

III Risks of Financial Intermediation Institutes and Infrastructure

3.1 Risks of the Banking Sector

3.1.1 Risk Profile

In the environment of anticipated competition among the banking systems of the EAEU member countries⁵⁴, solving the problem of asset quality, increasing sustainability of the funding base, transition to the Basel III standards and improving business strategies of banks aimed to increase return on assets and return on equity will help increase competitiveness of the Kazakh banking sector. In the setting of limited access to external funding sources, the domestic market of Kazakhstan has potential for the growth of the banks' funding base: increased confidence of the real sector in the Kazakh banking system will allow concentrating and channeling flows of the country's financial and economic resources through the banking sector, thus helping increase the level of credits to the economy.

A relatively low level of country risk of Kazakhstan as compared to Russia and Belarus represents one of competitive advantages of the Kazakh banking sector. However, limited access to foreign capital markets will not allow, in the nearest term, realize this potential to the full extent.

According to assessments of international rating agencies S&P/Moody's/Fitch, at the end of 2014 the sovereign credit rating of Kazakhstan was maintained at BBB+/Baa2, rating of Belarus – at B-/B3, and the rating of Russia had been lowered by one point over the year to BBB-/Baa2/BBB⁵⁵ (Table 3.1.1.1). Key factors for lowering the rating were: the crisis in Ukraine, sanctions imposed against Russia⁵⁶, capital outflow from the country, decline in the oil price followed by deteriorated forecasts for the economic growth. The decline in oil price also caused the reduced forecasts about the growth of the Kazakh economy; as a consequence, S&P lowered the country's credit rating to BBB. Despite its lowering, the credit rating of Kazakhstan remains high and, as compared to the EAEU countries, gives some advantages to the Kazakh banking system, *inter alia*, favorable investment climate and a possibility to raise funding on more beneficial conditions.

At the end of 2014, CDS spreads which reflect the risk premium for investment were at 290 and 329 basis points for Kazakhstan and Belarus, whereas the risk premium for investment in Russia increased to 470 basis points (Figure 3.1.1.1, A). Before March 2014, investors were assessing risk in Kazakhstan and in Russia at a similar level, which is demonstrated by trends of CDS spreads and a high positive correlation between them. Later, sanctions imposed against Russia, significant depreciation of the exchange rate of the Russian domestic currency, yet another lowering of the country rating caused the gap between CDS spreads of Russia and of Kazakhstan and the growth in the risk premium for investment in Russia.

⁵⁴ The analysis was prepared as of 01.01.2015 on three EAEU member countries: Kazakhstan, Russia and Belarus.

⁵⁵ In January-February 2015, two leading rating agencies again lowered Russia's ratings below the investment rating.

⁵⁶ In 2014, sanctions had been imposed against Russia by the NATO, European Union, OECD and other international organizations, as well as by some countries. They may be conditionally divided into political and economic sanctions. Political sanctions include visa limitations for certain individuals as well as refusal/prohibition of membership in joint organizations and refusal/prohibition of participation in joint events. Economic sanctions may be conditionally divided into 4 categories: 1) prohibition for exports (defense and paramilitary products, equipment for exploration of oil and gas fields, hi-tech exports); 2) prohibition for imports of certain categories of goods including mineral resources; 3) prohibition for project financing in certain economic sectors including through international financial institutions; 4) limiting access to capital markets for certain companies and largest banks controlled by the government.

