



**National Bank  
of the Kyrgyz Republic**

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

**June 2017**

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**Bishkek**

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This publication is released 2 times in a year. It is published in three languages: Kyrgyz, Russian and English.

Due to rounding of numbers, mismatch in the last number position is possible when summing up.

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## **PREAMBLE**

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

**Financial Stability** in this publication means smooth and 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 NBKR monetary policy, regulating the banking activity and development of the strategy for financial and credit institutions of the Kyrgyz Republic.

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

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

**At the end of 2016, the results of macroprudential analysis, econometric modeling, financial projections modeling, and “reverse” stress tests indicated to the sustainability of the financial sector of the Kyrgyz Republic and the financial strength. A significant reduction of the dollarization level was observed in the banking sector, which has a positive effect on its sustainability.**

**Country risk still remains moderate for the banking sector.**

**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.

**As before, the banking sector of the Kyrgyz Republic still retains the financial strength.** The results of econometric modeling, modeling of the financial projections, as well as “reverse” stress tests still indicate the availability of financial safety margins at the end of 2016 compared to 2015 and ability to withstand certain macroeconomic shocks. Meanwhile, it should be noted that some banks have become vulnerable to combined macroeconomic shocks.

**According to the results of 2016, the payments systems of the Kyrgyz Republic operated normally,** the level of systemic risks in the financial infrastructure was assessed as moderate.

**A decrease of the price index for residential real estate was observed in the real estate market.** The results of stress tests of the commercial banks indicated that the banking sector of the Kyrgyz Republic can potentially suffer losses in case of decline in prices for real estate by more than 33 percent. Large banks can potentially suffer losses in case of decline in prices for real estate by more than 40 percent.

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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. MICROECONOMIC AND FINANCIAL ENVIRONMENT

### 1.1. Macroeconomic Conditions and Risks

*At the end of 2016, the economy of the country was observed in the positive zone. The policy of increasing government expenditures resulted in significant increase of the state budget deficit, which was formed amid fiscal fallout and existing fiscal sustainability risks.*

*Monetary policy measures taken previously in the Kyrgyz Republic helped to sustain low inflation rate, along with slowdown of inflation processes on the background of low prices in the world food and energy markets, and deflationary impact of decline in the domestic and foreign demand.*

*The National Bank of the Kyrgyz Republic followed the stimulating monetary policy under the conditions of slowdown in the economic growth and downward inflation trends.*

*The expected terms of the further economic development in the country are predetermined by slowdown of the global growth and fragile economic development in the countries - major trade partners, adjusted in the conditions of continuing uncertainty of stock prices and the sluggish external economic environment.*

#### **Gross Domestic Product**

In 2016, GDP improvement in the second half of the year resulted in economic growth of the country by 3.8 percent (in 2015, GDP growth was 3.9 percent). Excluding companies for the development of gold mining “Kumtor”, GDP increased by 3.7 percent (in 2015 - 4.9 percent). All major sectors of economy: services (1.5 p.p.), industry (0.9 p.p.), construction (0.6 p.p.) and agriculture (0.4 p.p.) made a positive contribution to GDP growth. Economic growth was supported by recovery in the dynamics of remittance inflow, which also influenced the increase of domestic consumption in the country. The deflator made 2.5 percent (in 2015 - 3.4 percent).

After two years of recession in 2014-2015, the industrial sector grew by 5.2 percent at the end of 2016 mainly due to the increase in the output of precious metals (by 5.0 percent), mining of metal ores (by 2.3 times), production of refined oil products (by 44.4 percent) and food products (by 16.7 percent). However, continuing decline is observed in textile manufacture (by 12.6 percent), production of clothing (by 20.0 percent), other non-metal mineral products (by 8.4 percent), in the sphere of electricity, gas, steam and conditioned air supply (by 3.5 percent).

For the second consecutive year, favorable weather conditions, together with the policy of agricultural subsidies have a positive impact on the growth of this sector. Growth in the sector of agriculture made 3.0 percent (in 2015 – by 6.2 percent). Growth resulted from increase in crop and livestock production.

Growth in the construction sector made 7.4 percent per year; this process was accompanied by increase in fixed capital investments (by 3.8 percent). In the reporting period, investments grew through the internal sources (by 1.5 percent) and external sources (by 7.1 percent). The major share of investments (approximately 74.0 percent of the total volume) was forwarded to the construction of mining facilities, provision (supply) of electricity, gas, steam and conditioned air, transportation activities and housing construction.

Increased activity in the sector of trade by 7.6 percent contributed to the growth in the sphere of service by 3.0 percent per a year. Meanwhile, reduction was observed in the sphere of transport and communication.



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

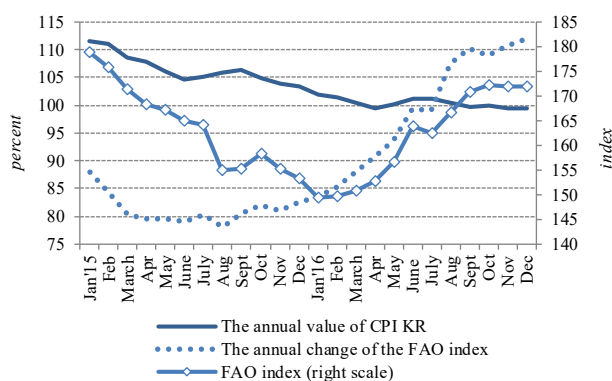
	2015			2016		
	Share, percent	Growth rate, percent	Contribution in growth, perc. points	Share, percent	Growth rate, percent	Contribution in growth, perc. points
<b>GDP</b>	<b>100</b>	<b>3.9</b>	<b>3.9</b>	<b>100</b>	<b>3.8</b>	<b>3.8</b>
Agriculture, forestry and fishery	14.1	6.2	0.9	13.2	3.0	0.4
Industry	16.7	-3.1	-0.5	17.5	5.2	0.9
<i>Mining</i>	0.8	50.5	0.3	1.0	20.1	0.2
<i>Processing sectors (Processing industry)</i>	14.1	-6.2	-0.9	14.8	5.4	0.8
<i>Provision (supply) of electric energy, gas, steam and conditioned air</i>	1.7	-0.1	-0.0	1.5	-3.5	-0.1
<i>Water supply, waste treatment and processing, receipt of recyclable materials</i>	0.2	3.0	0.01	0.2	6.9	0.01
Construction	8.4	16.3	1.2	8.5	7.4	0.6
Services	49.1	3.7	1.7	49.8	3.0	1.5
<i>Wholesale and retail trade; repair of cars and motor-cycles</i>	18.8	7.1	1.3	18.6	7.6	1.4
<i>Transportation activity and storage of cargo</i>	3.9	0.7	0.02	3.9	-0.3	-0.01
<i>Information and communication</i>	1.9	9.1	0.2	1.9	9.5	0.2
<i>Activity of hotels and restaurants</i>	4.3	3.2	0.1	3.9	-6.5	-0.3
<i>Financial intermediation and insurance</i>	0.5	1.5	0.01	0.5	1.5	0.01
<i>Operations with real estate</i>	2.6	-0.8	-0.02	2.6	-1.8	-0.05
<i>Professional, scientific and technical activity</i>	1.6	-1.2	-0.02	1.4	0.6	0.01
<i>Administrative and auxiliary activity</i>	0.4	2.8	0.01	0.4	-2.7	-0.01
<i>State administration and defence; obligatory social security</i>	5.4	-0.0	-0.0	5.6	0.7	0.04
<i>Education</i>	5.3	1.9	0.1	6.2	2.7	0.1
<i>Healthcare and social servicing of population</i>	2.8	1.3	0.04	3.0	1.4	0.04
<i>Art, entertainment and rest</i>	0.5	-0.7	-0.0	0.6	2.1	0.01
<i>Other servicing activity</i>	1.2	3.6	0.04	1.2	-2.2	-0.03
Net (exclusive of subsidies) taxes on products	11.8	3.9	0.5	11.0	3.8	0.4

Source: NSC KR

### **Inflation**

In 2016, the inflation rate in the Kyrgyz Republic was low primarily due to the decline in prices for food products and non-alcoholic beverages. Growth of production output in the agricultural sector and a stable situation in the international markets of key imported food products provided rather high supply of many food products. Tariffs for electricity and heat energy remaining at the level of 2015 in accordance with the Medium-term tariff policy of the Government of the Kyrgyz Republic for 2014-2017, as well as the decrease in prices for construction materials, petroleum products and gas had a downward effect on the prices. At the end of 2016, the CPI average annual growth constituted 0.4 percent (January-December 2016 to January-December 2015), whereas the CPI growth in December 2016 to December 2015 amounted to -0.5 percent.

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



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

In 2016, FAO index (Food Price Index) reflecting price dynamics in the world food markets was characterized by the upward trend, meanwhile its average annual value decreased by 1.5 percent compared to 2015. In 2016, quotations for crops decreased due to good harvest. Generally, the price index for vegetable oils increased; however, the prices for sunflower oil, the main oil in the market of the Kyrgyz Republic, were characterized by the stable dynamics. The prices of sugar in the world markets increased due to adverse weather conditions, which caused supply reduction in Brazil and Asian countries; however, it was largely compensated by a significant increase in

the production output of this product in the Kyrgyz Republic.

### State Budget

In 2016, the Government of the Kyrgyz Republic carried out stimulating fiscal policy. The state budget deficit amounted to KGS 20.9 billion or 4.6 percent of GDP<sup>3</sup> (in 2015, the budget was executed with a deficit of 1.5 percent of GDP). The total budget deficit financing was mainly implemented from the external sources in the amount of KGS 19.2 billion (4.2 percent of GDP), from the internal sources – KGS 7.7 billion (1.7 percent of GDP).

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

	Jan-Dec 2015		Jan-Dec 2016	
	billions of KGS	% to GDP	billions of KGS	% to GDP
<b>Total incomes (including sales of non-financial assets)</b>	128.2	30.3	130.7	28.5
including incomes from operational activity	128.1	30.2	130.6	28.5
sale of non-financial assets	0.1	0.0	0.1	0.0
<b>Total expenditures (including purchase of non-financial assets)</b>	134.5	31.8	151.5	33.1
including expenditures for operational activity	105.3	24.8	115.9	25.3
purchase of non-financial assets	29.3	6.9	35.6	7.8
<b>Deficit(-) / Surplus (+)</b>	-6.3	-1.5	-20.9	-4.6
<b>Budget financing</b>	19.4	4.6	26.9	5.9
External financing	16.3	3.8	19.2	4.2
Internal financing	3.1	0.7	7.7	1.7

Source: MF KR

At the end of 2016, revenue part of the republican budget was executed (tax revenues + non-tax revenues + official transfers) by 95.4 percent due to implementation of the plan for the collection of non-tax revenues by 115.7 percent, official transfers – by 103.0 percent. The plan for the collections of tax revenues was implemented by 92.3 percent. The plan for the collection of taxes by the State Tax Service was implemented by 92.5 percent, the State Customs Service plan – by 91.9 percent. At the end

<sup>3</sup> According to the preliminary data of the Central Treasury of the Ministry of Finance of the Kyrgyz Republic.

of 2016, the republican budget expenditures were fulfilled by 80.0 percent. Meanwhile, the expenditure plan for protected items was implemented by 83.6 percent, for unprotected items – by 65.3 percent.

### ***Macroeconomic risks***

Expectations of the economic development suggest moderate growth amid the recovery of business activity and achievement of potential development in the medium term. Despite the encouraging results of 2016, macroeconomic risks such as structural problems of the national economy still exist in the country and an ambiguous geo-economic situation is observed in the world. High dependence on the economic climate in the countries-major trade partners, as well as the weak dynamics of foreign and domestic demand are the factors, which restrain improvements.

Structural factors of price stability risk, associated with a significant proportion of food products in the consumer basket and a large share of imports in the consumption of the population, are still observed. Changing supply of agricultural products, which depends on the influence of weather conditions on the harvest and environment in the international markets, may have a significant upward or downward pressure on the price level. Moreover, price risks may result from unexpected changes in the foreign economic environment and fluctuations in the currency market.

## 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)

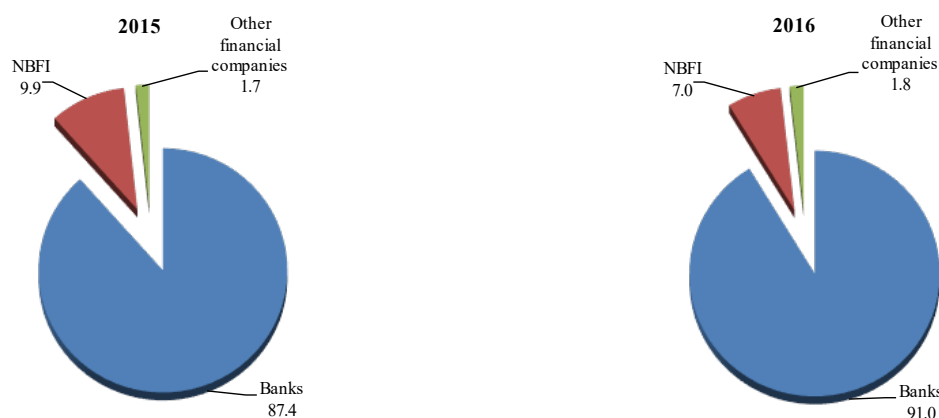
Financial institutions	2012	2013	2014	2015	2016
<b>Commercial banks</b>	<b>23</b>	<b>24</b>	<b>23</b>	<b>24</b>	<b>25</b>
<b>Other financial companies, including:</b>	<b>837</b>	<b>793</b>	<b>689</b>	<b>656</b>	<b>704</b>
<b>Nonbanking financial institutions (NBFIs), including:</b>	<b>810</b>	<b>764</b>	<b>660</b>	<b>627</b>	<b>673</b>
Micro-financial organizations, including:	320	277	215	172	162
micro-crediting companies	242	208	154	109	103
micro-crediting agencies	74	65	56	57	53
micro-financial companies	4	4	5	6	6
“FCCU” OJSC	1	1	1	1	1
Credit unions	183	153	135	125	116
Exchange offices	306	333	309	329	394
<b>Insurance companies</b>	<b>16</b>	<b>18</b>	<b>17</b>	<b>17</b>	<b>19</b>
<b>Investments funds</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>9</b>
<b>Stock exchanges</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Pension funds</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>

Source: NBKR, NSC KR

As of the end of 2016, assets of the financial sector constituted KGS 195.2 billion or 42.6 percent of GDP, a decrease was KGS 6.1 billion compared with the same period of 2015.

The banking sector’s share in the total assets of the financial sector constituted 91.2 percent. The share of NBFIs and other financial companies accounted for 7.0 percent and 1.8 percent, respectively (Chart 1.2.1). The increase in the share of the banking sector and the decrease in the share of NBFIs mainly resulted from reorganization of “MFC Financial Group Companion” CJSC into “Bank Companion” CJSC.

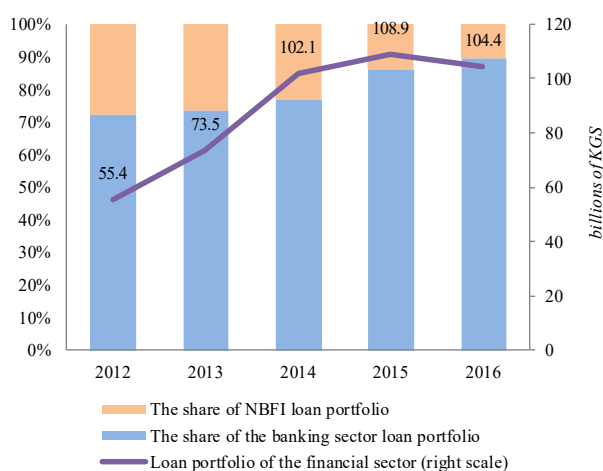
**Chart 1.2.1. Institutional Structure of the Financial Sector Assets of the Kyrgyz Republic**  
percent



Source: NBKR

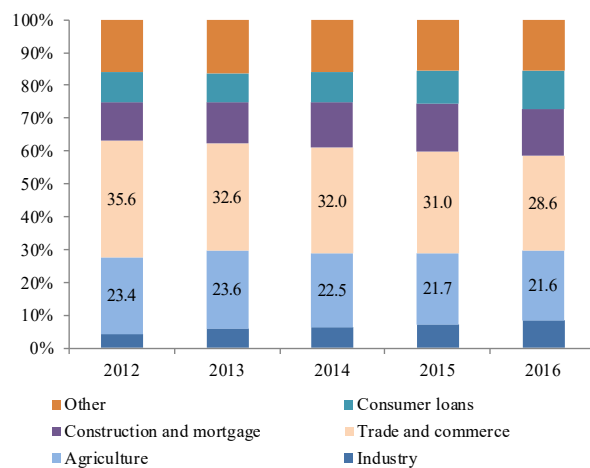
The total loan portfolio of banks and NBFIs in 2016 amounted to KGS 104.4 billion or 22.8 percent of GDP. The share of bank loans in the loan portfolio of the financial sector increased by 3.3 p.p. and as of the end of 2016 constituted 89.5 percent (Chart 1.2.2).

**Chart 1.2.2. Structure of the Loan Portfolio**



Source: NBKR

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



Source: NBKR

The high concentration was still observed in the trading sector (banks) and agriculture (NBFIs) 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 2016 constituted 50.2 percent of total issued loans or KGS 52.5 billion (Chart 1.2.3).

## 1.3. Financial Markets

Generally, the situation in the domestic foreign exchange market at the end of 2016 was stable and was characterized by the downward trend of the foreign currency exchange rate. Reduction in demand for interbank loans with decline in their value was one of the consequences of liquidity growth in the banking sector. Increased demand for government securities resulted in decrease of profitability of the treasury bills and the National Bank notes; meanwhile the profitability of treasury bonds on the contrary remained relatively high.

### 1.3.1. Currency and Money Market

#### *Currency Market*

In 2016, dynamics of the exchange rate in the domestic currency market was primarily formed under the impact of measures previously taken in the currency market by the National Bank and the Government of the Kyrgyz Republic. Finally, in 2016, the level of dollarization in the banking sector reached a historical minimum. An additional factor was the gradual weakening of internal pressure on KGS due to decreased demand for foreign currency.

