.9 million respectively (Chart 3.3.1).

<sup>28</sup> MFIs create general and special loan loss provisions 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

	<b>Share of nonperforming loans in the loan portfolio of NBFIs</b>
<b>Scenario 1:</b> transition of 50% of loans from one category to another	14.7
<b>Scenario 2:</b> transition of 75% of loans from one category to another	18.8
<b>Scenario 3:</b> transition of 100% of loans from one category to another	22.8

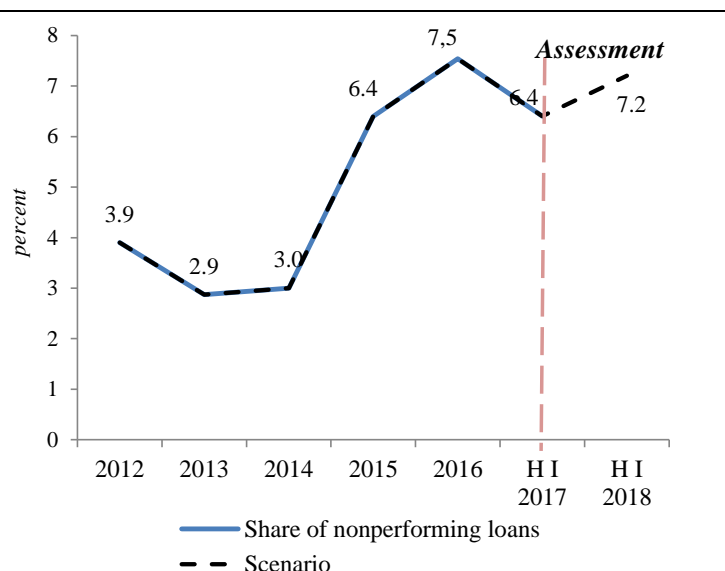
Source: NBKR, NBKR calculations

Implementation of the first scenario may result in an increase in the share of nonperforming loans in the loan portfolio of NBFIs by 8.3 p.p., to the level of 14.7 percent. In the case of the second scenario, nonperforming loans may increase by 12.4 p.p., to the level of 18.8 percent, and in the implementation of the third scenario – by 16.4 p.p. and may reach the level of 22.8 percent.

### Stress Testing of the Credit 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 nonperforming loans on macroeconomic factors.

**Chart 3.3.2. Dynamics of NBFIs Nonperforming Loans**



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

- Reducing the rate of GDP growth by 10 percent.

An increase in the share of nonperforming loans in the loan portfolio by 0.8 p.p., up to the level of 7.2 percent may occur in the process of this scenario implementation.

Source: NBKR

## IV. PAYMENT SYSTEMS

*In the reporting period, the payment system of the Kyrgyz Republic was characterized by a minimum level of risks.*

*The level of risks in the systemically important payment systems was minimal due to sufficient level of liquidity in the correspondent accounts of the participants in the National Bank of the Kyrgyz Republic.*

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

As of June 30, 2017, the following components of the payment system were operating in the Kyrgyz Republic:

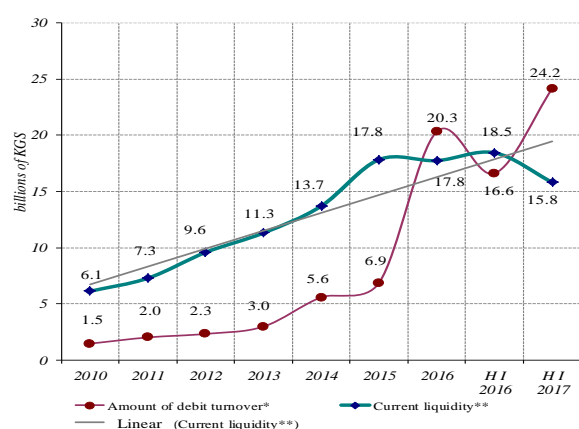
1. Large Value Payment System of the National Bank – Real Time Gross Settlement (RTGS);
2. Systems of Retail Payments: the System of Batch Clearing of Small Retail and Regular Payments (SBC), Systems of Payment Cards Settlement, Money Transfer Systems, Electronic Money Settlement Systems, Instant Payment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

In March 2017, systemically important and significant payment systems in the territory of the Kyrgyz Republic were determined in accordance with the established criteria.