Table 3.1.1.1

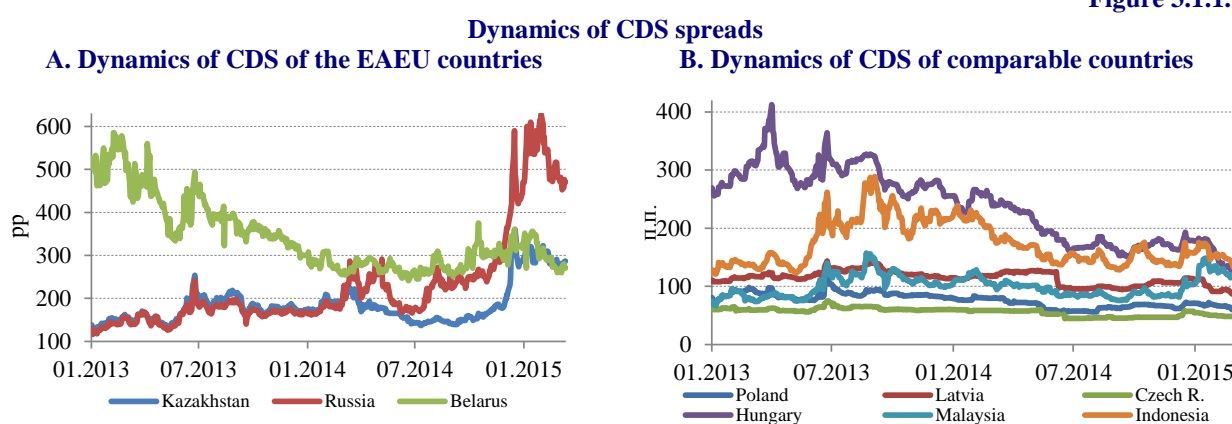
Sovereign credit ratings of the EAEU countries and the sample countries, in foreign currency⁵⁷

	Rating Agency	Kazakhstan	Russia	Belarus	Argentina	Hungary	Indonesia	Columbia	Latvia	Malaysia	Poland
As of 05.01.2015											
S&P	BBB+	BBB-	B-	SD	BB	BB+	BBB	A-	A	A-	AA-
Moody's	Baa2	Baa2	B3	Caa1	Ba1	Baa3	Baa2	Baa1	A3	A2	A1
Fitch		BBB		CCC	BBB-	BBB-	BBB	A-	A	A-	AA-
As of 05.03.2015											
S&P	BBB	BB+	B-	SD	BB	BB+	BBB	A-	A	A-	AA-
Moody's	Baa2	Ba1	B3	Caa1	Ba1	Baa3	Baa2	A3	A3	A2	A1
Fitch		BBB-		CCC	BBB-	BBB-	BBB	A-	A	A-	AA-

Source: Thomson Reuters Eikon

In the countries that were selected as a benchmark the CDS did not exceed 200 basis points at the end of 2014, and the trend of spreads was of a downward nature (Figure 3.1.1.1, B). On the other hand, the upward CDS trend in the EAEU countries speaks of increased risks of investments in such countries.

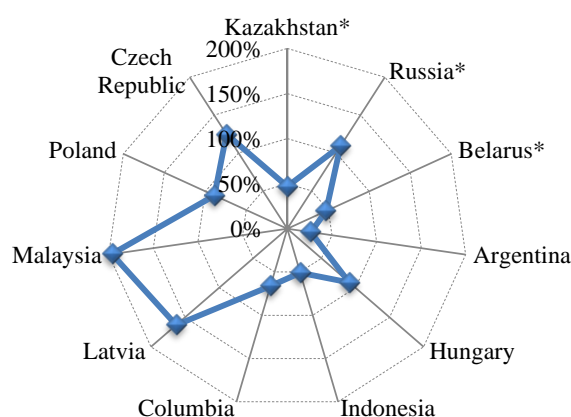
Figure 3.1.1.1



Source: Thomson Reuters Eikon

The level of penetration of banking services into the Kazakh economy remains low. At the same time, a high level of GDP per capita is an evidence of the growth potential for a stable funding base in the form of retail deposits.

Figure 3.1.1.2

Assets to GDP as of 01.07.2014

Note: *data on the EAEU countries are available as of 01.01.2015

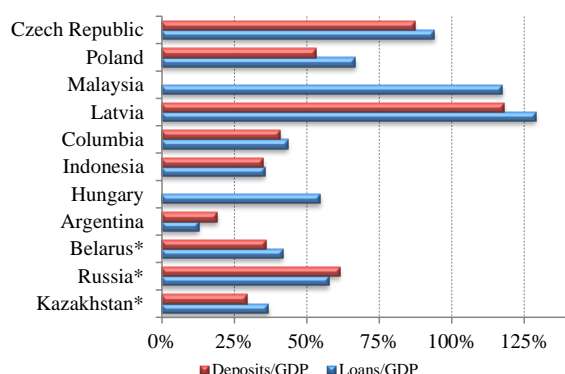
Source: IMF, CS MNE RK, NBRK, CBRF, NBRB, calculation by NBRK

decrease in the assets to GDP ratio.