The official exchange rate of the US dollar decreased in 2016 by 8.8 percent, from KGS 75.8993 to KGS 69.2301/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 2016, net purchase of foreign currency by the National Bank in 2016 amounted to USD 29.1 million: the volume of operations on purchase of the foreign currency by the commercial banks amounted to USD 191.9 million, on sale – USD 162.7 million.

#### *Money Market*

In the reporting period, activity of the commercial banks decreased on the background of the high level of excess liquidity in the banking sector in the interbank borrowings market. Repo transactions, which were in high demand a year ago, in 2016, decreased by 85.9 percent and amounted to KGS 4.5 billion. The volume of overnight loans issued by the National Bank of the Kyrgyz Republic declined down to KGS 2.0 billion, a decrease by 92.3 percent compared with the same indicator of 2015.

The volume of transactions increased due to the growth of the standard credit interbank transactions in the national currency up to KGS 1.9 billion (+74.9 percent).

Another result of the environment formed in the domestic money market was the growth of overnight deposits by 6.1 times, up to KGS 1,986.5 billion within a year.

### 1.3.2. Securities Market

In 2016, ST-Bills auctions were conducted on a monthly basis, with the exception of December due to the fact that the limit of placement, stipulated in the law on the republican budget, was achieved.

The total volume of declared ST-Bills issue decreased by 18.7 percent compared to 2015, down to KGS 5.4 billion. Given significant increase of demand by 2.3 times on the part of the participants of this segment in the securities market, the volume of actual sales (including additional placement) increased by 51.4 percent compared to the same indicator of 2015 and amounted to KGS 5.7 billion.

Thus, the volume of ST-Bills in circulation increase by 28.5 percent within a year and amounted to KGS 4.3 billion at the end of 2016. The commercial banks are the major group of the ST-Bills holders

with the total share of 65.8 percent, the share of institutional investors made 33.3 percent, resident legal entities -0.9 percent.

Growth of the government treasury bills placement was accompanied by a decline in profitability of securities on all types of maturity - the aggregate average monthly profitability of the ST-Bills made approximately 9.9 percent (-2.9 p.p.) within a year.

In the reporting period, the total volume of supply of treasury bonds issued by the Ministry of Finance decreased by 12.8 percent compared to the same indicator of 2015 and amounted to KGS 6.7 billion. This segment, like the state treasury bills market, demonstrated significant increase in demand by 83.0 percent within a year.

The ST-Bonds additional placement conducted by the Ministry of Finance adjusted the total sales, which finally exceeded the supply of these securities by 19.8 percent and amounted to KGS 8.0 billion (+52.5 percent compared to 2015). Finally, in 2016, the volume of state treasury bonds in circulation increased by 37.0 percent, up to KGS 13.7 billion.

Sales of ST-Bonds increased on the background of growing profitability thereof, up to 20.1 percent on 5-year ST-Bonds, compared to ST-Bills.

In the reporting period, 7-and 14-day notes of the National Bank of the Kyrgyz Republic were offered for placement in the amount of KGS 116.0 billion in line with the conducted monetary policy, a decrease by 11.1 percent compared to the indicator of the same period of 2015.

Sales of the National Bank notes increased by 62.3 percent, up to KGS 110.3 billion on the background of increased demand for these notes by 3.0 times (up to KGS 207.8 billion). Thus, sales of 7-day notes amounted to KGS 102.3 billion (+52.4 percent) and 14-day notes – KGS 8.0 billion, an increase by 10.0 times compared to the same indicator of 2015.

The results of the auctions conducted in 2016 showed that the total weighted average revenue was 2.6 percent, a decrease by 7.3 p.p. compared to 2015.

## 1.4. Real Estate Market

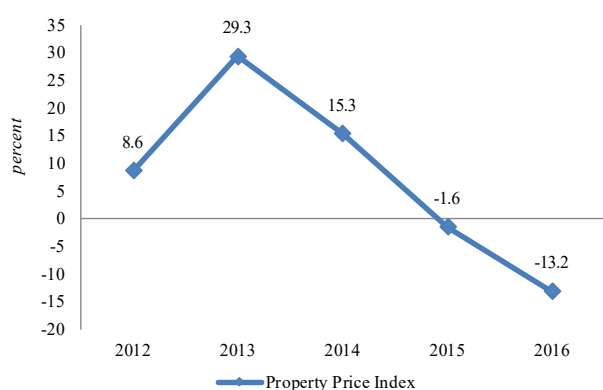
**The real estate market of the Kyrgyz Republic experienced decrease of the price index<sup>4</sup>, due to decline in prices for apartments (in the reporting period, prices decreased by 2.6 p.p.), and individual houses (a decrease by 21.2 p.p.) compared with 2015.**

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

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

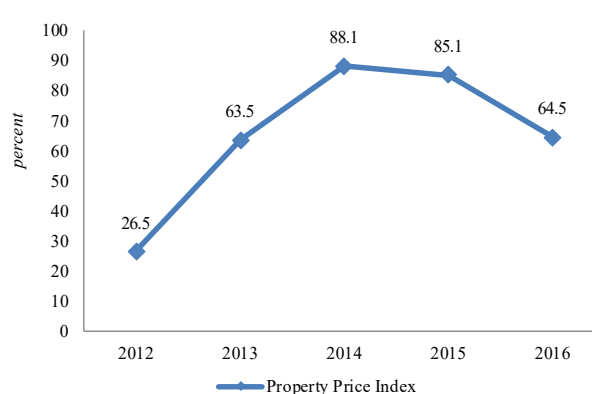
At the end of 2016, decrease in property price index compared with 2015 was observed in Kyrgyzstan (Chart 1.4.1, Chart 1.4.2).

**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\***



Source: SRS GKR, NBKR calculations

\* Year of 2010 was taken as a basis period.

As of December 31, 2016, the average price for 1 square meter of housing (apartments) in Bishkek decreased by 10.6 percent and in Osh increased by 30.1 percent compared with 2015 (Chart 1.4.3). The average price for 1 square meter of individual houses in Bishkek decreased by 22.0 percent and in Osh – by 17.8 percent, (Chart 1.4.4).

<sup>4</sup> The Laspeyres index method was used in developing 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.

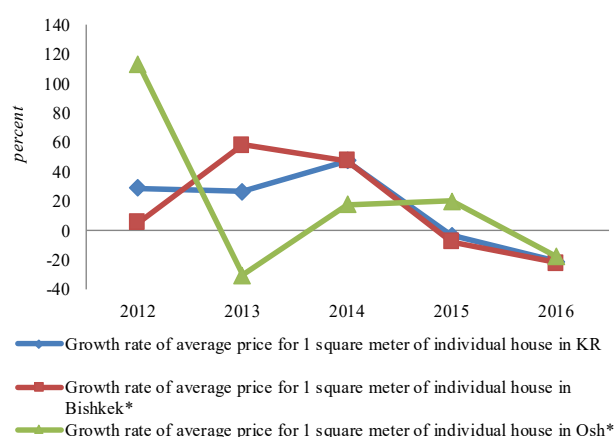


**Chart 1.4.3. Dynamics of Change in Prices for Apartments**



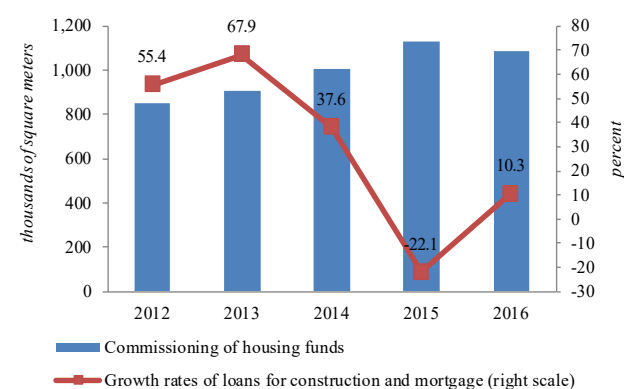
Source: SRS GKR, NSC KR, NBKR calculations

**Chart 1.4.4. Dynamics of Change in Prices for Individual Houses**



Source: SRS GKR, NSC KR, NBKR calculations

**Chart 1.4.5. Dynamics of Housing Commissioning and Provided Loans for Construction and Mortgage**



Source: SRS GKR, NSC KR, NBKR calculations

Note: data for the reporting period

At the end of 2016, the decrease in the aggregate level of commissioning of housing funds constituted 3.8 percent compared with 2015 (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).

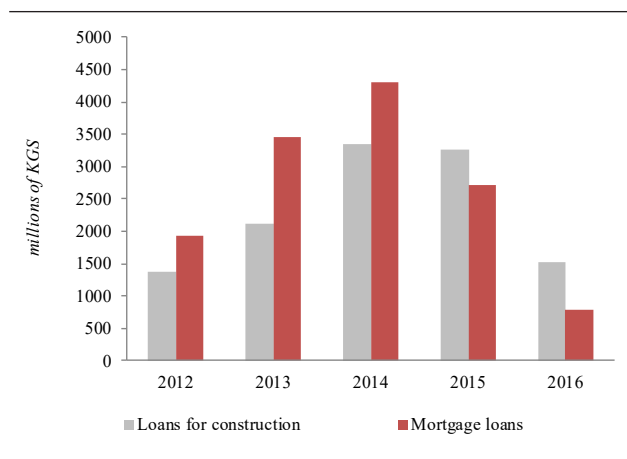
**Table 1.4.1. Geographic Structure of Commissioned Housing**

	2015		2016	
	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	602.1	53.4	529.1	48.8
Osh city and Osh region	247.3	21.9	238.3	22.0
Other regions of KR	277.7	24.6	316.6	29.2
<b>Total</b>	<b>1127.1</b>	<b>100.0</b>	<b>1084.0</b>	<b>100.0</b>

Source: NSC KR

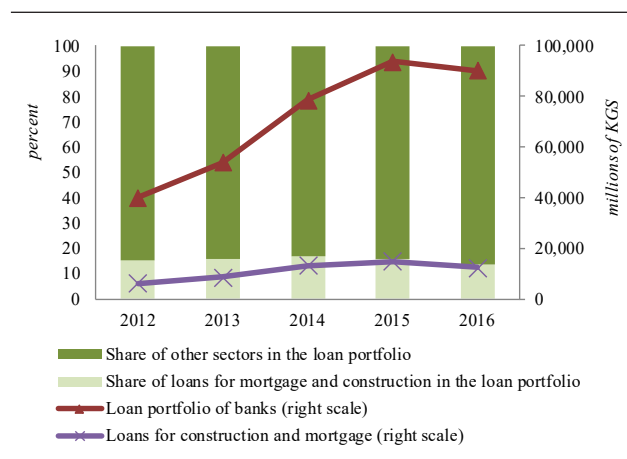
The total mortgage loans and loans issued to finance the construction constituted KGS 6.6 billion (Chart 1.4.6).

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



Source: NBKR  
Note: data for the reporting period

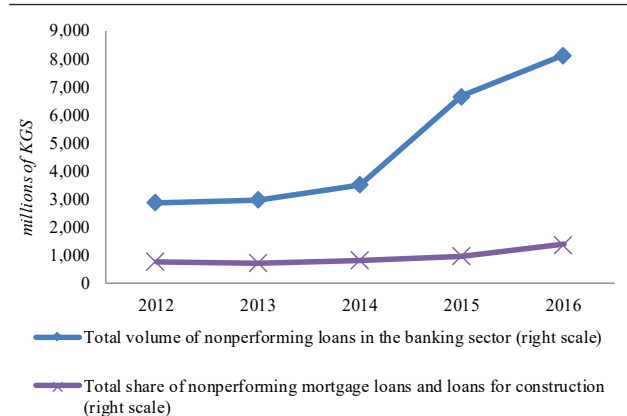
**Chart 1.4.7. Total Share of Loans for Mortgage and Construction in the Loan Portfolio of Commercial Banks**



Source: NBKR  
Note: data for the reporting period

As of December 31, 2016, total loans of the commercial banks for mortgage and construction decreased by 3.7 percent compared with 2015 and amounted to KGS 14.1 billion. Meanwhile, the total share of loans for construction and mortgage in the loan portfolio of the commercial banks decreased by 0.5 p. p. compared with 2015 and constituted 15.1 percent (Chart 1.4.7).

**Chart 1.4.8. Dynamics of Nonperforming Loans**



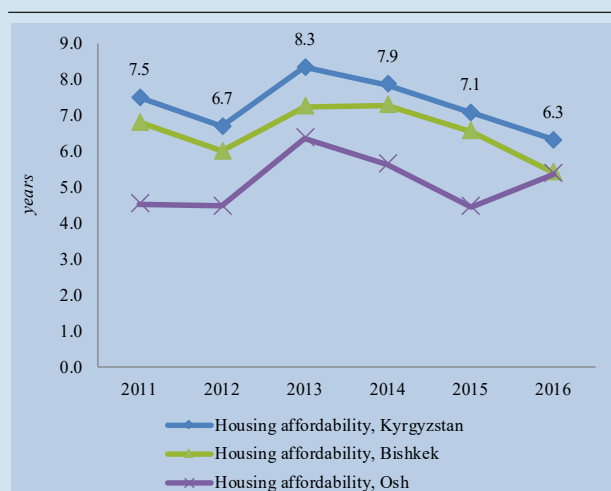
Source: NBKR

As of December 31, 2016, the total volume of nonperforming loans for mortgage and construction amounted to KGS 1,543.2 million (Chart 1.4.8). In the reporting period, gross share of nonperforming loans of aforementioned sectors constituted 18.8 percent of the total volume of nonperforming loans in the banking sector.

### Box 1. Housing Affordability Index

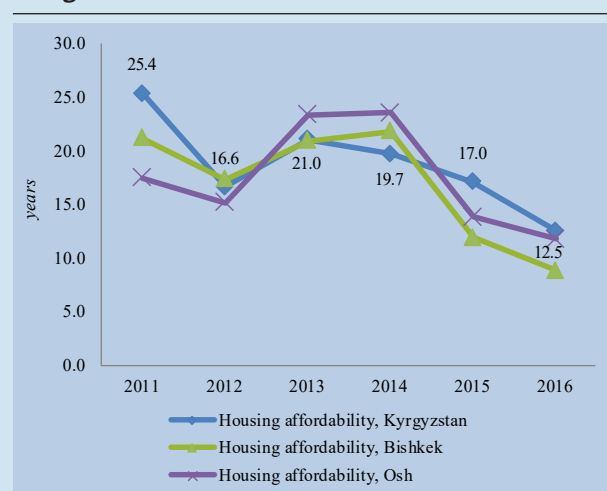
As of December 31, 2016, the situation with housing affordability in the Kyrgyz Republic improved slightly (index value decreased by 0.8 years) compared with 2015. This is due to decrease in prices for apartments in the real estate market of the Kyrgyz Republic (Chart 1.4.9).

**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 2016, to purchase an apartment of 54 square meters in Kyrgyzstan one should save all wages for 6.3 years.

By the end of the reporting period, a family in Kyrgyzstan with the minimum consumer budget of KGS 14,383 (49.6 percent of total family income) will need 12.5 years in order to purchase housing (Chart 1.4.10).

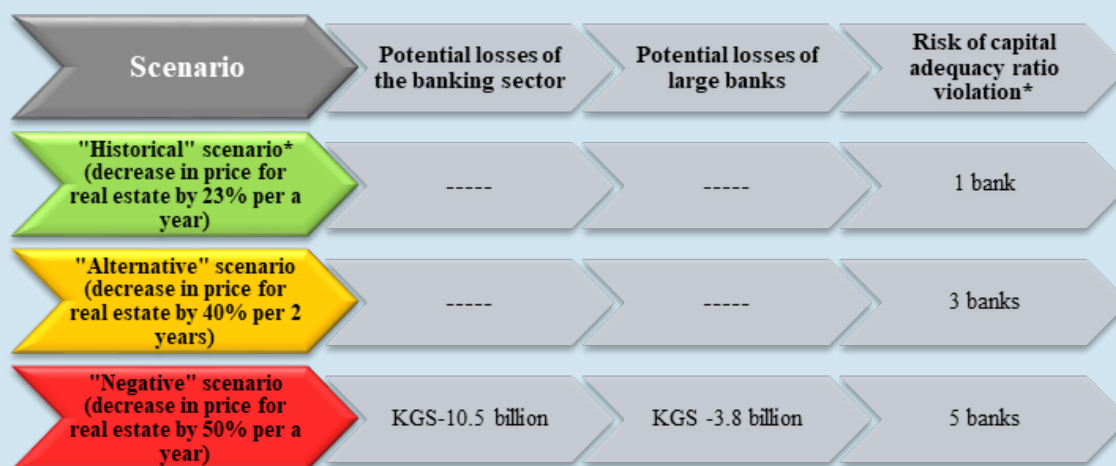
## Box 2. Stress Testing of Impact from Change in Prices in the Real Estate Market on the Banking Sector<sup>5</sup>

As of December 31, 2016, the share of loans, secured by pledged real estate, constituted 63.1 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>6</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 Change in Prices in the Real Estate Market on the Level of Credit Risk of the Banking Sector



\* 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 33 percent, large banks – by 40 percent. Potential risk of capital adequacy ratio violation in the banking sector, as well as by large banks, occurs when prices for real estate decrease by 57 percent and 60 percent, accordingly.

<sup>5</sup> Stress test was conducted on the basis of the commercial banks' data provided in the course of the survey as of December 31, 2016.

<sup>6</sup> According to the data provided in the course of the commercial banks' survey.

**Scheme 2. Comparative Analysis of the Results of Stress Test with the Stress Test Conducted on June 30, 2016.**

	<b>Stress test as of June 30, 2016</b>	<b>Stress test as of December 31, 2016</b>
<b>Banking sector</b>	Scenario 1: ----- Scenario 2: KGS -0.6 billion; Scenario 3: KGS -17.7 billion	Scenario 1: ----- Scenario 2: ----- Scenario 3: KGS -10.5 billion
<b>Large banks</b>	<i>Scenario 1 and 2: ----- Scenario 3: KGS -7.4 billion</i>	<i>Scenario 1 and 2: ----- Scenario 3: KGS -3.8 billion</i>
Banks subjected to credit risk most of all in case of decrease in prices	<i>5 banks</i>	<i>6 banks</i>
The level of decrease in prices, when losses occur	<i>in the banking sector: 31%</i>	<i>in the banking sector: 33%</i>
The level of decrease in prices, when the risk of capital adequacy ratio violation occurs	<i>in the banking sector: 48%</i>	<i>in the banking sector: 57%</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.