**RTGS** functioned normally in the first half of 2017.

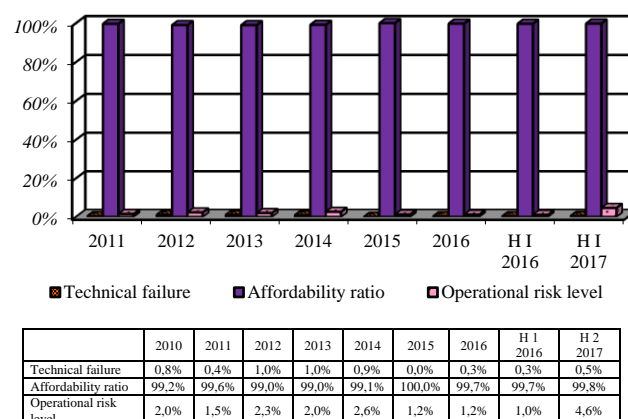
The level of financial risk in RTGS remained low due to high level of liquid funds on the participants' accounts in relation to the turnover in the system (liquidity ratio was 0.7, the turnover ratio – 1.5). Average daily volume of liquid assets of participants showed decrease by 14.3 percent (compared to the same period of 2016) and amounted to KGS 15.8 billion (Chart 4.1). Meanwhile, there is a significant increase in turnover ratio (by 45.4 percent compared with the first half of 2016). This increase was due to the growth of payments on the transactions in the Computer Assisted Trading System (CATS).

**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 the first half of 2017, 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 4.6 percent (Chart 4.2).

GTGS is a systemically important payment system, failures in which can cause serious shocks for the banking system and the financial system in the country as a whole.

In functioning of the SBC the level of financial risks in the reporting period was also extremely 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 functioning the system affordability index in the reporting period remained high and constituted 99.8 percent (in the same period of 2016 – 99.7 percent), meanwhile, operational risk level was 4.6 percent due to prolongation of the work schedule at the request of the participants (Chart 4.3).

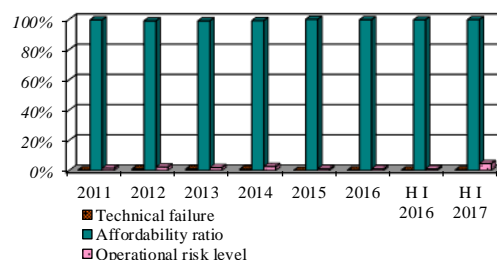
**Systems of Bank Payment Cards Settlements.** As of July 1, 2017, 5 international payment card systems and the national system “ElCart” operated in the Kyrgyz Republic.

In accordance with the established criteria, the payment system “ElCart” is the national system with which 23 commercial banks work.

During the first half of 2017, according to the results of monitoring and analysis of operations, the system affordability index of the national system “ElCart” constituted 98.9 percent, and the level of operational risks in the system constituted 1.1 percent (Chart 4.4).

**Money transfer systems.** In the reporting period, receipt and transfer of money without opening an account in the commercial banks was carried out by means of 14 international money transfer systems (Table 4.1.).

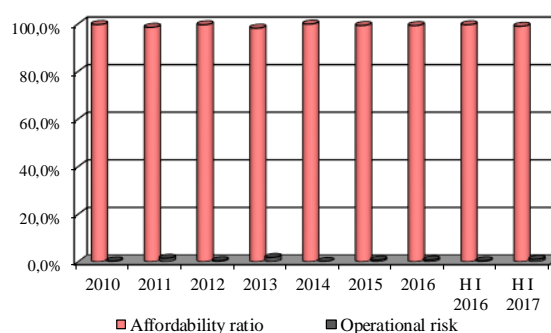
**Chart 4.3. Ratio of Affordability Index and Operational Risks in the SBC**



	2010	2011	2012	2013	2014	2015	2016	H1 2016	H2 2017
Technical failure	0,8%	0,4%	1,0%	1,0%	0,9%	0,0%	0,3%	0,3%	0,5%
Affordability ratio	99,2%	99,6%	99,0%	99,0%	99,1%	100,0%	99,7%	99,7%	99,8%
Operational risk level	2,0%	1,5%	2,3%	2,0%	2,6%	1,2%	1,2%	1,0%	4,6%