Penetration of banking services into the Kazakh economy remains at a relatively low level as compared to countries in the sample (Figure 3.1.1.2). At the end of 2014, the ratio of assets to GDP in Kazakhstan accounted for 47.1%. However, in a number of comparable countries, except Argentina, this ratio exceeded 50%, including 109.4% in Russia. A low value of the ratio for Kazakhstan is a consequence of a more significant impact of the global financial crisis of 2008-2009, prior to which the maximum penetration of banking services exceeded 90% (in 2007). However, a significant decrease in the volumes of new loans against relatively high GDP growth rates in the subsequent years caused the

⁵⁷ For comparison, countries were included in the sample of countries outside the EAEU based on three criteria – GDP per capita and/or presence in the MSCI Frontier Markets Index and/or export-dependent economies with raw-materials orientation. The list of countries includes: Argentina, Hungary, Indonesia, Columbia, Latvia, Malaysia, Poland and the Czech Republic.

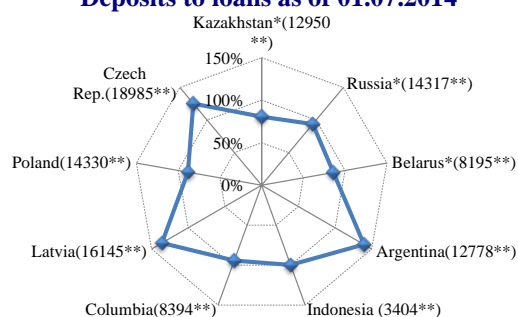
Figure 3.1.1.3
Loans and deposits to GDP as of 01.07.2014



Note: *data on the EAEU countries are available as of 01.01.2015

Source: IMF, CS MNE RK, NBRK, CBRF, NBRB, calculation by NBRK

Figure 3.1.1.4
Deposits to loans as of 01.07.2014



Note: *data on the EAEU countries are available as of 01.01.2015

** GDP per capita in US Dollars

Source: IMF, NBRK, NBRB, CBRF, calculation by NBRK

Relatively low indicators of the extent of penetration of loans and deposits of the banking system in the EAEU countries are explained by structural specifics of their economy. One of the reasons for a relatively low level of loans to GDP of Kazakhstan and Russia is the fact that large mineral companies in these countries borrow in foreign capital markets at lower rates, bypassing domestic banks (Figure 3.1.1.3). In Belarus where state-owned banks have a dominant influence, the level of the banking services penetration is directly dependent on priorities of the government policy.

In the EAEU countries, in order to realize the growth potential of the banking sector through credits to the economy, a sustainable funding base needs to be built. Due to limited access to foreign capital markets and insufficiently developed infrastructure of domestic stock markets, deposits will remain one of the most stable sources of funding in the years to come. In Kazakhstan and Russia, the growth potential of deposits is visible through a relatively high level of the GDP per capita (Figure 3.1.1.4). For example, in countries with a high GDP per capita (the Czech Republic, Latvia and Argentina) the loans to deposits ratio is at a high level; this gives a reason to believe that a major portion of lending is financed from the deposit base. At the same time, quite a high level of GDP per capita in Kazakhstan and in