## II. BANKING SECTOR

*The Development of the banking sector in 2016 was characterized by adaptation to changing external environment, which affected growth rates of major indicators of the banking sector. The growth of assets and diversification of loans were observed on the background of insignificant decrease of liabilities, loan portfolio and net profit of the banking sector.*

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

### 2.1. Major Trends

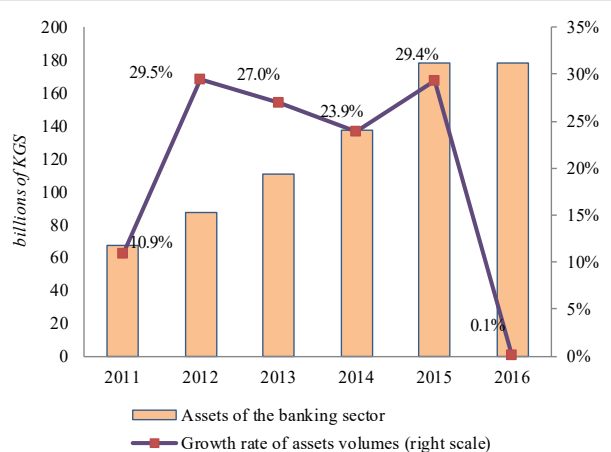
As of December 31, 2016<sup>7</sup> 25 commercial banks (including the Bishkek branch of the National Bank of Pakistan) and 324 of their branches worked in the territory of the Kyrgyz Republic, among which there were 17 banks with foreign participation in the capital, including 12 banks with foreign participation in the amount of more than 50 percent. All banking institutions of the country are universal by the type of business.

In 2016, “MFC Financial Group Companion” CJSC<sup>8</sup> was reorganized in “Bank Companion” CJSC and a license for carrying out banking operations was issued.

#### 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 2016 amounted to KGS 178.2 billion, having increased by 0.1 percent compared with 2015 (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 securities by 62.5 percent or KGS 5.0 billion;
- as well as other assets by 36.6 percent or KGS 5.7 billion.

The share of loan portfolio in the structure of assets constituted 52.5 percent, having decreased by 0.3 p.p. compared with 2015.

#### Loan Portfolio

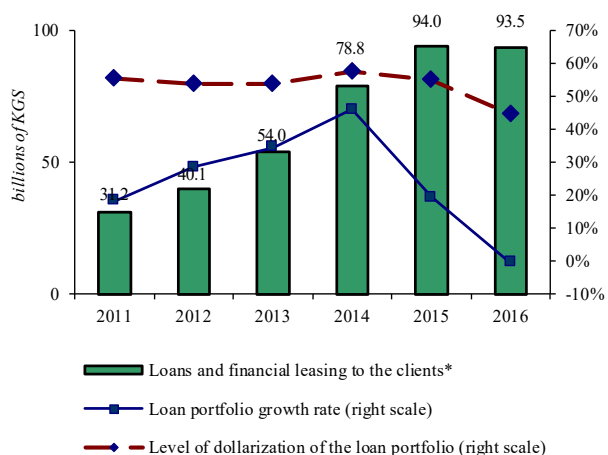
The decrease of banks' loan portfolio in 2016 was primarily due to reduction in the volume of lending to trade and mortgage loans.

At the end of 2016, the level of dollarization of the loan portfolio in the banking sector decreased by 10.5 p.p. compared with 2015 and amounted to 44.5 percent (Chart 2.1.2).

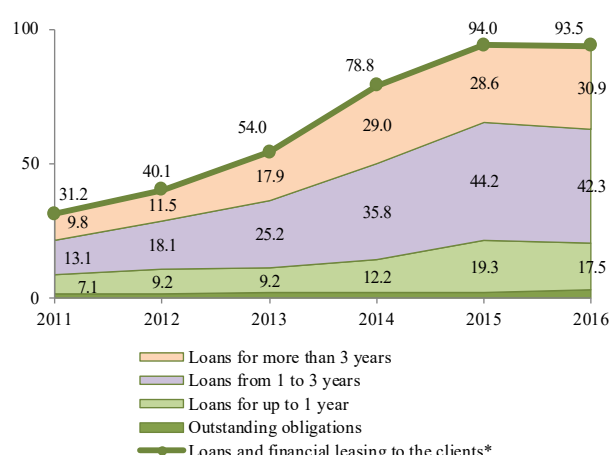
<sup>7</sup> The data are submitted according to periodic regulatory reporting of the commercial banks.

<sup>8</sup> The licenses No.053 and No.053/1 for carrying out banking operations in the national and foreign currency, accordingly, were issued to “Bank Companion” CJSC on January 11, 2016 on the basis of the National Bank of the Kyrgyz Republic Resolution No. 61/1 dated October 7, 2015.

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



**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 45.3 percent or KGS 42.3 billion at end of 2016 (Chart 2.1.3).

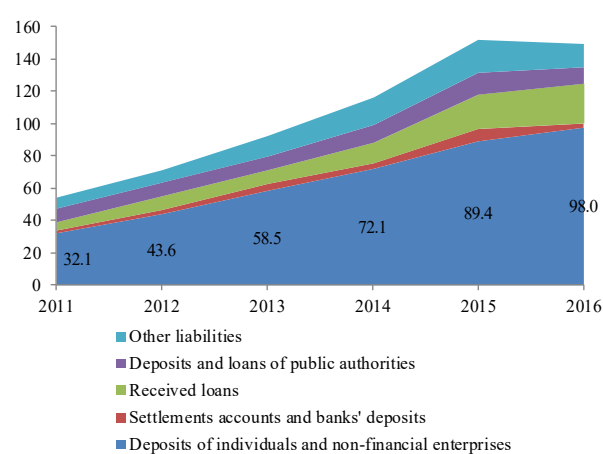
### Liabilities

At the end of 2016, liabilities of the banking sector of the Kyrgyz Republic amounted to KGS 149.6 billion, having decreased by 1.5 percent compared with 2015.

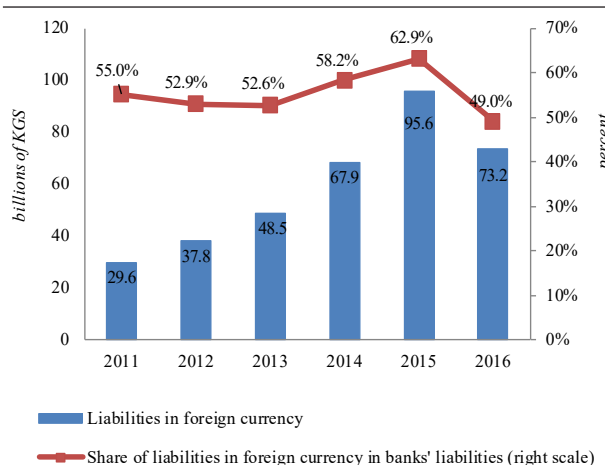
At the end of 2016, deposits of individuals and non-financial enterprises increased by 9.7 percent and amounted to KGS 98.0 billion (График 2.1.4). The share of individuals' and households' deposits in the banks' liabilities increased by 6.7 p.p. and amounted to 65.5 percent.

The share of liabilities in foreign currency in the total volume of attracted funds decreased by 13.9 p.p. and amounted to 49.0 percent or KGS 73.2 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

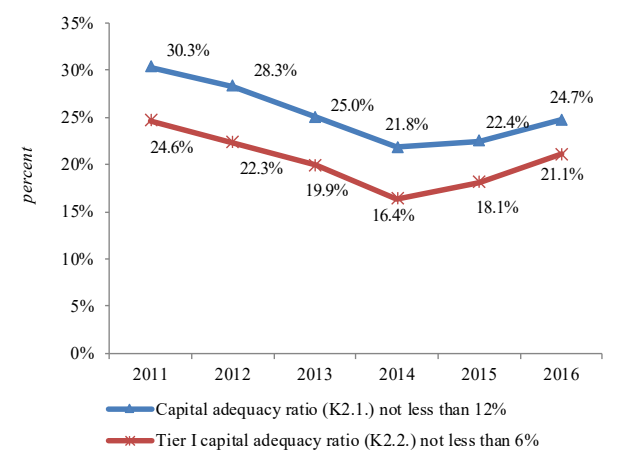
The change of profitability indicators<sup>9</sup> at the end of 2016 was observed compared with 2015:

- ROA constituted 0.5 percent;
- ROE formed at the level of 3.4 percent.

Net profit of the banking sector amounted to KGS 893.5 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 2016, this figure amounted to 24.7 percent (Chart 2.1.6), having increased by 2.3 p.p compared with 2015.

Increase of capital adequacy was due to outstripping growth rates of net total capital (+7.8 percent) and the decrease of risk weighted assets and off-balance sheet liabilities (-2.2 percent).

At the same time, the actual level of capital adequacy in the banking sector generally formed according to the results of 2016 can further increase the volume of risky and earning assets by 2.1 times, without exceeding established level of capital adequacy.

The abovementioned information indicates relative stability of the banking sector to negative shocks and the presence of certain potential to increase the level of financial intermediation and efficiency of the banking sector activity in the future.

<sup>9</sup> ROA, ROE indicators are presented in annual terms.



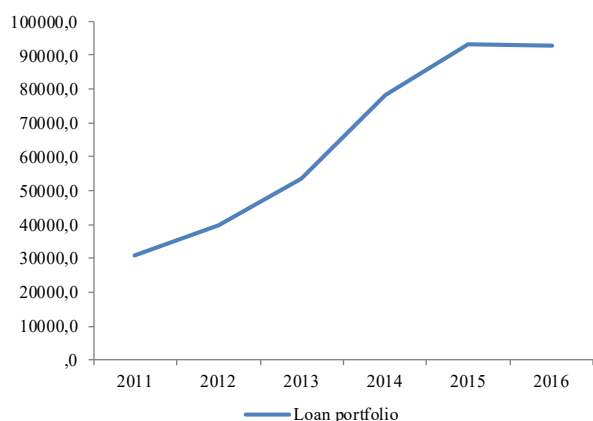
## 2.2. Banking Sector Risks

### 2.2.1. Credit Risk

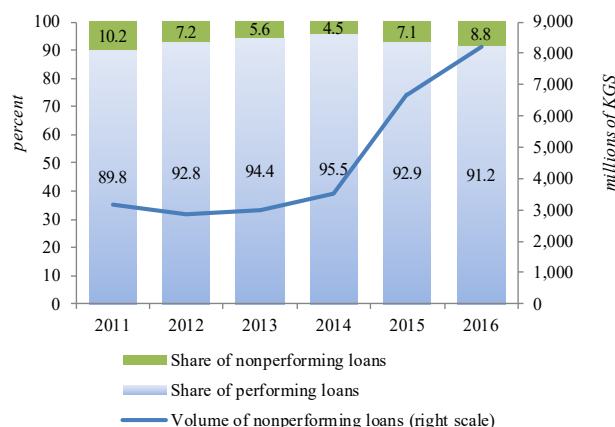
A credit risk is one of the main risks that accompany banking activity.

At the end of 2016, the volume of loan portfolio in the banking sector slightly decreased compared with 2015 (Chart 2.2.1). The share of nonperforming loans in the loan portfolio of banks increased from 7.1 percent to 8.8 percent compared with 2015 (Chart 2.2.2).

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



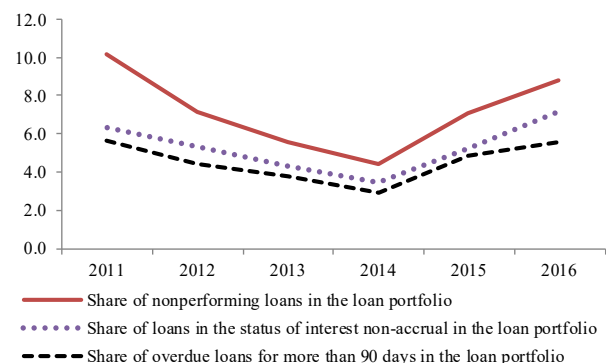
**Chart 2.2.2. Loan Portfolio Quality**



In order to assess the quality of the loan portfolio, the commercial banks use a loan classification system<sup>10</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 2016, the indicator of the risk of default on assets (the ratio of special loan loss provisions and loan portfolio) constituted 5.0 percent.

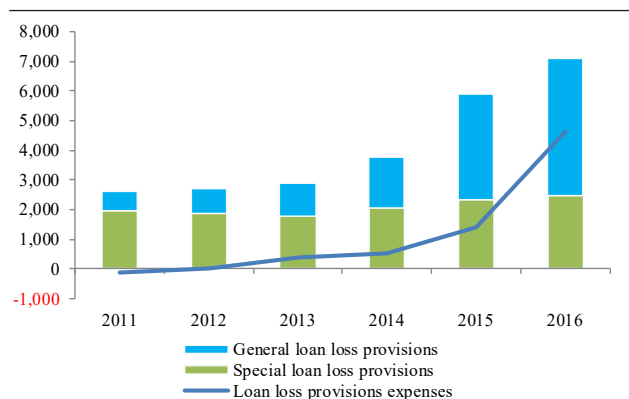
**Chart 2.2.3. Indicators of the Loan Portfolio Quality**  
Percent



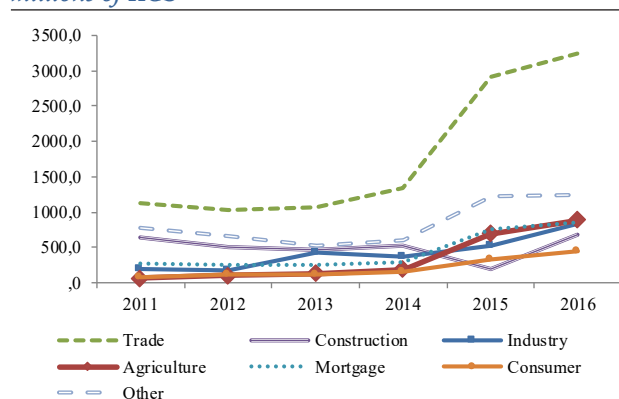
Aggregate reserves created by the commercial banks constituted 7.6 percent of the total loan portfolio (as of December 31, 2015 this index constituted 6.3 percent). Meanwhile, the share of special loan loss provision as of December 31, 2016 constituted 34.8 percent of the total reserves (Chart 2.2.4).

<sup>10</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 2.2.4. Total and Special Reserves**  
millions of KGS



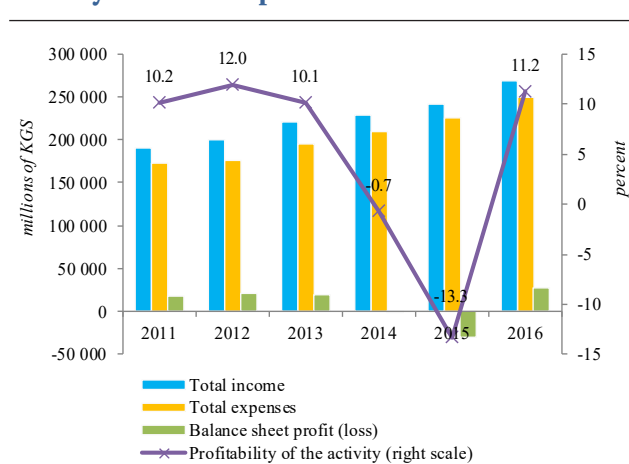
**Chart 2.2.5. Volume of Nonperforming Loans by Sectors of Economy,**  
millions of KGS



As of the end of December 31, 2016, the highest concentration of credit risks was observed in the trade sector of economy (Chart 2.2.5).

### Financial Status of Medium and Large Enterprises

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



Source: NSC KR, NBKR calculations

At the end of 2016, the balance sheet profit and profitability of the enterprises increased compared to 2015 on the background of existing upward trend in the corporate sector.

At the end of the reporting period, the following financial results of the enterprises operating in the corporate sector were observed (Chart 2.2.6):

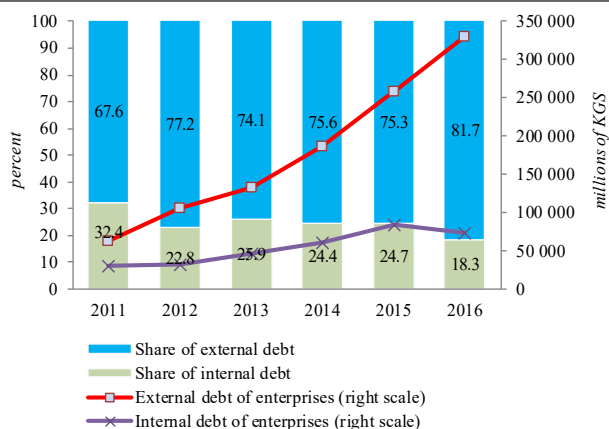
- total income increased by 11.1 percent and amounted to KGS 268.6 billion;
- total expenses increased by 10.3 percent and amounted to KGS 249.8 billion;
- balance sheet profit amounted to KGS 28.1 billion;
- profitability of the enterprises made 11.2 percent.

At the end of 2016, the total debt of the enterprises in the corporate sector grew by 17.2 percent compared to 2015 and amounted to KGS 402.2 billion or 87.8 percent of GDP

At the end of 2016, *the external debt* of the corporate sector increased by 27.2 percent compared to 2015 and amounted to KGS 328.5 billion or 71.7 percent of GDP (Chart 2.2.7 and 2.2.8).