Source: NBKR calculations

**Chart 4.4. Ratio of Affordability Index and Operational Risk in the national system “ElCart”**



	2010	2011	2012	2013	2014	2015	2016	H1 2016	H2 2017
Affordability ratio	99,7%	98,5%	99,6%	98,2%	99,9%	99,3%	99,2%	99,6%	98,9%
Operational risk	0,3%	1,5%	0,4%	1,8%	0,1%	0,7%	0,8%	0,4%	1,1%

Source: NBKR calculations

**Table 4.1. Distribution of Flows among International Money Transfer Systems**

Money transfer system	Incoming		Outgoing	
	Share of the total number, in %	Share of the total volume, in %	Share of the total number, in %	Share of the total volume, in %
Zolotaya Korona	71.6	69.6	84.9	77.1
Unistream	16.2	17.7	6.1	11.3
Leader	2.4	1.2	0.2	0.1
Western Union	4.5	4.8	5.0	4.4
Contact	2.8	2.8	1.5	1.0
Money Gram	1.2	1.7	1.3	1.6
Anelik	0.1	0.3	0.4	4.3
Other	1.2	1.8	0.6	0.3
Total	100.0	100.0	100.0	100.0

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

**6 channels of transfer and receipt of cross-border financial messages** functioned at the end of the first half of 2017. However, the main flow of financial messages accounted for SWIFT telecommunication network (the average value of incoming and outgoing payments made 93.3 percent of the total number and 96.8 percent of the total volume of payments).

The results of monitoring over the functioning of the the Kyrgyz Republic payment system show that in the first half of 2017 all significant payment systems functioned normally and did not cause any systemic risk for the financial system of the country.

## V. IMPROVEMENT OF THE FINANCIAL SECTOR REGULATION

*In the reporting period, improvement of the regulatory and legal framework regulating financial institutions' activities, as well as the financial institutions carrying out operations in accordance with the Islamic principles of the banking and financing, was mainly focused on bringing the normative and legal acts of the National Bank of the Kyrgyz Republic in line with amendments introduced in the legislation of the Kyrgyz Republic.*

In order to bring in line with the laws of the Kyrgyz Republic “On the National Bank of the Kyrgyz Republic, banks and banking activity” and “On bringing into force the Law of the Kyrgyz Republic “On the National Bank of the Kyrgyz Republic, banks and banking activity”, which entered into force on June 22, 2017, the National Bank of the Kyrgyz Republic introduced amendments and additions to more than 100 regulatory legal acts of the National Bank in the following areas:

- licensing of activities of banks and nonbanking financial institutions (NBFIs), licensed and regulated by the National Bank;
- corporate governance in the banks;
- internal control and audit system;
- management of banking risks (credit, operational, market, country, concentration risk);
- external audit of the banks;
- requirements for working with the banking accounts and individual bank safes;
- classification of assets and related deductions for loan loss provisions;
- requirements for the operations conducted by the bank with affiliated and related parties;
- establishing criteria for the systemic nature for the banks and NBFIs;
- consolidated supervision in the banks;
- formation of the banks' financial statements;
- protection of the rights of the financial services consumers;
- application of influence measures to the banks and some other NBFIs;
- pre-trial settlement of disputes between the supervisory authority and the banks;
- temporary administration procedure;
- procedure for voluntary and involuntary liquidation of the banks.

In order to bring in line with the Law of the Kyrgyz Republic “On the basics of administrative activities and administrative procedures”, amendments and additions to the regulatory legal acts on the issue of licensing activities of nonbanking financial institutions (microcredit companies and microcredit agencies, microfinance companies, credit unions, credit bureaus, specialized financial institutions, exchange bureaus) were approved by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 19/14 as of May 17, 2017.