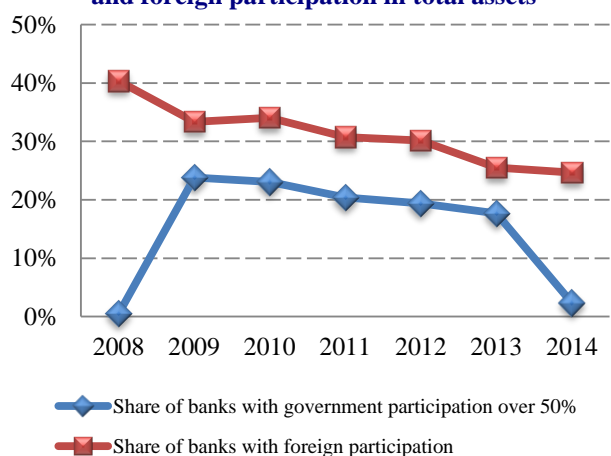
Russia against a low ratio of deposits to loans indicates that quite a significant amount of cash is kept in hands of the population. Therefore, the extension of a list of financial services provided by the country's financial institutions to the population may serve as an impetus to the deposit base growth, which, in its turn, will serve as the growth potential for volumes of credits to the economy.

In contrast to Russia and Belarus, the banking system of Kazakhstan where medium-sized banks are actively conquering the market share is represented by banks with a private capital. In Russia and Belarus, large banks with dominant government participation remained the engine rooms of the banking sector in 2014. Banks with foreign participation in Kazakhstan and Belarus that have been intensively developing are primarily represented by banks with the Russian equity.

Among the EAEU countries, the banking sector of Kazakhstan is the least concentrated one. Despite the fact that the share of Top 5 banks in assets of the banking sector accounts for 52.4%, medium-sized banks continue to actively increase their market shares. At the end of 2014, the share of medium-sized banks accounted for 39.9% versus 37.7% in 2013. (Table 3.1.1.2). Moreover, medium-sized banks and banks with the Russian equity participation continue to expand their presence in the credits to the economy, both in the corporate and retail segments. During 2014, the share of medium-sized banks on loans provided to legal entities increased from 14.5% to 16.9%, and the share of banks with the Russian equity participation increased from 10.6% to 12.2%. In the retail lending segment, medium-sized banks are dominant creditors; during 2014, their share increased from 41.1% to 41.9%, and disbursement of loans by banks with the Russian equity participation increased from 7.1% to 9.2%. In general, a high competition of the Kazakh market

represents an advantage for the country's economy since Kazakh banks will need to improve their pricing terms, product lines and quality of service in order to increase their market share and generate additional profits.

Figure 3.1.1.5
Dynamics in the share of banks with the government
and foreign participation in total assets



Source: NBRK

(Figure 3.1.1.5). The share of banks with a 100% foreign equity participation in Kazakhstan decreased from 14.7% in 2013 to 14% in 2014.

In Russia, 4 largest banks controlled by the state accounted for 51% of the market share in terms of the asset side at the end of 2014. According to different expert judgments, from one-third to a half of Russian credit organizations have different governmental entities among their shareholders whose share may vary from a very low to a blocking stake. This fact proves that the government has great influence on the country's banking system. Top 5 banks account for 54.7% of overall assets of the banking system, the remaining share is distributed among 829 banks and other credit organizations. Besides, the share of foreign equity in the Russian banking system is gradually decreasing due to its outflow because of sanctions imposed against the country. The overall number of credit organizations with foreign equity in Russia decreased from 251 in 2013 to 225 in 2014, with the share of banks with a 100% foreign equity participation decreasing from 10.4% to 9.2%.

In the banking sector of Belarus, a high concentration of government participation and the presence of foreign equity are observed. At the end of 2014, 64.4% of the banking sector was under the government control, 35.1% of the market share belonged to banks with foreign equity participation and less than 2% – to private Belorussian banks. The share of Top 5 banks which include three state-owned banks and two banks with foreign equity participation account for 79% of assets in the country's banking system.

In Kazakhstan and Belarus, a significant portion of foreign equity in the banking sector falls on the Russian equity. In 2014, a subsidiary of "Sberbank Rossii" JSC was among Top 5 banks of the two countries. One of the reasons for expansion of Russian banks within the territory of the EAEU countries is the fact that assets size of the first thirty Russian banks exceed the assets size of the whole banking sector of Kazakhstan by almost 10 times and by 23 times – assets of the Belorussian banking sector. In case of sustainable economic growth and adequate profitability level in Kazakhstan and Belarus, penetration of the Russian capital to the banking systems may continue⁵⁸.