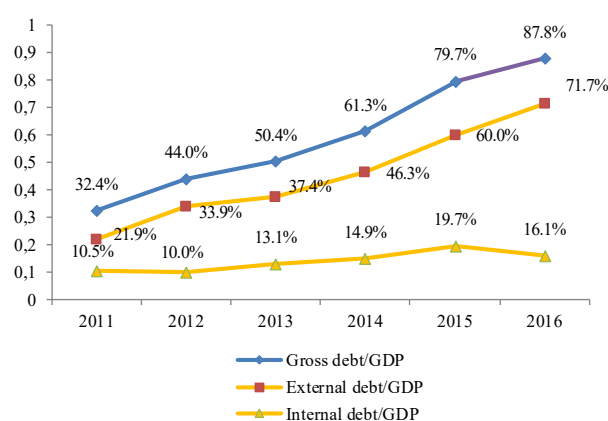
At the end of 2016, *the internal debt* of the enterprises in the corporate sector declined by 13.1 percent compared with last year and amounted to KGS 73.7 billion, or 16.1 percent of GDP.

**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**

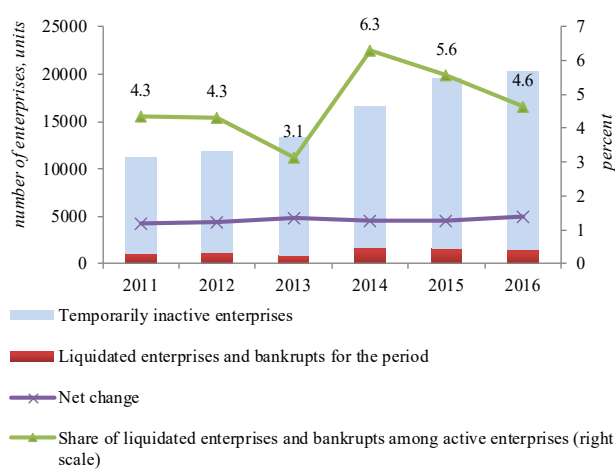


Source: NSC KR, NBKR calculations

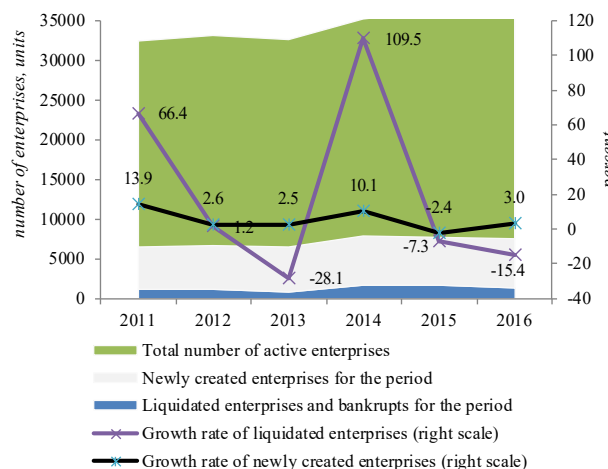
### Business Activity of the Corporate Sector

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 5.5 percent compared to 2015), as well as there was an increase in the number of newly created enterprises (by 3.0 percent compared to 2015).

**Chart 2.2.9. Business Activity of the Corporate Sector**



Source: NSC KR, NBKR calculations



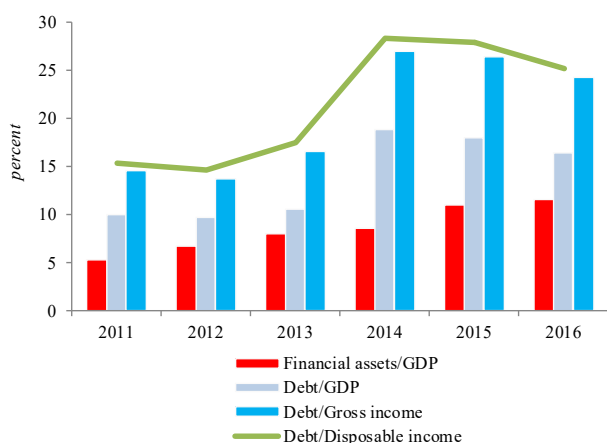
### Financial Conditions of the Households<sup>11</sup>

There was a slight improvement in the financial soundness of the households due to the growth in the incomes of the population outstripping the debt growth rate of the population to the financial sector.

Debt soundness indicators (Chart 2.2.10) decreased at the end of the reporting period. On December 31, 2016, the households' debt-to-GDP ratio decreased from 18.0 percent to 16.4 percent compared to 2015.

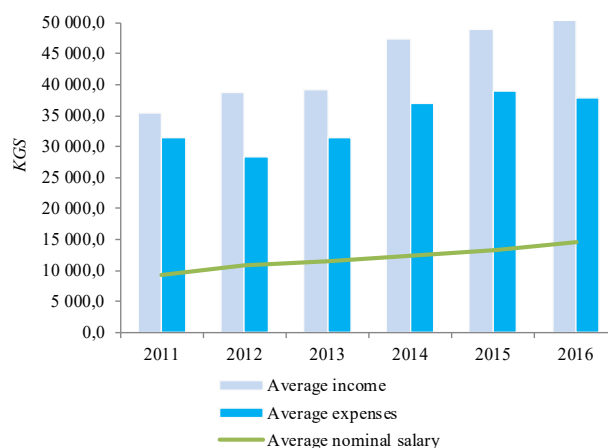
<sup>11</sup> According to the official statistical data of the NSC KR based on the sample survey of the households.

**Chart 2.2.10. Indicators of Financial Soundness of the Households**



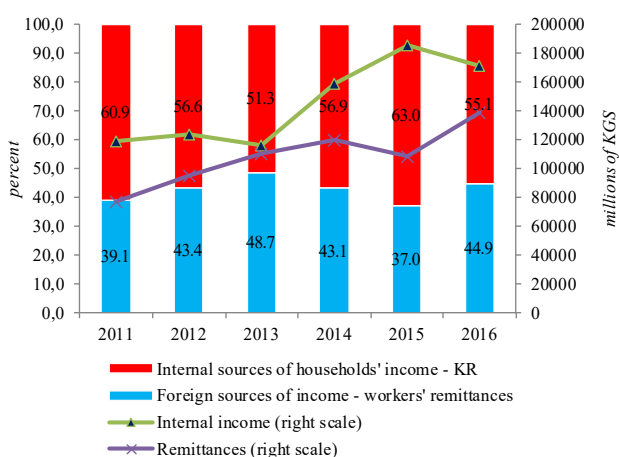
Source: NSC KR, NBKR calculations

**Chart 2.2.11. Factors for the Financial Soundness of the Population Balance**



Source: NSC KR, NBKR calculations

**Chart 2.2.12. Structure of the Households' Incomes by Sources**



Source: NSC KR, NBKR calculations

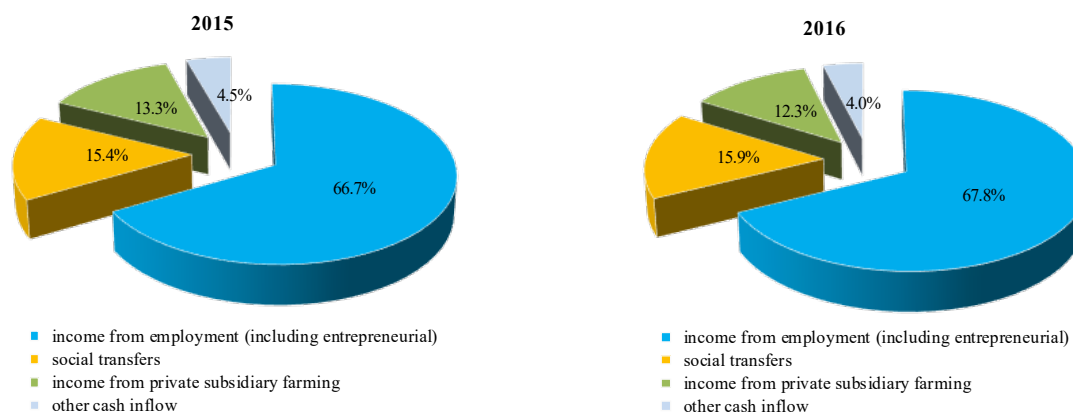
At the end of 2016, the share of remittances increased by 7.9 p. p., up to 44.9 percent of total income of the population (Chart 2.2.12). Meanwhile, remittances of migrant workers continued to be a significant source of the households' income.

At the end of 2016, the major share in the structure of the households' income accounted for the income from employment, which made 67.8 percent of the population total income (Chart 2.2.13).

The major share in the structure of household's expenses accounted for consumption (Chart 2.2.14) that restricted the increase of savings and investment costs.

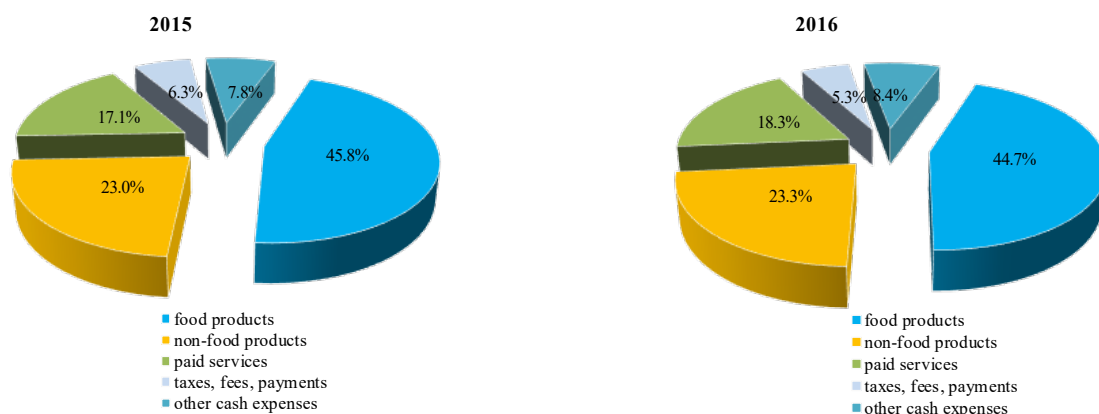
A significant share of consumer expenses, which made 86.3 percent of the total expenses at the end of 2016, can affect the households' ability to meet their obligations in case of a reduction in financial income.

**Chart 2.2.13. Structure of the Households' Income**



Source: NSC KR

**Chart 2.2.14. Structure of the Households' Expenses**

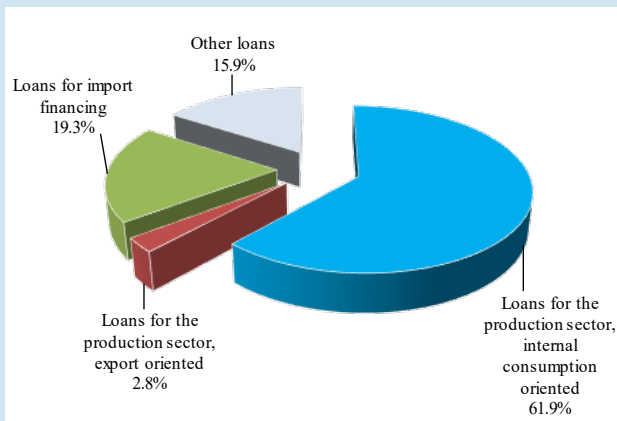


Source: NSC KR

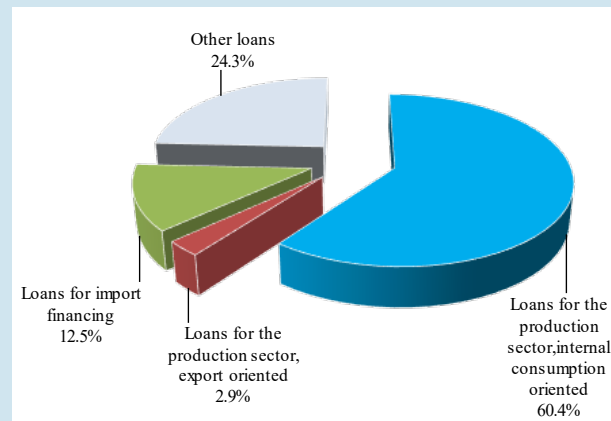
### Box 3. The Survey Results of the Commercial Banks Clients

At the end of 2016, a significant share of loans (60.4 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 (12.5 percent) are forwarded for financing of imports (Chart 2.2.16).

**Chart 2.2.15 Sectoral Structure of Loans as of December 31, 2015**

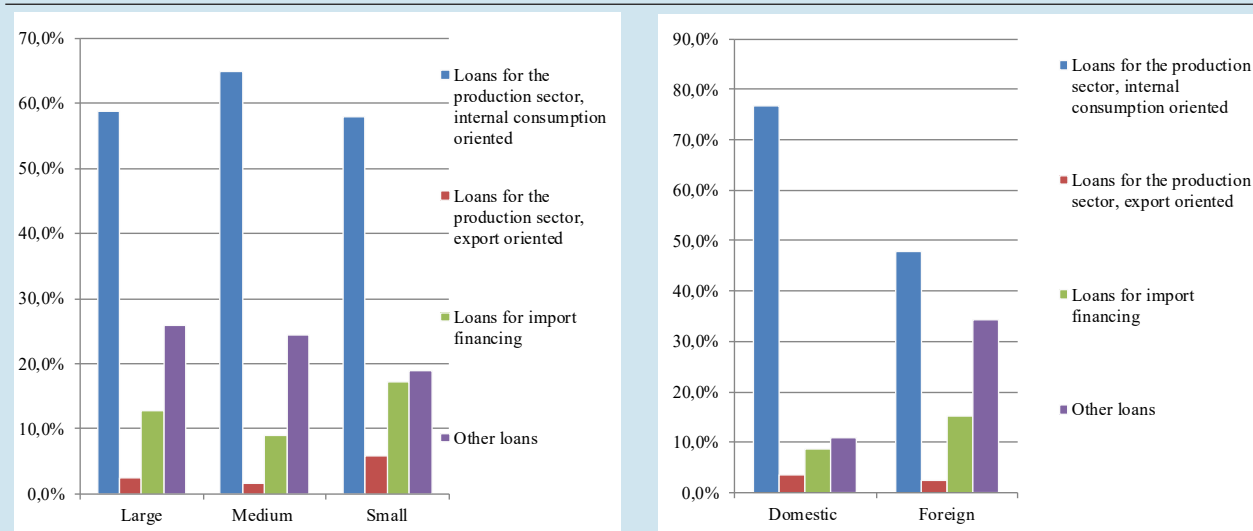


**Chart 2.2.16. Sectoral Structure of Loans as of December 31, 2016**



Domestic banks forward 76.9 percent of the loan portfolio to the manufacturing sector (GDP) and 8.8 percent – to finance imports. Generally, foreign banks also provided loans to the manufacturing sector of economy (47.9 percent). In the reviewed period, the share of loans forwarded to finance imports constituted 15.2 percent of the loan portfolio (Chart 2.2.17).

**Chart 2.2.17. Sectoral Structure of Loans by the Groups of Banks and Forms of Ownership as of December 31, 2016**



Source: data received from commercial banks' survey

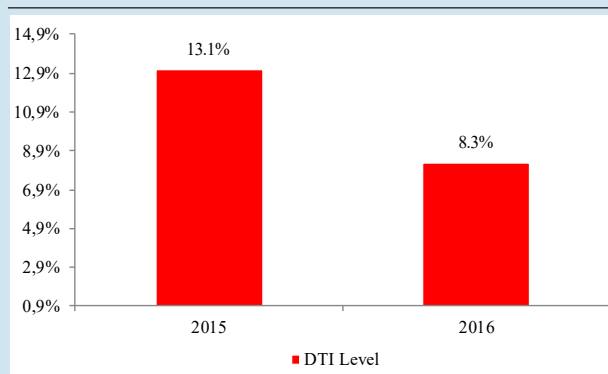
<sup>12</sup> The production sector means the activity of the bank clients connected with the production of goods and services (construction, communication and automobile repair shop services, transport services, real estate leasing, hotels, restaurants, etc.).

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

##### *Borrowers solvency*

At the end of 2016, the level of debt burden of 15 banks' largest clients calculated through DTI index constituted 8.3 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 **medium banks** (9.2 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 2016**

	Banking sector	Large banks	Medium banks	Small banks
Loan balance, <i>in billions of KGS</i>	21,067.9	11,079.5	5,526.5	4,462.0
Share of loans in 15 largest borrowers in the total volume of loan portfolio in the banking sector, in %	22.6%	22.7%	17.7%	34.0%
Ratio of expenses for loan debt servicing to the borrowers' total income, in %	8.3%	8.1%	9.2%	7.6%

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 2016**

	National banks	Foreign banks
Loan balance, <i>in billions of KGS</i>	6,591.6	14,476.4
Share of loans in 15 largest borrowers in the total volume of loan portfolio in the banking sector, in %	16.3%	27.4%
Ratio of expenses for loan debt servicing to the borrowers' total income, in %	7.8%	8.5%

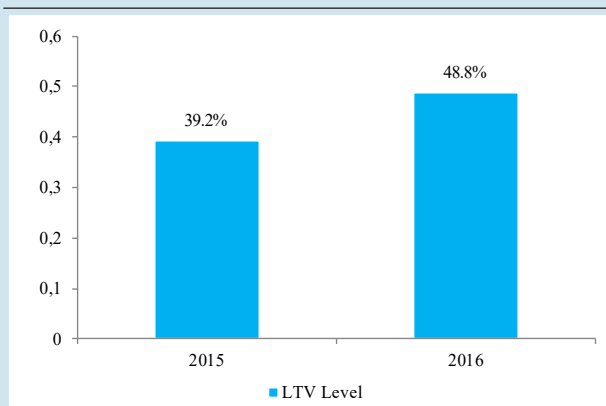
Source: Data of the commercial banks, NBKR calculations

\* data for 15 largest borrowers of each commercial bank

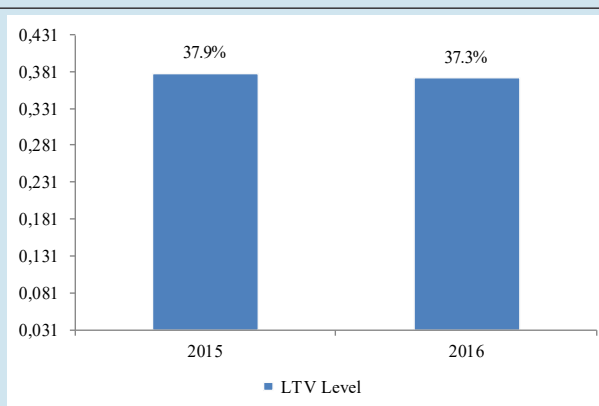
##### *Security of the borrowers' loans*

At the end of 2016, the LTV actual level in the banking sector amounted to 48.8 percent. The existing level of collateral indicates a relatively high level of the loans secured the pledged property (Chart 2.2.19).