## FINANCIAL SOUNDNESS INDICATORS OF THE KYRGYZ REPUBLIC

(in percent)

	2012	2013	2014	2015	2016	H I 2016	H I 2017
<b>Banking sector</b>							
<i>Indicators of the capital adequacy</i>							
Regulatory capital to risk-weighted assets	28.3	25.0	21.8	22.4	24.8	24.5	24.0
Regulatory Tier I capital to risk-weighted assets	22.3	19.9	16.4	18.1	21.1	21.7	21.1
Equity to total assets	18.3	16.9	16.2	15.6	16.8	16.5	16.8
Nonperforming loans to equity	18.1	16.1	16.1	24.2	27.7	28.6	27.9
Equity to total liabilities	22.7	20.7	19.5	18.6	20.4	19.9	20.4
<i>Quality of assets</i>							
Nonperforming loans to total gross loans	7.2	5.5	4.5	7.1	8.8	9.0	8.4
Loan loss provisions to loan portfolio	4.7	3.3	2.6	3.8	5.0	4.9	4.7
Loan loss provisions to nonperforming loans	64.9	59.6	58.9	53.3	56.9	54.8	55.3
Foreign-currency-denominated loans to loan portfolio	53.7	53.6	57.6	55.1	44.5	44.2	41.6
<i>Returns indicators</i>							
ROA	3.0	2.8	2.6	1.5	0.5	0.0	0.7
ROE	18.5	18.0	18.6	10.8	3.3	-0.1	4.5
Interest margin to gross income	16.8	57.3	58.6	46.1	40.8	35.0	39.3
Spread	8.0	7.7	8.0	7.1	6.3	6.1	6.9
<i>Liquidity indicators</i>							
High liquid assets to total assets	36.9	33.2	28.3	31.9	34.2	33.9	30.5
High liquid assets to short-term liabilities	79.5	69.9	65.0	77.8	75.5	79.9	64.4
<i>Sensitivity of market risk</i>							
Net foreign exchange exposure to equity	2.6	5.6	8.3	-1.9	4.3	0.4	0.7
<b>Other financial corporations*</b>							
Assets to total financial system assets	18.7	17.2	17.1	9.9	7.0	6.9	n/a
Assets to GDP	6.6	6.7	8.0	4.7	3.0	3.1	n/a
<b>Corporate sector (medium- and large-sized enterprises)</b>							
Return on assets (ROA)	6.7	5.5	-0.3	-5.8	9.5	n/a	n/a
Return on equity (ROE)	16.3	16.4	-1.2	-25.6	39.9	n/a	n/a
Total liabilities to equity (leverage)**	2.1	2.1	3.0	4.0	3.2	n/a	n/a
Current liquidity ratio	1.4	1.3	1.2	0.8	0.8	n/a	n/a
<b>Households sector</b>							
Households' debt to GDP	9.1	13.4	18.8	18.0	16.4	16.7	n/a
Households' debt to disposable income	13.4	21.8	28.4	27.8	25.2	25.1	n/a

Source: NBKR, NSC KR, NBKR calculations

\*- 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 re-payment 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  
ST-Bills – State Treasury Bills  
ST-Bonds – State Treasury Bonds  
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  
CB – commercial bank  
CAR – Capital Adequacy Ratio  
LSF – large sources of financing  
KR – Kyrgyz Republic  
KSE – Kyrgyz Stock Exchange  
IMF – International Monetary Fund  
MY – Marketing Year  
MCC – Microcredit Company  
MFC – Microfinance Company  
MF KR – Ministry of Finance of the Kyrgyz Republic  
MFO – Microfinance Organization  
NBKR – National Bank of the Kyrgyz Republic  
NBRK – National Bank of the Republic of Kazakhstan  
NSC KR – National Statistical Committee of the Kyrgyz Republic  
NBFIs – Nonbanking Financial Institutions  
NGS – Non-Government Securities  
OJSC – Open Joint-Stock Company  
OECD – Organization for Economic Cooperation and Development  
P.p. – percentage points  
PRBR – Periodic Regulatory Bank Reporting  
RK – Republic of Kazakhstan  
LLP – Loan Loss Provisions  
RF – Russian Federation  
CIS – Commonwealth of Independent States  
SBC – System of Batch Clearing  
USA – United States of America  
FAO – Food Agriculture Organization of the United Nations  
FCCU (“FCCU” OJSC) – “Financial Company of Credit Unions” OJSC  
FI – Financial Institution  
FRS – Federal Reserve System  
S – securities  
CBRF – Central Bank of the Russian Federation  
NTC – Net Total Capital  
DTI (Debt-to-Income) – ratio of the amount repaid by a borrower on the loan (including the amount of the principal debt and interest rate payments for the reporting period) to the main annual income of a borrower declared (announced) at the moment of the loan issue.  
LTV (Loan-to-Value Ratio) – ratio of the volume of issued loans to the value of collateral.