⁵⁸ For reference, over the last ten years the share of foreign banks in assets of the banking system in central European countries had decreased from 78% to 70%, in South East Europe – it had increased from 61% to 84%, in the CIS countries it had increased from 7% to 19% and then decreased to 16%, and in India it had been below 20%. In Germany, France, Italy, Spain and Netherlands "offshoots" and branches of foreign banks account for 8-12% of assets in the banking systems.

Table 3.1.1.2

Characteristics of the banking systems of the EAEU countries

	Kazakhstan		Russia ⁵⁹		Belarus	
The number of banks and their share in assets of banking systems in each group						
	Number	Share	Number	Share	Number	Share
at 01.01.2015						
Top 5	5	52,4%	5	54,7%	5	79,0%
Medium-sized banks	13	39,9%	20	23,8%	5	15,1%
Small banks, Regional banks	20	7,6%	18	5,0%	21	5,9%
Banks with foreign participation	16	24,7%	72	9,2%	20	35,1%
Top 5 + medium-size banks	18	92,4%	25	78,5%	10	94,1%
by 01.01.2014						
Top 5	5	55,4%	5	53,4%	5	79,0%
Medium-sized banks	13	37,7%	19	21,2%	5	15,2%
Small banks, Regional banks	20	6,9%	20	6,3%	21	5,9%
Banks with foreign participation	17	25,5%	82	10,4%	20	35,2%
Top 5 + medium-size banks	18	93,1%	24	74,6%	10	94,1%
by 01.01.2013						
Top 5	5	60,0%	5	50,8%	5	80,7%
Medium-sized banks	11	32,2%	20	22,4%	5	12,9%
Small banks, Regional banks	22	7,8%	22	6,6%	21	6,5%
Banks with foreign participation	19	30,2%	82	11,7%	20	33,7%
Top 5 + medium-size banks	18	92,2%	25	73,2%	10	93,5%

Note: Compositions of groups of banks of the EAEU countries were subject to change at each reporting date under the impact of processes of bank mergers and the outstripping asset growth in some banks:

(1) Top 5 – 5 largest banks in terms of their assets.

(2) Medium-sized banks – in Kazakhstan these are the banks with the share of assets over 1.0% of assets of the country's banking system. In Russia these are banks with the share of assets over 0.5% of assets of the country's banking system. In Belarus these are the banks with the share of assets over 5.0% of assets of the country's banking system less assets of the Top 5 group.

(3) Small banks – in Kazakhstan and Belarus these are small banks which are not included into the Top 5 and Medium-size banks groups.

(4) Regional banks – in Russia these are regional banks whose head offices are not registered in Moscow, with the share of assets over 0.1% of assets of the country's banking system.

(5) Foreign banks – in Kazakhstan these are the banks which conform to p.5 of Article 3 of the Banking Law, in Belarus these are the banks with dominant share in the authorized fund of the foreign capital. In Russia these are the banks with 100% foreign equity participation.

In the existing environment, Kazakh banks have to find an optimum ratio between risk assets and potential earnings. In Russia and Belarus, a significant support on the part of the government or foreign capital determines a higher risk appetite which is reflected in a higher share of risk assets in the balance sheet structure. Reliance of Kazakh banks on funds attracted from their clients is heavier because of the absence of alternative funding sources.

The banking sector of Kazakhstan, in contrast to that of Russia and Belarus, is privately owned and is functioning in equal competitive environment. Without a direct support on the part of the government, Kazakh banks cannot afford assuming a higher level of risk. In all groups of banks except small banks, the share of the loan portfolio in assets accounts for 60% on average; such share, perhaps, is optimal for maintaining normal banking activity in Kazakhstan (Figure 3.1.1.6).