**Chart 2.2.19. LTV Level on All Borrowers of the Banking Sector**

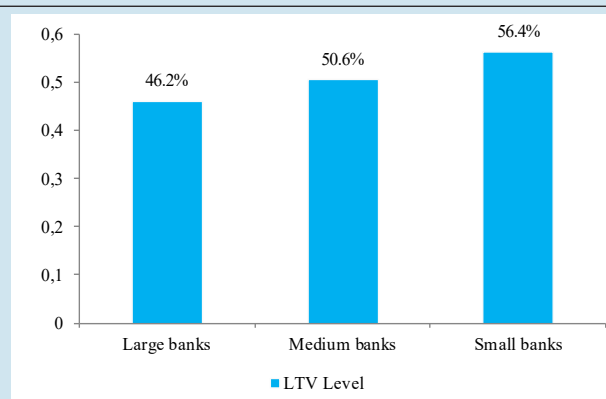


**Chart 2.2.20. LTV Level on 15 Largest Borrowers of the Banking Sector**

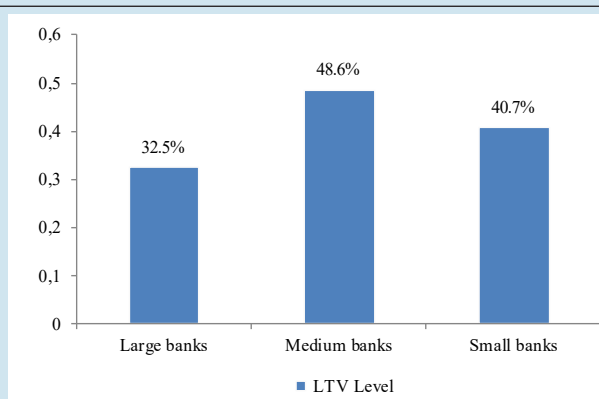


Meanwhile, the LTV value in the small banks is higher than in the large and medium banks and in the banking sector as a whole (Chart 2.2.21).

**Chart 2.2.21. LTV Level on All Borrowers by the Banks' Groups in 2016**



**Chart 2.2.22. LTV Level on 15 Largest Borrowers by the Banks' Groups in 2016**



### 2.2.2. Liquidity Risk

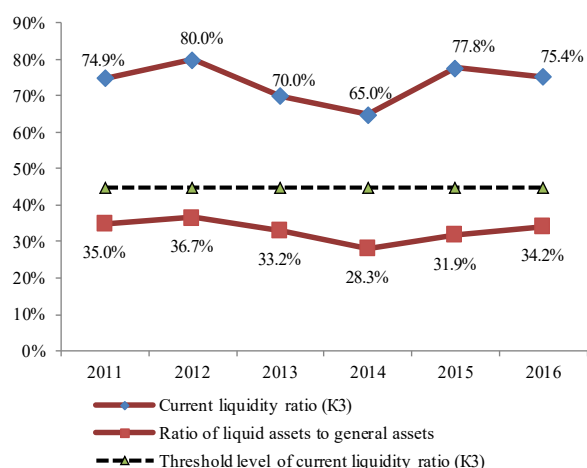
Public confidence in the banking sector depends on the timely implementation of obligations by banks, which suggests availability of sufficient liquidity in the banks. For regulatory purposes, liquidity risk is assessed using economic current liquidity ratio<sup>13</sup>.

At the end of 2016, current liquidity ratio decreased from 77.8 percent (as of the end of 2015) to 75.4 percent (Chart 2.2.23).

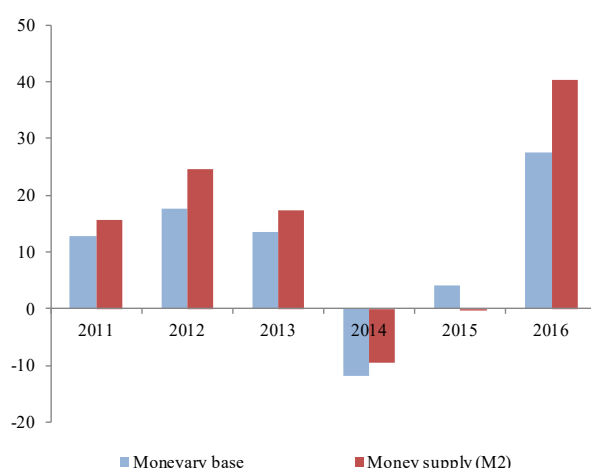
<sup>13</sup> *Economic current liquidity ratio* is one of the mandatory standards for the bank established by NBKR, according to which the liquid assets (for calculation of this indicator including funds of banks in cash and correspondent accounts) must be at least 45 percent of short-term liabilities.



**Chart 2.2.23. Liquidity Indicators in the Banking Sector**



**Chart 2.2.24. 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.

In the reporting period, short-term financial liabilities of the banks up to 1 year outstripped growth rates of short-term financial assets. Finally, this dynamics contributed to increase of negative gap between financial assets and liabilities of the banks (Table 2.2.3).

**Table 2.2.3. Cumulative Gap<sup>14</sup> by Maturity of Financial Assets and Liabilities<sup>15</sup> as of December 31, 2016, millions of KGS<sup>16</sup>**

Total	demand	up to 1 month	up to 3 months	up to 1 year	up to 3 years	Grand total
Total financial assets	44,694	68,831	78,040	106,345	184,089	184,089
Total financial liabilities	67,695	74,713	84,610	118,153	145,704	145,704
Gap (gap interval)	-23,001	-5,882	-6,569	-11,809	38,385	38,385
Gap in % of assets	-12.5%	-3.2%	-3.6%	-6.4%	20.9%	20.9%
Gap in % of net total capital	-80.6%	-20.6%	-23.0%	-41.4%	134.6%	134.6%

in foreign currency	demand	up to 1 month	up to 3 months	up to 1 year	up to 3 years	Grand total
Total financial assets	22,002	33,746	37,249	48,231	82,941	82,941
Total financial liabilities	35,356	39,001	42,424	58,982	71,852	71,852
Gap (gap interval)	-13,354	-5,256	-5,175	-10,752	11,088	11,088
Gap in % of assets in foreign currency	-16.1%	-6.3%	-6.2%	-13.0%	13.4%	13.4%
Gap in % of net total capital	-46.8%	-18.4%	-18.1%	-37.7%	38.9%	38.9%

in national currency	demand	up to 1 month	up to 3 months	up to 1 year	up to 3 years	Grand total
Total financial assets	22,692	35,085	40,792	58,114	101,148	101,148
Total financial liabilities	32,339	35,712	42,186	59,171	73,852	73,852
Gap (gap interval)	-9,647	-626	-1,394	-1,057	27,296	27,296
Gap in % of assets in national currency	-9.5%	-0.6%	-1.4%	-1.0%	27.0%	27.0%
Gap in % of net total capital	-33.8%	-2.2%	-4.9%	-3.7%	95.7%	95.7%

<sup>14</sup> Cumulative gap is the amount of possible expenses for support of solvency, estimated for each range of maturity.

<sup>15</sup> Data are given of the basis of section 12 of the PRBR.

<sup>16</sup> Data are given taking into account special LLP on the loans and financial leasing, as well as discount on all corresponding types of assets.

**Table 2.2.4. Maturity of Financial Assets and Liabilities, as of December 31, 2016,**  
millions of KGS

Name	Maturity					Grand total
	up to 1 total month	1- 3 months	3-6 months	6-12 months	more than 12 months	
Total financial assets	68,831	9,209	9,966	18,339	77,744	184,089
Including loans and financial leasing to the clients	4,373	5,204	7,428	13,149	63,079	93,232
Total financial liabilities	74,713	9,896	15,076	18,468	27,551	145,704
Including deposits of individuals and fixed deposits of legal entities	28,348	4,765	8,537	11,102	9,707	62,459
Gap	-5,882	-687	-5,110	-130	50,194	38,385
Including on loans and deposits	-23,976	439	-1,109	2,047	53,372	30,774

### 2.2.3. Concentration Risk

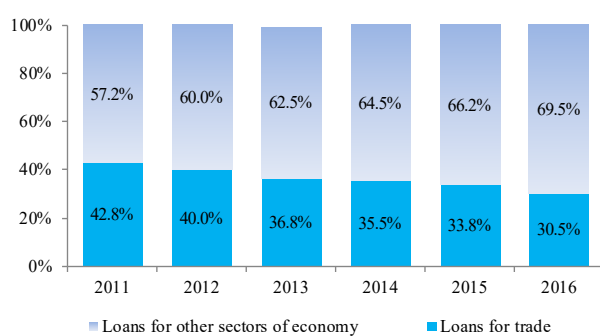
#### Concentration of the Largest Sources of Financing

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>17</sup> (liquidity ratio decreases below the threshold level of 45 percent).

#### Loan Concentration

Potential default from one to five largest borrowers<sup>18</sup> in separate banks may decrease regulatory capital below economic standard of the NBKR.

**Chart 2.2.25. 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 2016, the share of loans for trade decreased from 33.8 percent to 30.5 percent (Chart 2.2.25).

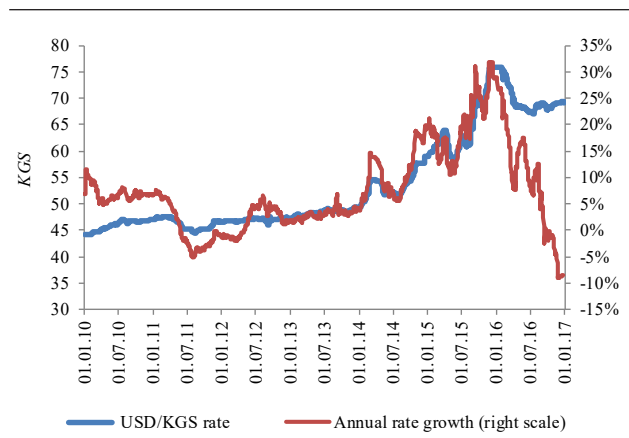
<sup>17</sup> The largest sources of financing (LSF) are the funds of creditors and depositors (received loans, settlement accounts, demand deposits and fixed deposits).

<sup>18</sup> Total debt of five largest borrowers of the bank is meant.

### 2.2.4. Currency Risk

At the end of 2016, *direct currency risk* of the banking sector was at a moderate level.

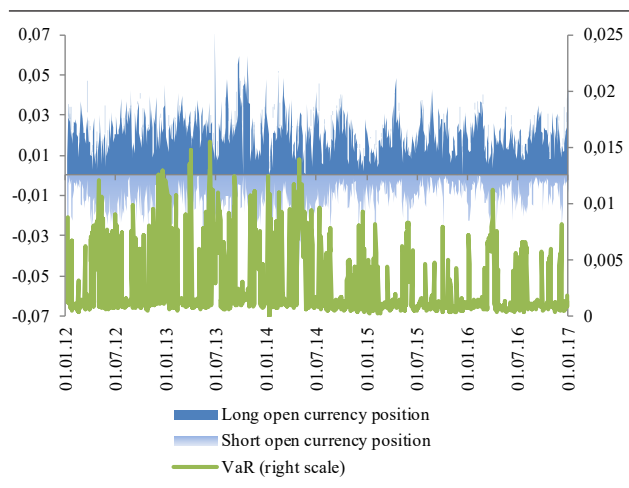
**Chart 2.2.26. Dynamics of USD/KGS Nominal Exchange Rate**



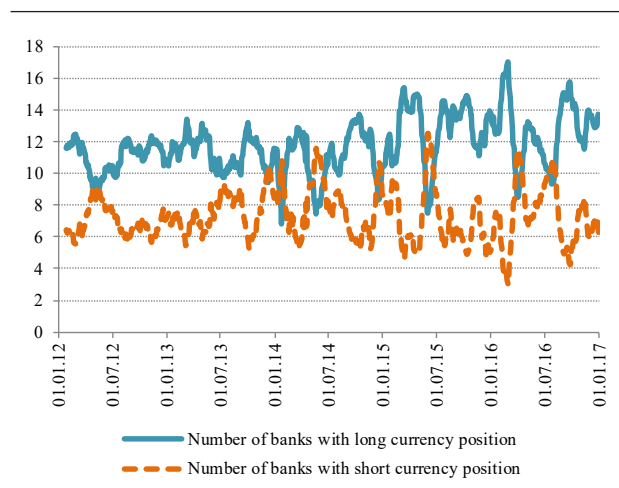
In general, the banks kept open currency positions of assets and liabilities within the limits of prudential standards of the National Bank of the Kyrgyz Republic.

The risk of currency position overestimation in the banking sector is minimum (VaR: 0.1–0.9 percent of the net total capital, Chart 2.2.27).

**Chart 2.2.27. Dynamics of Open Currency Position (OCP) and Revaluation Risk (VaR) in percent of NTC**



**Chart 2.2.28. Currency Position of the Banks units**



CONTENT

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

As of the end of 2016, 28.3 percent of the total loan portfolio was accounted for the loans, which were repaid in foreign currency, while the income of the borrowers generated in the national currency (Chart 2.2.29). 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 2.2.30 that displays the proportion of nonperforming loans by groups of loans:

- Group 1 – 15.7 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 – 6.4 percent, basic incomes of the borrower are generated in foreign currency, and the loans are repaid in the national currency.

Chart 2.2.29. Loan Portfolio by Groups of Loans\*

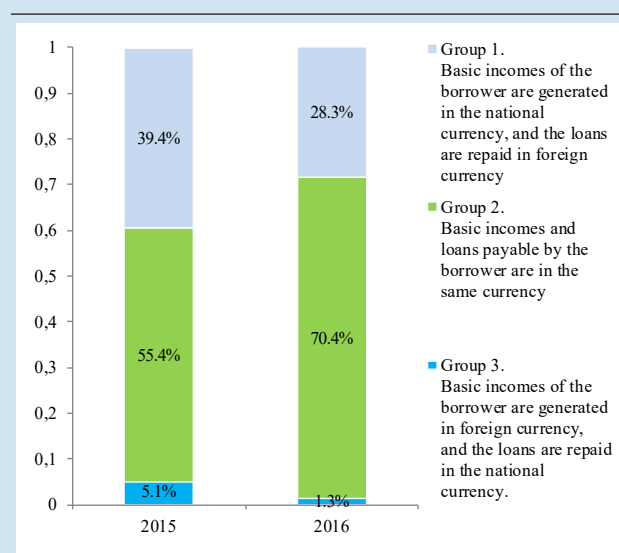
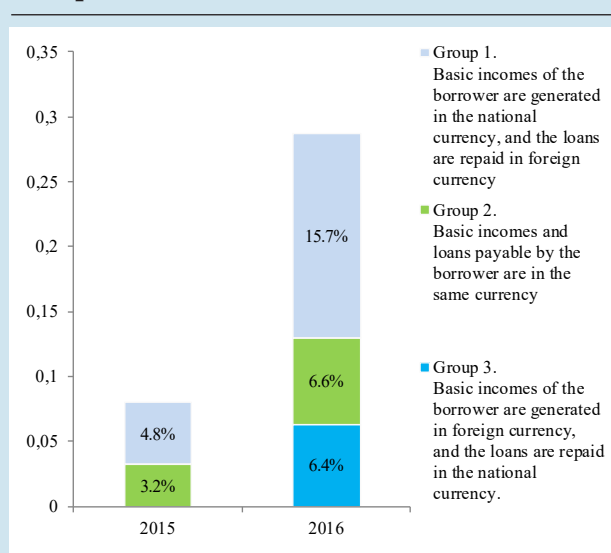


Chart 2.2.30. Share of Nonperforming Loans by Groups of Loans\*

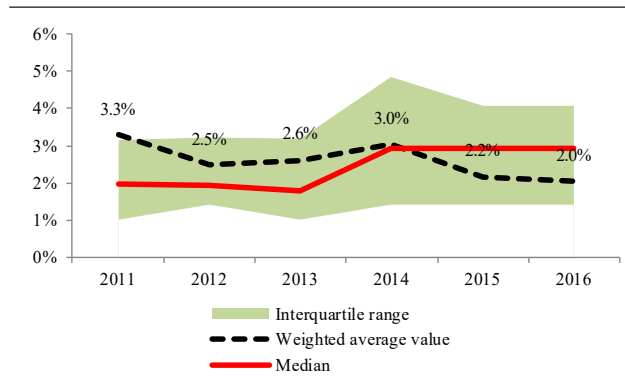


\* Source: section 37 of the PRBR.

### 2.2.5. Interest Rate Risk

At the end of 2016, *interest rate risk* was moderate.

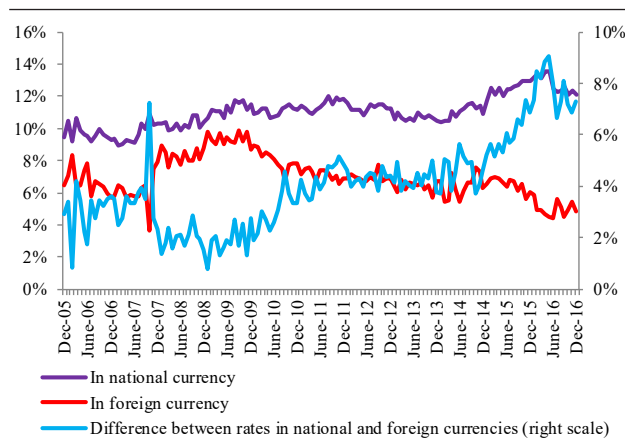
**Chart 2.2.31. Dynamics of Interest Rate Risk (VaR) in percent of NTC**



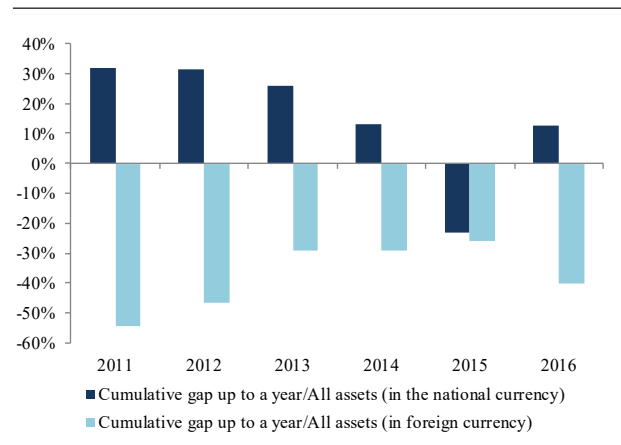
Slight increase of interest rate risk (VaR) from 2.2 percent to 2.0 percent of net total capital was resulted from decrease of gaps by maturities between financial assets and liabilities vulnerable to interest rates dynamics.