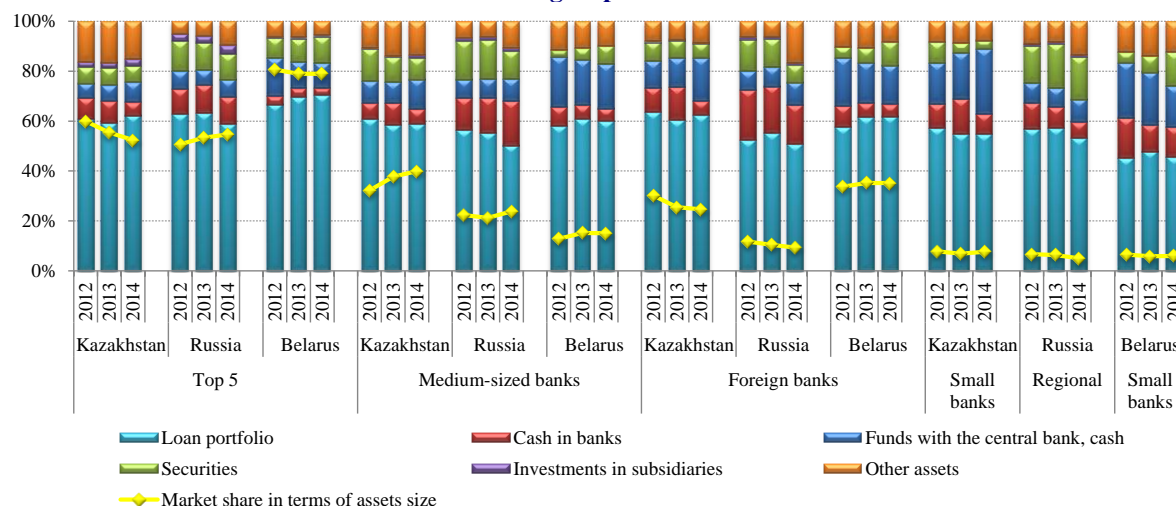
In Russia and Belarus, concentration of the publicly owned capital in the Top 5 group of banks enables these banks to assume a higher risk versus other groups of banks: to invest a large share of assets in the loan portfolio while leaving a smaller amount of liquid resources. First, in case of negative developments, banks in this group can borrow resources from the government, including through additional capitalization. Second, contrary to Kazakh banks, resources borrowed from the central bank constitute a larger portion in the structure of liabilities of Russian and Belorussian banks (Figure 3.1.1.7).

On the other hand, medium-sized and small banks in Russia and Belarus while having no advantages of largest banks maintain a large portion of liquid resources against the possibility of risk. At the same time, banks with foreign equity are able to borrow from their parents as an alternative. For instance, in Belarus medium-sized banks represented solely by banks with foreign

⁵⁹ Given a significant number of credit organizations in Russia, the analysis included the banks sample only.

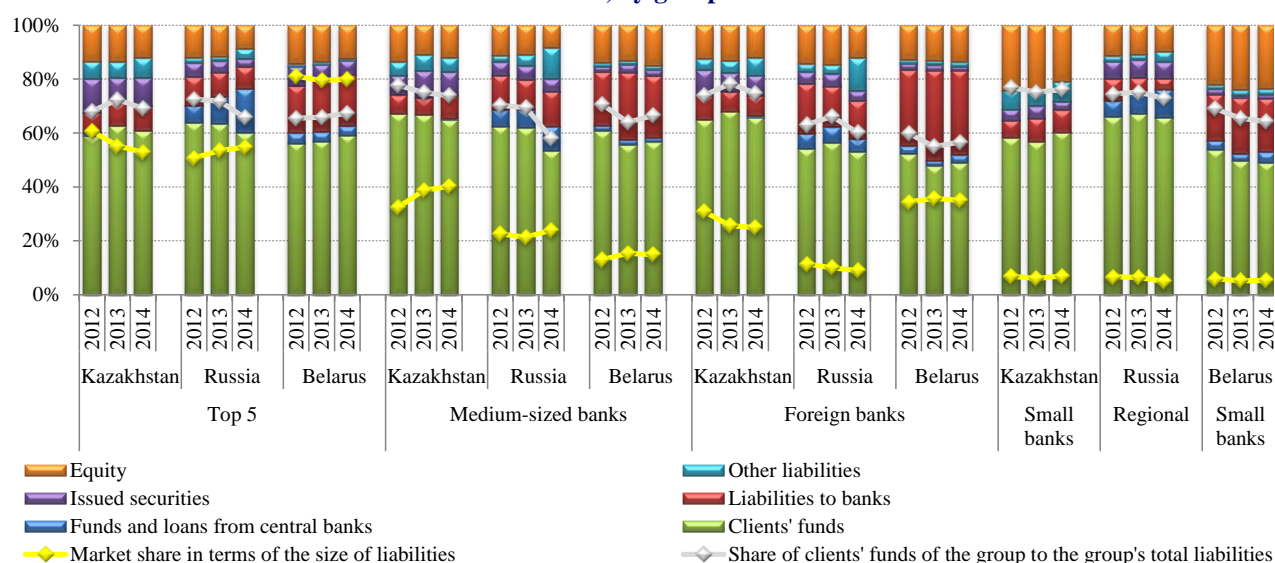
equity maintain a large share of their loan portfolio, as compared to small banks; in their turn, small banks being solely privately owned and without sufficient support, have to keep a high portion of liquid resources in their assets. Regional Russian banks mostly represented by private capital also have to keep a significant volume of liquid resources.

Figure 3.1.1.6
Structure of assets and of the market share in terms of the size of assets of banks of the EAEU countries, by groups



Source: NBRK, CBRF, NBRB, calculations by NBRK

Figure 3.1.1.7
Structure of liabilities and capital, the market share in terms of the size of liabilities of banks of the EAEU countries, by groups



Source: NBRK, CBRF, NBRB, calculations by NBRK

Therefore, advantages of the Russian and Belorussian banking systems are the ability to borrow resources from the government and assume additional risks while concentration of the government equity influences the development and the strategic decision-making by the banking sector. At the same time, in Kazakhstan, the absence of direct support on the part of the government limits the level of assumption of additional risks by banks, on the one hand, and on the other hand, encourages banks to search for the optimum ratio between risk and returns in the environment of competition.

Customer deposits have traditionally been the main source of funding for banks in all EAEU countries (Figure 3.1.1.7). For Kazakh banks, the extent of importance of customer deposits as the most affordable funding source is higher versus banks in Russia and Belarus. First, it is related to the fact that Russian and Belorussian banks may rely on resources borrowed from the central bank

to a larger extent than Kazakh banks. Second, in Kazakhstan's medium-sized banks and in banks with foreign participation the share of clients' resources is prevailing, both as compared to Top 5 Kazakh banks and as compared to Russian and Belorussian banks in that group.

Kazakh banks use debt securities as an alternative funding source. However, due to a low level of the stock market development, the percentage of securities-based funding is still low. A possibility of fund-raising through securities issuance may help increase sustainability of funding of the banking system in Kazakhstan. In terms of maturities, for Kazakh banks a large share of securities in liabilities is a relative advantage among the EAEU countries.

Russian medium-sized and small banks and all groups of Belorussian banks use borrowings in the domestic and foreign interbank market as an alternative funding source, to a greater extent than Kazakh banks. In general, a possibility to attract cheaper funding in the interbank loan market or from the central bank is an advantage for the banking systems of Russia and Belorussia. However, at present more expensive borrowing in the local currency, both from the central bank and in the interbank market, limits the ability of Russian and Belorussian banks to attract liquid resources.

In 2014, there was intensive redistribution of the deposit base from the local into foreign currency in Kazakhstan. This resulted in a more active buildup of the foreign currency loan portfolio. In Russia, the main contribution to the growth in foreign currency deposits and loans occurred as a result of revaluation, to a larger extent.

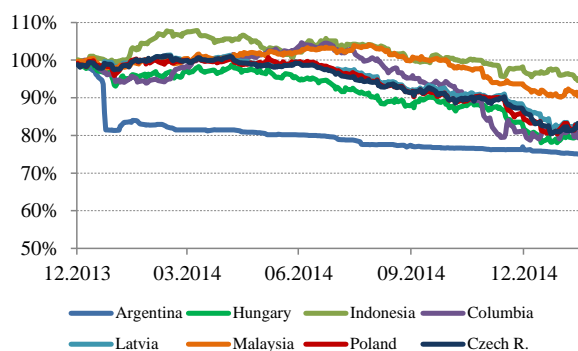
In 2014, the US Dollar demonstrated an appreciation trend versus currencies of developed and developing countries. In Kazakhstan, a one-time adjustment of the domestic currency exchange rate was conducted in February 2014. In Russia, depreciation of the domestic currency was taking place throughout the year; however, termination of foreign currency interventions by the CBRF and transition to a floating exchange rate in November 2014 caused a further depreciation of the Russian ruble. In Belarus, the NBRB was implementing the policy of a graduate depreciation of the domestic currency exchange rate.