Average value of interest rate risk during the period of 2010 – 2016 was within accessible limits (2-4 percent of net total capital).

**Chart 2.2.32. Dynamics of Average Weighted Interest Rate of Individuals' Time Deposits in percent**



**Chart 2.2.33. Cumulative Gap of Assets and Liabilities Exposed to Interest Rate Risk**



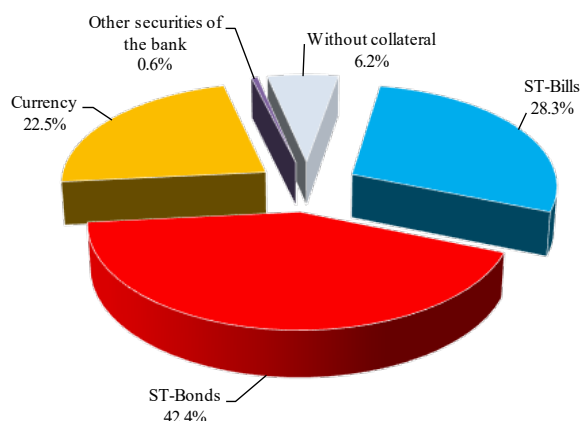
### 2.2.6. “Contagion” Risk

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 2016, the volume of transactions in the interbank market made between the resident banks amounted to KGS 6.4 billion<sup>19</sup>, having decreased by 81.8 percent compared with 2015.

<sup>19</sup> The total volume of transactions made between the resident banks during 2016 is meant here.

**Chart 2.2.34. Distribution of Interbank Loan Transactions Made during 2016 between Resident Banks, Depending on Collateral**  
in percent



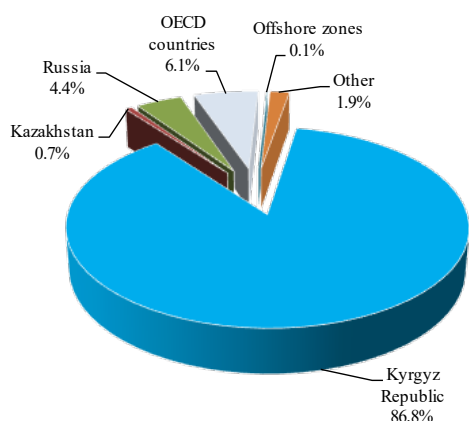
The loans in the interbank market are generally covered by collateral in the form of highly liquid government securities or foreign exchange (Chart 2.2.34) in the banking sector of Kyrgyzstan. At the end of 2016, the share of interbank loans granted without collateral constituted only 6.2 percent.

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

### 2.2.7. Country Risk<sup>20</sup>

In general, the volume of disposed assets of non-residents constituted KGS 24.3 billion or 13.2 percent of total banking sector assets. The highest concentration of placement was observed in the OECD countries – 6.1 percent (KGS 11.3 billion) of total assets in the banking sector of the Kyrgyz Republic.

**Chart 2.2.35. Geographic Structure of Assets as of December 31, 2016**

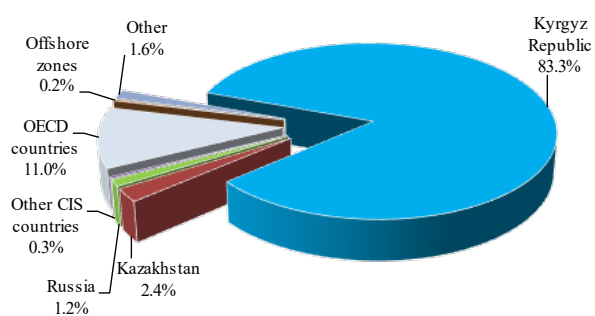


The main share of the assets placed abroad was focused on correspondent or deposit accounts and constituted KGS 22.8 billion or 93.6 percent of total placed assets of non-residents.

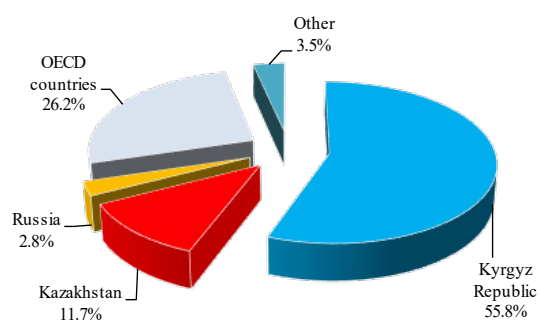
At the end of 2016, banks' liabilities to non-residents of the Kyrgyz Republic totaled KGS 24.3 billion or 16.7 percent of the total liabilities of the banking sector. Main volume of the resources was drawn from non-resident banks in the form of loans and deposits, which amounted to KGS 22.1 billion or 90.8 percent of the total liabilities to non-residents.

<sup>20</sup> Data are given on the basis of section 1 of the PRBR.

**Chart 2.2.36. Geographic Structure of Liabilities as of December 31, 2016**



**Chart 2.2.37. Authorized Capital by Countries as of December 31, 2016**



At the end of 2016, foreign capital amounted to KGS 8.3 billion or 44.0 percent of the total authorized capital of the banking sector.

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

### 2.3.1. “Reverse” Stress Testing of Credit Risk<sup>21</sup>

Maximum allowable share of “performing” loans<sup>22</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.

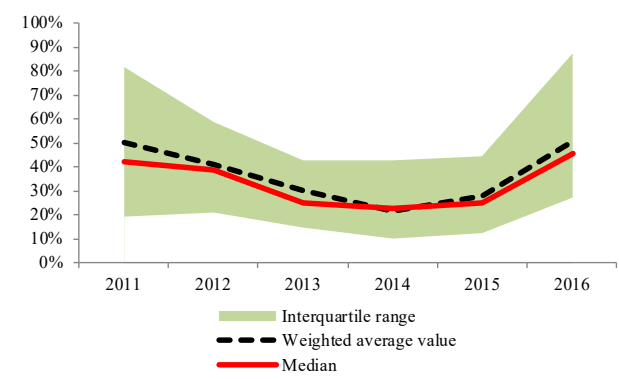
This method allows detecting a buffer stock of capital (net total capital) of banks, which can cover the additional allocations to LLP in connection with the transformation of “performing” loans into the category of “nonperforming” loans<sup>23</sup>.

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.

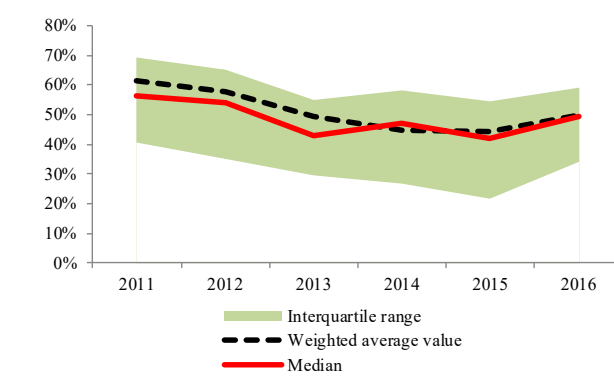
Based on the results of the “reverse” stress testing of the banking sector as of December 31, 2016, the maximum allowable share of “performing” loans, transferring to the category of “nonperforming” in the banking sector, amounted to approximately 50.8 percent (Chart 2.3.1).

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 49.7 percent of net total capital (Chart 2.3.2).

**Chart 2.3.1. Maximum Possible Share of “Performing”<sup>24</sup> Loans that May Become “Nonperforming” Loans<sup>25</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>21</sup> Exclusive of troubled banks.

<sup>22</sup> Exclusive of “normal” loan category, which are risk free.

<sup>23</sup> Herewith, transition of “performing” loans to the category of “nonperforming” loans is fulfilled smoothly by three categories (“substandard”, “doubtful” and “losses”).

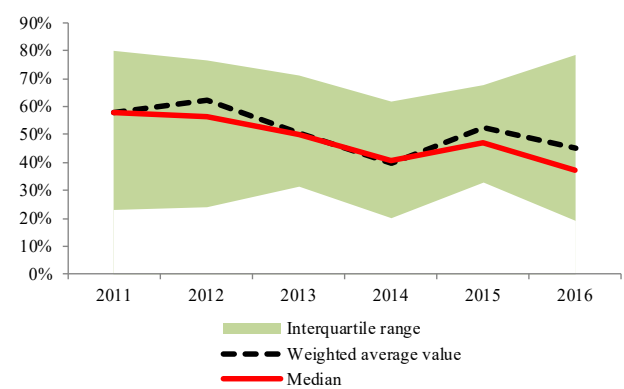
<sup>24</sup> Exclusive of “normal” loan category.

<sup>25</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 2016 the actual amount of liquid assets of the banking

sector was able to cover the outflow of an average of 45.0 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 December 31, 2016 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 17.7 p. p. can reduce the level of capital adequacy ratio to 12 percent (Table 2.3.1).

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

#### Currency Risk (Revaluation Risk)

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

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

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

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

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

**Table 2.3.1. General Results of the “Reverse” Stress Tests as of December 31, 2016**

		Banking sector
<b>Credit risk</b>		
Scenario1	Share of performing loans transferring to the category of “nonperforming” loans, <i>in percent</i>	50.8
<b>Interest rate risk</b>		
Scenario 1	Decrease of interest rate on loans, when CAR declines to 12%, <i>in percentage points</i>	17.7
<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>	45.0

### III. NONBANKING FINANCIAL INSTITUTIONS

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

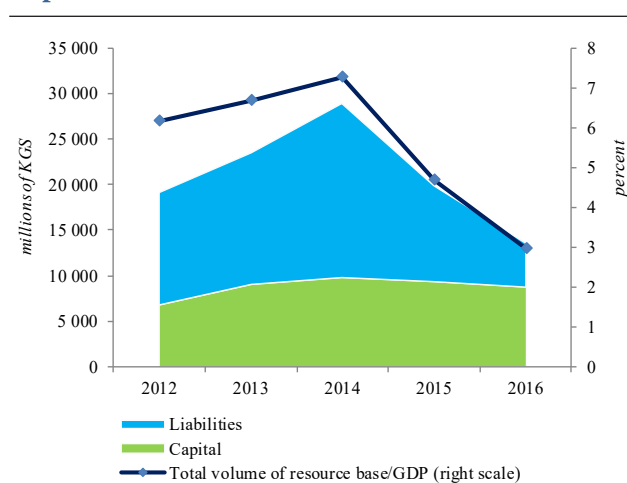
*The weighted average interest rates on loans of the microfinance organizations and credit unions decreased compared with the last year (MFO – by 0.8 p.p. compared with 2015, CU – by 0.1 p.p.).*

#### 3.1. Main Trends

The system of nonbanking financial institutions subjected to licensing and regulation by the National Bank as of December 31, 2016 in the Kyrgyz Republic included: a specialized financial institution - “FCCU” OJSC; 116 credit unions; 162 microfinance organizations (including 6 microfinance companies, 103 microcredit companies and 53 microcredit agencies) and 394 exchange offices.

#### Resources

**Chart 3.1.1. Dynamics of NBFIs Liabilities and Capital**



Source: NBKR

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

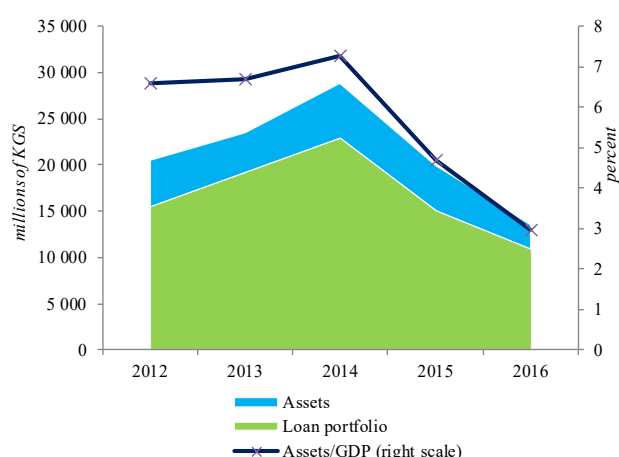
At the end of 2016, NBFIs liabilities decreased by 53.1 percent compared with 2015 and were formed in the amount of KGS 4,913.3 million. In 2016, NBFIs capital decreased by 7.8 percent and totaled KGS 8,681.0 million (Chart 3.1.1).

Resource base reduction was mainly due to withdrawal by “MFC Financial Group Companion” CJSC from NBFIs membership and reorganization thereof into “Bank Companion” CJSC.

The main volume of the resource base of the NBFIs was accounted for the loans of the financial institutions of the Kyrgyz Republic (as of December 31, 2016 the share of these loans constituted 57.5 percent).

## 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

According to periodic regulatory reporting, the total assets of NBFIs in 2016 decreased by 31.6 percent and amounted to KGS 13,594.3 million<sup>26</sup>. This decrease was due to reduction in the loan portfolio of NBFIs (Chart 3.1.2). The decrease of the total assets was also due to reorganization of “MFC Financial Group Companion” CJSC into “Bank Companion” CJSC.

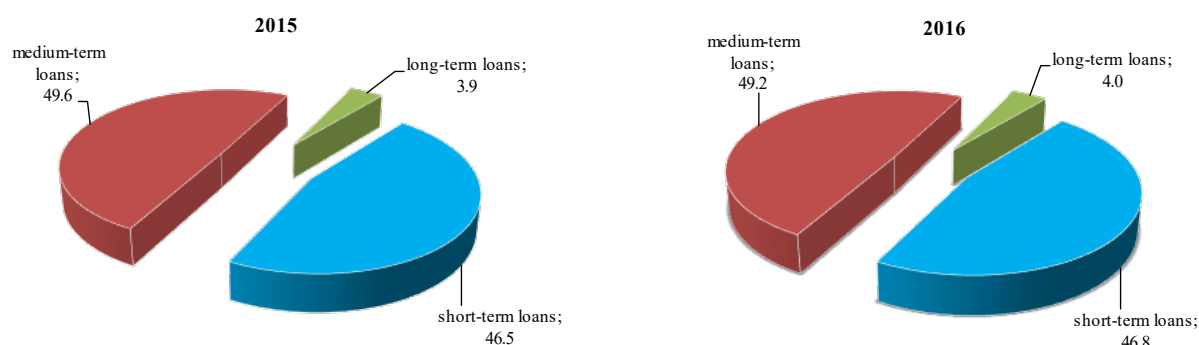
The main activity of NBFIs remains lending. As of December 31, 2016, the loan portfolio of NBFIs decreased by 27.1 percent and was formed in the amount of KGS 10,915.4 million.

As of December 31, 2016, the number of borrowers decreased by 31.3 percent compared with 2015 and amounted to 229,919 borrowers.

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

As of December 31, 2016, the decrease in the share of medium-term credit resources and the increase in the share of long-term and short-term loans were observed (Chart 3.1.3).

**Chart 3.1.3. Structure of the NBFIs Loan Portfolio by Maturity**



Source: NBKR

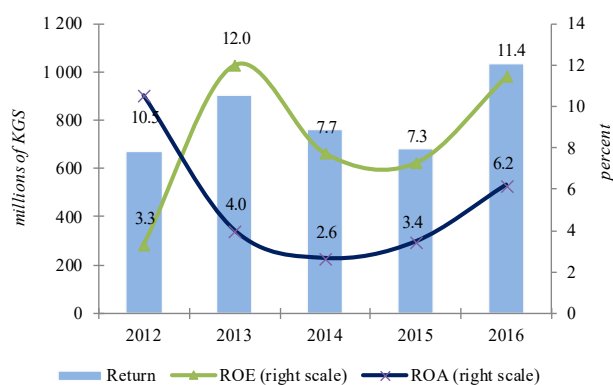
Note: data for the period

The main oblasts where the major share of loan portfolio of NBFIs is concentrated (78.8 percent of total credit portfolio) are Bishkek city, Chui, Osh and Jalal-Abad oblasts, with is due to the highest level of business activity in these oblasts of the republic.

<sup>26</sup> Exclusive of “FCCU” OJSC.

**Revenue Position<sup>27</sup>**

**Chart 3.1.4. Dynamics of NBFIs Revenue Position\***



Source: NBKR

\*exclusive of FCCU

At the end of 2016 net profit of NBFIs increased by 51.4 percent compared with the previous year and amounted to KGS 1,035.3 million. ROA at the end of the reporting period increased by 2.8 p.p. and amounted to 6.2 percent; ROE increased by 4.1 p.p. and constituted 11.4 percent (Chart 3.1.4).

<sup>27</sup> ROA and ROE indices are provided in annual terms.

### 3.2. Risks of Nonbanking Financial Institutions

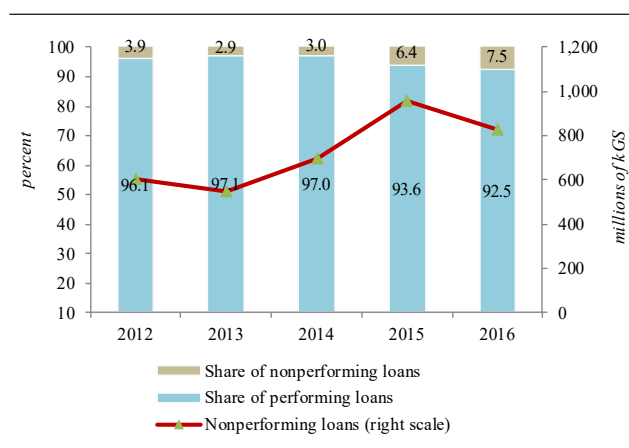
Major risk factors of the activities of NBFIs are the quality of the loan portfolio, sectoral and institutional concentration, as well as status of the external debt of NBFIs.

#### Quality of the Loan Portfolio of NBFIs

As of December 31, 2016, the share of nonperforming loans in the loan portfolio of NBFIs constituted 7.5 percent, meanwhile, their nominal volume decreased slightly by KGS 135.5 million compared with 2015 (Chart 3.2.1).

At the end of the reporting period, the structure of NBFIs nonperforming loans noted increase in the share of nonperforming loans issued to agriculture (by 8.6 p.p. compared with 2015). The share of nonperforming loans in the total nonperforming loans of NBFIs constituted 29.4 percent (Chart 3.2.2).

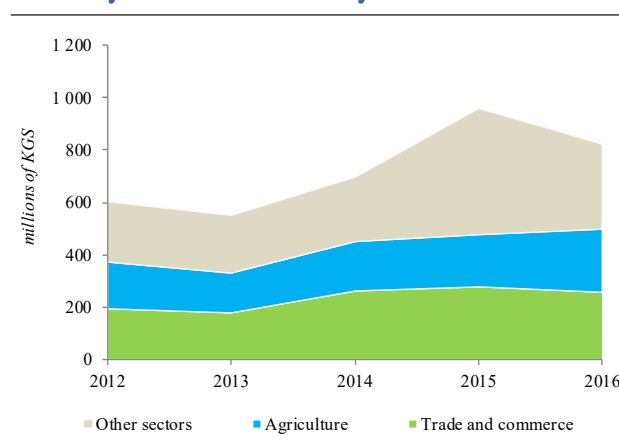
Chart 3.2.1. Quality of NBFIs Loan Portfolio



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

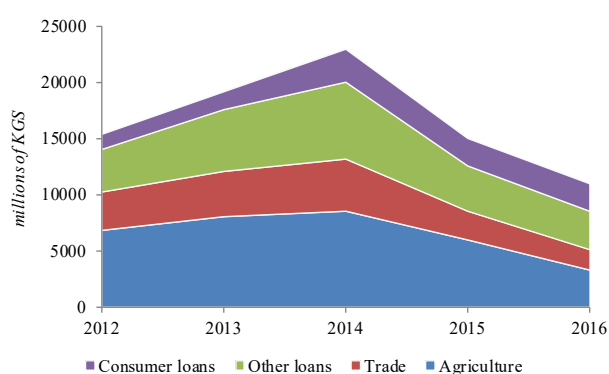
#### Sectoral Concentration

NBFIs loan portfolio is concentrated in agriculture (29.4 percent of NBFIs total loans), trade and consumer loans (16.7 percent and 21.5 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 December 31, 2016, the share of assets of the three largest NBFIs decreased by 15.4 p.p. compared with 2015 and amounted to 41.0 percent of the total assets of NBFIs system (Chart 3.2.4). The share of assets of the three largest NBFIs decrease, as it was mentioned above, was primarily due to reorganization of “MFC Financial Group Companion” CJSC into “Bank Companion” CJSC.

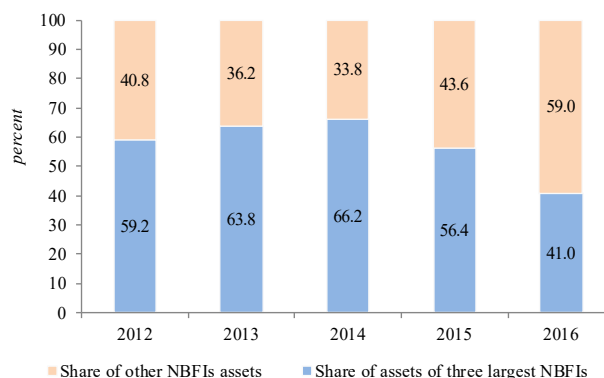
**Chart 3.2.3. Sectoral Structure of NBFi Loan Portfolio**



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**



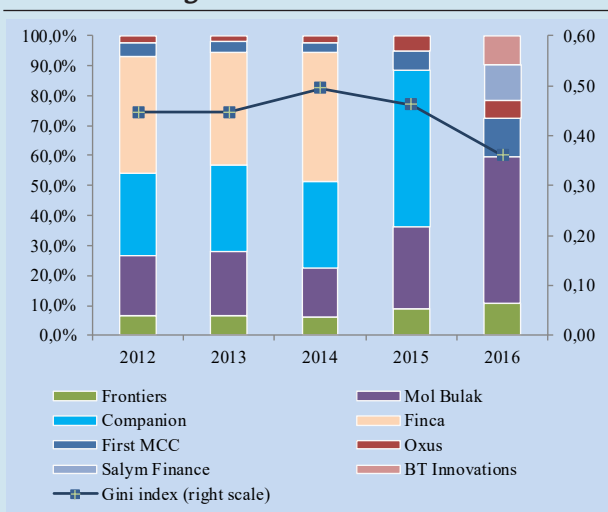
Source: NBKR

**Box 6. Concentration Indices based Assessment of NBFIs Activity<sup>28</sup>**

**The Herfindahl-Hirschman Index**

Herfindahl-Hirschman index was calculated for the purposes of concentration risk analysis in the NBFIs system<sup>29</sup>. As of December 31, 2016, Herfindahl-Hirschman index for the NBFIs system constituted 946.7 points. According to the rule of thumb<sup>30</sup>, resulting value indicates availability of insignificant concentration of NBFIs assets or low concentration of microfinance market.

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



Source: NBKR

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

**The Gini Index**

The Gini index was calculated for estimating the uniformity of the NBFIs assets distribution. As of December 31, 2016, the index value constituted 0.360, which reflected the moderate distribution of assets among the largest microfinance institutions. Meanwhile, decline of concentration level was observed in the reporting period (Chart 3.2.5).

CONTENT

<sup>28</sup> Concentration indices are calculated on the basis of data submitted by 6 largest NBFIs.

<sup>29</sup>  $H = \sum_{i=1}^n (\text{share } i)^2$

<sup>30</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 December 31, 2016, the external debt of NBFIs amounted to USD 22.7 million. Major part of the external debt of NBFIs are loans provided by the foreign commercial financial institutions (82.1 percent of total external debt of NBFIs), and the rest are loans of the international financial institutions (17.9 percent of total external debt of NBFIs).

At the end of 2015, external debt of the largest NBFIs decreased by 78.2 percent compared with 2015 and amounted to USD 17.8 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;

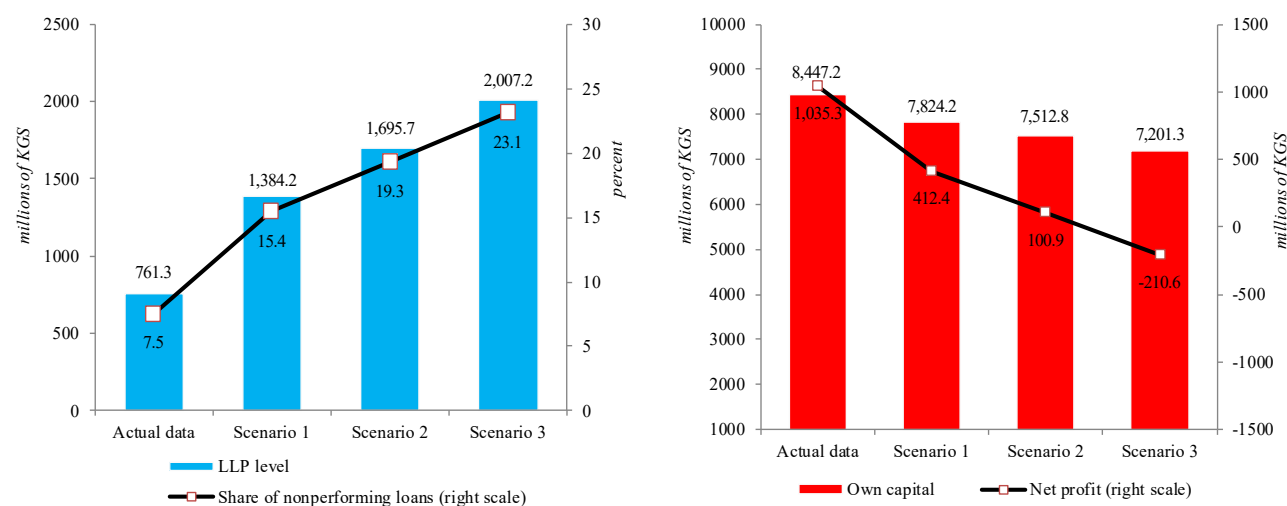
*Scenario 2:* 75% of loans transition from one category to another;

*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>31</sup> in the loan portfolio of NBFIs increased from 81.8 to 163.7 percent, depending on the scenario in conducting this stress testing (Chart 2.3.3).

Chart 3.3.1. Results of Stress Testing of the Credit Risk as of December 31, 2016



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 and second scenarios, the NBFIs remain profitable; however, the level of profit decreases down to KGS 412.4 million and KGS 100.9 million, accordingly. Potential implementation of the third scenario may result in losses of the NBFIs sector in the amount of KGS 210.6 million (Chart 3.3.1).

<sup>31</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	15.4
<b>Scenario 2:</b> transition of 75% of loans from one category to another	19.3
<b>Scenario 3:</b> transition of 100% of loans from one category to another	23.1

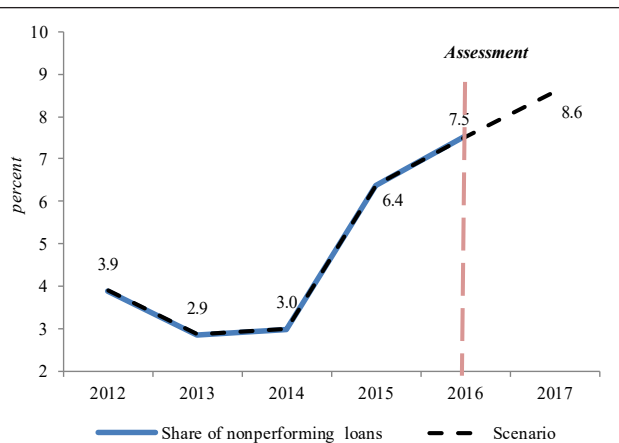
Source: NBKR, NBKR calculations

Implementation of the first scenario may result in an increase in the share of nonperforming loans in the loan portfolio of NBFIs by 7.9 p.p., to the level of 15.4 percent. In the case of the second scenario, nonperforming loans may increase by 11.8 p.p., to the level of 19.3 percent, and in the implementation of the third scenario – by 15.6 p.p. and may reach the level of 23.1 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**



Source: NBKR

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 1.1 p.p., up to the level of 8.6 percent may occur in the process of this scenario implementation.

## IV. PAYMENT SYSTEMS

**Measures aimed at minimizing the financial and operational risks in the important payment systems were taken in the reporting period. Ensuring the continuity of the system operation through control of the payment infrastructure allowed minimizing the impact of risks on the financial sector stability.**

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

As of December 31, 2016, the following components of the payment system were operating in the Kyrgyz Republic:

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

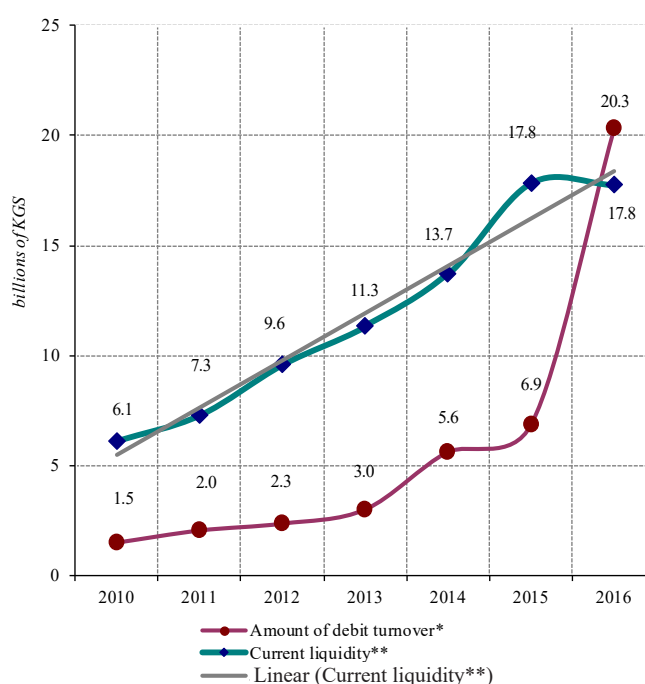
During the reporting period, the list of systemically important and significant payment systems of the Kyrgyz Republic was identified in accordance with established criteria, as well as self-assessment of functioning of systemically important payment systems was conducted for compliance with the international standards with the assistance of international experts.

In 2016, RTGS and SBS were recognized as the systemically important systems of the Kyrgyz Republic.

**RTGS** functioned normally in the reporting period.

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 0.9, the turnover ratio – 1.1). Average daily volume of liquid assets of participants showed an insignificant decrease by 0.5 percent (compared to the same period of 2015) and amounted to KGS 17.8 billion (Chart 4.1). Meanwhile, there is a rapid increase in turnover ratio (almost by 3 times compared to 2015). This increase was due to the growth of payments in the Computer Assisted Trading System (CATS), the share thereof in the total volume of gross settlements amounted to 85.1 percent.

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



Source: NBKR calculations

In 2016, 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 and functional failure, constituted 5.2 percent (Chart 4.2).

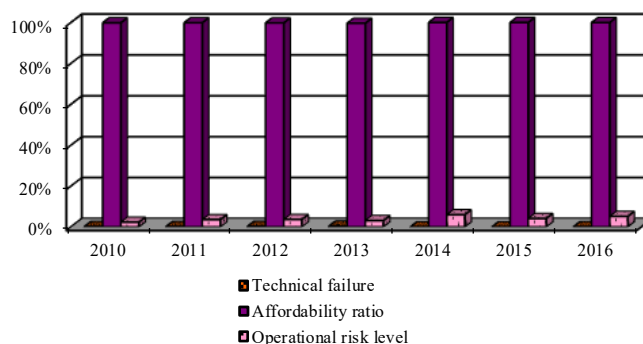
In functioning of the SBC the level of financial risks in the reporting period was also low. Reserves exhibited by the participants to cover a debit net position were 4 times higher than the required level. The system affordability index in the reporting period remained high and constituted 99.7 percent (in 2015 – 100.0 percent), meanwhile, operational risk level was 1.2 percent (Chart 4.3).

**Systems of Bank Payment Cards Settlements.** As of December 30, 2016, 5 international payment card systems and the national system “ElCart” operated in the Kyrgyz Republic.

Commercial banks offered different banking additional services using payment cards. However, low introduction rate of the bank payment cards is still observed in the Kyrgyz Republic due to some reasons (low level of financial literacy of the population, weak marketing activities of the banks, insufficient stimulation and information provided by the banks to their clients about offered services and banking products with the use of payment cards, insufficient provision with peripheral devices in the regions, low return on infrastructure).

There is a positive upward trend in the number of issued payment cards. Thus, as of December 30, 2016, the total number of payment cards in circulation increased by 34.8 percent compared to the same period of the last year and amounted to 1,615.7 thousand units.

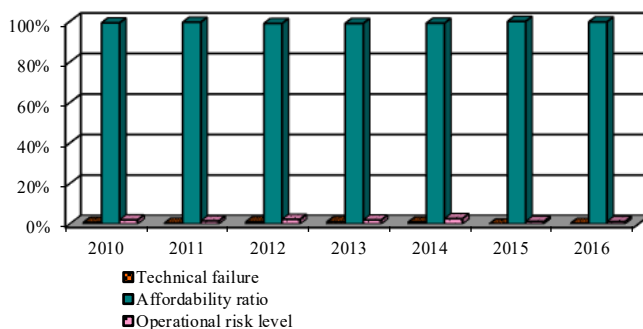
**Chart 4.2. Ratio of Affordability and Operational Risk in the RTGS**



	2009	2010	2011	2012	2013	2014	2015	2016
Technical failure	0.1%	0.2%	0.1%	0.2%	0.4%	0.0%	0.0%	0.0%
Affordability ratio	99.9%	99.8%	99.9%	99.8%	99.6%	100.0%	100.0%	100.0%
Operational risk level	0.8%	2.3%	3.6%	3.6%	3.1%	5.9%	4.1%	5.2%

Source: NBKR calculations

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



	2010	2011	2012	2013	2014	2015	2016
Technical failure	0.8%	0.4%	1.0%	1.0%	0.9%	0.0%	0.3%
Affordability ratio	99.2%	99.6%	99.0%	99.0%	99.1%	100.0%	99.7%
Operational risk level	2.0%	1.5%	2.3%	2.0%	2.6%	1.2%	1.2%

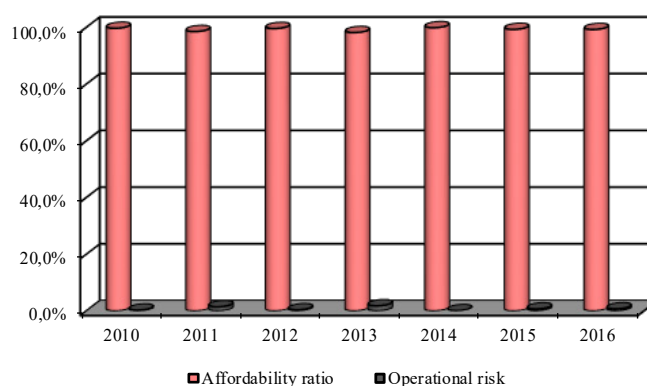
Source: NBKR calculations

In 2016, the system “ElCart” was recognized as the national system, which meets all the criteria of national systems. During the reporting period, 25 commercial banks worked with the national system “ElCart”.

According to the results of monitoring and analysis of operations, the system affordability index constituted 99.2 percent, and the level of operational risks in the system constituted 0.8 percent (Chart 4.4).

During 2016, 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 4.4. Ratio of Affordability Index and Operational Risk in the UIP**



	2010	2011	2012	2013	2014	2015	2016
Affordability ratio	99.7%	98.5%	99.6%	98.2%	99.9%	99.3%	99.2%
Operational risk	0.3%	1.5%	0.4%	1.8%	0.1%	0.7%	0.8%

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	69.0	66.2	87.6	85.3
Unistream	15.6	17.5	5.3	7.6
Leader	6.0	3.0	0.1	0.1
Western Union	4.1	5.6	3.7	3.4
Contact	2.8	3.0	1.3	1.7
Money Gram	1.0	1.8	1.3	1.6
Other	1.5	2.8	0.6	0.4
Total	100.0	100.0	100.0	100.0

Regarding **local money transfers**, relatively even distribution among four 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 payments/remittances** functioned in the reporting period. However, the main flow of financial messages accounted for SWIFT telecommunication network (the average value of incoming and outgoing payments made 92.8 percent of the total number and 87.7 percent of the total volume of payments).

The results of monitoring over the functioning of the the Kyrgyz Republic payment system show that in 2016 all significant payment systems functioned normally and did not cause any systemic risk.

## V. IMPROVEMENT OF THE FINANCIAL SECTOR REGULATION

*In the reporting period, within the framework of improving the regulatory and legal framework regulating financial institutions' activities, special emphasis was focused on the issues of dedollarization and stimulation of the economy, reduction of the risks in the activities of financial institutions, regulation of the activity conducted by the new entities in the financial market, bringing the normative and legal acts in line with amendments introduced in the legislation.*

### **Risk Management**

In order to reduce the level of dollarization of the economy, as well as the credit risk conditioned by the currency risk, amendments and additions were introduced into some normative and legal acts of the National Bank by the Resolution of the Board of the National Bank No. 7/3 dated February 10, 2016. According to these amendments and additions, banks, microfinance organizations and credit unions are prohibited to issue consumer and mortgage loans in foreign currency to the borrowers-individuals, except for the individuals carrying out business activity on the basis of the certificate or a patent, and overdrafts on payment cards within salary projects.

Moreover, these amendments also stipulate changes relating to the financial statements of a client, procedure of loan repayment, expenses of the third parties, frequency of monitoring the loans, which are secured by 40 percent or more with the goods in circulation, as well as repeated loan restructuring.

Some normative and legal acts of the National Bank, relating to the issues of asset classification and corresponding deductions to loan loss provision, as well as determination of capital adequacy, were approved by the Resolutions of the Board of the National Bank No. 19/6 dated April 27, 2016 and No. 29/5 dated July 14, 2016. According to there Resolutions the banks shall exclude from the notion "restructured loans" exchange of the loan currency from foreign into the national if this exchange is not connected with deteriorating the financial status of the borrower. These additions and amendments reduced the volumes of loan loss provisions issued in the United States dollars, at the expense of Russian-Kyrgyz Development Fund financing. In order to minimize credit risks for the commercial banks and their borrowers these amendments will also assist in implementing the diversification of the loans issued by the commercial banks' involving uneven schedule of loan repayment by the borrowers.

The aforementioned Resolution will also help the commercial banks to increase the share of the authorized capital through retained earnings before and in reaching the set values of the "capital buffer" indicator.

In order to ensure continuous and effective activity of the commercial banks and financial institutions licensed by the National Bank, as well as to introduce effective mechanisms of responding to potential incidents that create threats to information security of the banks and financial institutions the Board of the National Bank approved amendments and addenda to the Regulation "On minimum requirements to the external audit of the banks and financial institutions licensed by the National Bank of the Kyrgyz Republic" No. 20/6 dated May 25, 2016.

These amendments and addenda stipulate carrying out external audit of the information systems in the commercial banks and financial institutions every three years in order to analyze and evaluate the conformity of information technologies and information security with the requirements set by the National Bank and the internal documents of the Bank.

Amendments were introduced into the Regulation "On periodic regulatory bank reporting" by the Resolution of the Board of the National Bank No. 25/1 dated June 15, 2016.

These amendments and addenda were introduced in order to enhance the effectiveness of information provided by the commercial banks about 15 major sources of finance, interest rates,

other property, as well as information on cash balances on the accounts of public enterprises, public authorities and on the correspondent accounts in foreign currency.

In order to improve calculations of the banks' liquidity ratios, to prohibit the banks and microfinance institutions from entering into the agreements on the use of trademarks on paid basis, as well as to introduce technical changes into the normative and legal acts, amendments and addenda were approved in a number of normative and legal acts by the Resolution of the Board of the National Bank No. 48/11 from December 14, 2016.

### ***Stimulation of Economy***

Amendments and addenda into some normative and legal acts of the National Bank on credit risk management were approved by the Resolution of the Board of the National Bank No. 35/4 dated August 24, 2016. These amendments and addenda relaxed the requirements to the documents submitted by the borrowers to the commercial banks, including carrying out operations in accordance with the Islamic principles of the banking, in order to receive a loan in respect of providing:

- the borrower's business plan. A business plan is not required to be submitted to the bank if the loan is granted for replenishment of circulating assets of the borrower-legal entity;
- the guarantor's financial reporting. If the guarantee is the only security for a loan and the guarantor is a legal entity, only then the borrower must submit a guarantor's financial reporting to the bank;
- the clients' salary certificate. The period of salary certificate validity is changed. If previously the borrowers had to submit a salary certificate over the past 12 months, currently, the borrowers may provide a salary certificate over the past 3-12 months. Meanwhile, the bank has a right to determine itself the period for which a salary certificate should be provided.

Moreover, the requirements to frequency of collateral monitoring conducted by the banks, restructuring and write-off of the banks' loans, the formation of the borrowers' credit file were relaxed.

In general, introduced amendments and addenda are aimed at improving access of the population to the financial and credit institutions, as well as at strengthening the lending procedure in the commercial banks, including the ones carrying out operations in accordance with the Islamic principles of the banking and finance, in the microfinance organizations, not attracting deposits, and in the credit unions.

In order to create an enabling environment contributing to development of mortgage lending, amendments were adopted in the Recommendations for standardization of loans granted for purchase of finished housing by the Resolution of the Supervisory Committee of the National Bank of the Kyrgyz Republic No. 47/1 dated November 23, 2016.

In order to increase access to credit resources, amendments and addenda were introduced by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 49/7 dated December 21, 2016 to some resolutions of the Board of the National Bank, which stipulate the possibility for the financial institutions to diversify the collateral by taking precious metals as collateral without restrictions in case of lending, as well as establish the requirements to collateral in the form of precious metals.

### ***Licensing of Banks' Activities***

Amendments and addenda were approved in the Regulation "On licensing the banks' activity" by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 15/2 dated March 30, 2016. The requirements to the officials of the banks, in particular to the members of the Board of Directors and the Audit Committee of the banks were revised by means of these amendments and addenda. The possibility of reconciling the work in the audit organization with the posts of the internal audit service's head and the chief accountant of the bank is excluded. Moreover, introduced amendments touched the issues of the procedure and conditions for opening the representative offices of the banks, as well as the problems of issuing and reissuing the bank's licenses. These amendments

and addenda excluded the possibility also excluded the possibility of transforming the microfinance companies into the banks.

Additions were introduced into the aforementioned normative and legal act by the Resolution of the Board of the National Bank No. 27/2 dated June 29, 2016 within the framework of the Regulation of Jogorku Kenesh of the Kyrgyz Republic “On measures to stabilize the exchange rate of the national currency and dedollarization of the Kyrgyz Republic economy” No. 90-VI dated December 10, 2015. These additions strengthened the requirements for issuing the licenses to the banks relating to the establishment of the banking terminals and POS-terminals in the regions of the republic, expanding the network of ATMs and terminals for receiving and servicing of the bank payment cards. Moreover, the rule for connecting the banks to the national payment system “ElCart” was introduced.

In order to develop the market of precious metals and to increase the access to credit resources and taking into account the laws of the Kyrgyz Republic “On collateral” and “On precious metals and jewels”, the amendments and addenda, stipulating the possibility for the financial institutions to diversify the collateral through precious metals without obtaining an additional license of the National Bank, were approved in the Regulation “On licensing the banks’ activity” by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 49/7 dated December 21, 2016.

### ***Bringing the Normative and Legal Acts in Line with the Laws***

In order to bring in line with the Law of the Kyrgyz Republic “On counteracting the legalization (laundering) of criminal proceeds and the financing of terrorist or extremist activities”, amendments and addenda were approved in 27 normative and legal acts of the National Bank by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 7/2 dated February 10, 2016.

Within the framework of amendments and addenda introduced into the Regulation “On the procedure for carrying out the exchange operations with foreign currency in cash in the Kyrgyz Republic” amendments and addenda were introduced in part of improving the quality and accelerating the reporting submitted by the exchange offices to the National Bank.

Moreover, the requirements to the activities of the specialized financial institutions concerning the arrangement of internal control in order to counteract the legalization (laundering) of criminal proceeds and the financing of terrorist or extremist activities, as well as carrying out the exchange operations with foreign currency in cash and submitting the reports to the National Bank.

Within the framework of bringing the normative and legal acts of the National Bank in line with the laws of the Kyrgyz Republic, as well as to establish the measures for maintaining the stability of the commercial banks’ activity, amendments and addenda were introduced into certain normative and legal acts of the National Bank by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 17/3 dated April 11, 2016.

Thus, technical additions were introduced into the Instruction on consideration of cases on administrative offences in the sphere of banking legislation in order to bring it in line with the administrative laws. In order to implement further introduction of the risk-oriented supervision over the commercial banks, amendments and addenda were introduced into the Instruction “On carrying out on-site inspections by the inspectors”.

### ***Regulation of Nonbanking Financial Institutions***

In order to improve the quality of control over the activity of microfinance organizations and credit unions, amendments and addenda were approved in the Regulations “On periodic regulatory report of the microcredit companies and agencies, microfinance companies and credit unions” by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 4/5 dated January 20, 2016.

Within the framework of the Resolution of the Board of the National Bank of the Kyrgyz Republic, the periodic regulatory reporting was supplemented with the relevant articles, subsections and sections related to:



- income/loss from exchange rate difference, from factoring operations, as well as investment;
- income received on agency banking;
- restructured loans;
- foreign exchange operations;
- funds borrowed from the founders (shareholders);
- off-balance sheet commitments;
- decoding of other assets and liabilities;
- sensitivity analysis;
- assets and liabilities to changes in interest rates.

Moreover, the conditions for removing the savings share were revised for calculating the liquidity ratio (H5-2) of the credit unions attracting deposits from the participants.

In order to carry out the appropriate supervision over the microfinance organizations, amendments and addenda were approved in some normative and legal acts of the National Bank by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 4/6 dated January 20, 2016. According to these amendments and addenda, the requirements to the microfinance organizations were established in part of borrowing the funds from legal entities and shareholders – individuals. The sizes of microcredits increased and the definition was given to the wholesale loans and the wholesale microfinance organizations.

Within the framework of further development of microcredit agencies and support to the small and medium business, amendments and addenda were approved by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 17/2 dated April 11, 2016 in some normative and legal acts of the National Bank, as well as into the Rules regulating the activity of microfinance organizations in the territory of the Kyrgyz Republic in part of increasing the size of the microloan issued by the microcredit agency.

In order to explain how to fill in the forms of the Periodic regulatory report of the microfinance companies, microcredit companies, microcredit institutions and credit unions, the new versions of the Methodology guidelines for filling in the periodic regulatory report of specified nonbanking financial institutions were approved by the Resolution of the Supervisory Committee of the National Bank of the Kyrgyz Republic No. 24/1 dated June 9, 2016.

In the context of improving the normative and legal acts of the National Bank regulating the licensing of specialized financial institutions (SFI), the Regulation “On licensing the activity of specialized financial institutions” was approved by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 12/3 dated March 16, 2016. This Regulation establishes the procedure for the issuance, renewal, suspension, revocation and termination of the SFIs license, as well as the particularities of SFI passing the state registration/re-registration, reorganization and liquidation.

In order to ensure stable activity of the SFIs consistent with the requirements of legislation and normative and legal acts of the National Bank, the Rules regulating the activities of the specialized financial institutions were approved by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 12/4 dated March 16, 2016.

The Rules establish the economic standards, requirements and restrictions, mandatory for implementation by the SFIs carrying out the activities on exchange of foreign currency, the requirements on the procedure and the terms of providing the regulatory and other reporting to the National Bank, as well as preventive measures and sanctions to be applied to SFIs. These requirements will help to ensure stable activity of the SFIs, as well as to reduce the level of risk in their work.

In order to provide additional possibilities of obtaining the licenses to the persons, who cannot provide information on the sources of funds, the Board of the National Bank adopted the Resolution No. 29/4 dated July 14, 2016, which stipulates suspending the validity of subparagraph “b”, paragraph 9 of the Regulation “On the procedure for issuing the licenses for the right to conduct the exchange operations with foreign currency in cash. In accordance with this Resolution when filing the documents

for obtaining a license for the right to conduct the exchange operations with foreign currency in cash within the period till December 31, 2016 the applicants could fail to provide the information on the sources of origin of circulating assets.

This norm simplified the procedure for obtaining the licenses for the right to conduct the exchange operations with foreign currency in cash and was aimed at reducing the number of persons who carry out exchange operations in cash without an appropriate license of the National Bank.

With regard to coming into force the Law “On credit information exchange” from July 16, 2016, which adoption helped to improve the arrangement of credit information sharing activities, the Regulation “On licensing the activity of exchange offices” was approved by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 35.5 dated August 24, 2016. This regulation establishes the procedure for the issuance, renewal, suspension, revocation and termination of the license, as well as passing the procedure of state registration/re-registration, reorganization and liquidation by the exchange office. Moreover, the Rules regulating the activities of the credit bureaus in the territory of the Kyrgyz Republic were approved by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 40/5 dated September 28, 2016.

Within the framework of implementing the aforementioned Act and for the further development of credit information sharing activities, which is one of the ways to minimize credit risk, as well as for the implementation of evaluation of the creditworthiness of the borrowers, the amendments and addenda were approved in a number of normative and legal acts.

Due to the fact that since July 1, 2016 the microfinance companies, microcredit companies, credit unions, exchange offices and specialized financial institutions have to submit on a daily basis the reports on the exchange operations with foreign currency in cash through the portal [www.ob.nbkr.kg](http://www.ob.nbkr.kg) to the National Bank, appropriate amendments and addenda were introduced in the normative and legal acts of the National Bank, as well as in the Regulation “On the procedure for issuing licenses for the right to conduct the exchange operations with foreign currency in cash” by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 47/5 dated November 30, 2016.

### ***Islamic Principles of Financing***

In order to analyze the activities of microfinance organizations with “Islamic window”, the amendments and additions were approved on a periodic basis by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 25/2 dated June 15, 2016 in the Regulation “On the periodic regulatory report of the microcredit company/microcredit agency” and “On periodic regulatory report of the microfinance company” to the provisions.

Moreover, a number of technical changes were introduced into the Regulations “On the periodic regulatory report of the microcredit companies and microcredit agencies implementing operations in accordance with the Islamic principles of the banking and financing, “On the periodic regulatory report of the microfinance companies carrying out operations in accordance with the Islamic principles of the banking and financing”. Thus, periodic regulatory reporting of the microfinance organizations is complemented by the tables that reflect data on the transactions with the aim of expanding the information provided by the microfinance organizations with “Islamic windows”.

In order to enhance transparency of the activity of the microfinance organizations and credit unions operating in accordance with the Islamic principles of the banking and financing, the Regulation “On the requirements to the formation of a financial reporting and provision of the information to the nonbanking financial and credit institutions carrying out activities in accordance with the Islamic principles of the banking and financing, or having “Islamic window” was adopted by the Resolution of the Board of the National Bank of the Kyrgyz Republic No. 49/9 dated December 21, 2016.

## Financial Soundness Indicators of the Kyrgyz Republic

(in percent)

	2012	2013	2014	2015	2016
<b>Banking sector</b>					
<i>Indicators of the capital adequacy</i>					
Regulatory capital to assets, weighted by risk	28.3	25.0	21.8	22.4	24.8
Tier I capital to assets, weighted by risk	22.3	19.9	16.4	18.1	21.1
Equity to total assets	18.3	16.9	16.2	15.6	16.8
Ratio of nonperforming loans to equity	18.1	16.1	16.1	24.2	27.6
Equity to total liabilities	22.7	20.7	19.5	18.6	20.4
<i>Quality of assets</i>					
Ratio of nonperforming loans to loan portfolio	7.2	5.5	4.5	7.1	8.8
Loan loss provisions to loan portfolio	4.7	3.3	2.6	3.8	5.0
Loan loss provisions to nonperforming loans	64.9	59.6	58.9	53.3	56.4
Ratio of currency loans to loan portfolio	53.7	53.6	57.6	55.1	44.5
<i>Returns indicators</i>					
ROA	3.0	2.8	2.6	1.5	0.5
ROE	18.5	18.0	18.6	10.8	3.4
Interest margin to total income	16.8	57.3	58.6	46.1	40.8
Spread	8.0	7.7	8.0	7.1	6.3
<i>Liquidity indicators</i>					
Ratio of high liquid assets to total assets	36.9	33.2	28.3	31.9	34.2
Ratio of high liquid assets to short-term liabilities	79.5	69.9	65.0	77.8	75.5
<i>Sensitivity of market risk</i>					
Ratio of net foreign exchange position to equity	2.6	5.6	8.3	-1.9	4.4
<b>Other financial corporations*</b>					
Ratio of assets to total assets of the financial system	18.7	17.2	17.1	9.9	7.0
Ratio of assets to GDP	6.6	6.7	8.0	4.7	3.0
<b>Corporate sector (medium- and large-sized enterprises)</b>					
Return on assets (ROA)	6.7	5.5	-0.3	-5.8	9.5
Return on equity (ROE)	16.3	16.4	-1.2	-25.6	39.9
Ratio of total liabilities to equity (leverage)**	2.1	2.1	3.0	4.0	3.2
Current liquidity ratio	1.4	1.3	1.2	0.8	0.8
<b>Households sector</b>					
Ratio of the households' debt to GDP	9.1	13.4	18.8	18.0	16.4
Ratio of households' debt to disposable income	13.4	21.8	28.4	27.8	25.2

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.

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

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

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

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

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

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

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

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

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

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

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

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

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