Adjustment of the domestic currency exchange rates in Kazakhstan and Belarus in general was adequate to the overall growth of the US Dollar index⁶⁰, which was 12.8% in 2014. Local currencies of comparable countries also had demonstrated depreciation of their exchange rates

versus the US Dollar within the range of 15-20% (Figure 3.1.1.8).

In 2014, the structure of time deposits and the loan portfolio broken down by currencies started to change, especially in Kazakh and Russian banks. Re-orientation of time deposits from the local currency to foreign currency is noted across all groups of Kazakh banks and in a group of medium-sized Russian banks (Figure 3.1.1.9). A more significant growth in foreign currency deposits at Kazakh banks is explained by the fact that the overflow of deposits was taking place throughout 2014.

Figure 3.1.1.8
Dynamics of changes in indices of currencies versus the US Dollar (2013 = 100%)

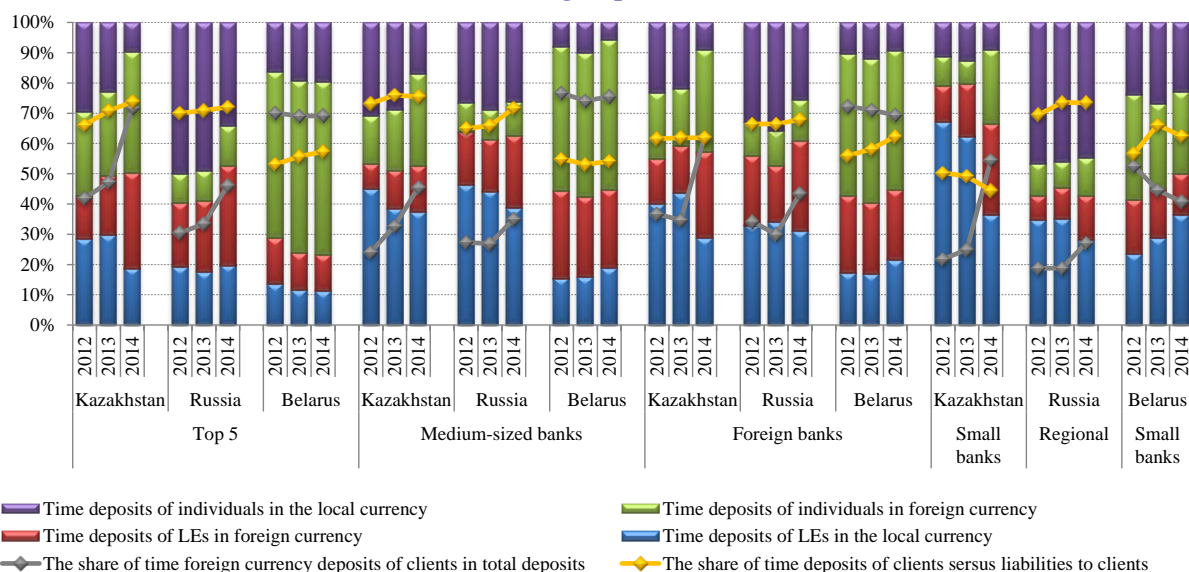


Source: Bloomberg, calculation by NBRK

⁶⁰ The DXY index which measures the dollar's value against a currency basket of six basic currencies: euro (EUR), yen (JPY), pound of sterling (GBP), Canadian dollar (CAD), Swedish krona (SEK) and Swiss franc (CHF). The index is calculated as a weighted geometric mean of these currencies. Between January 1, 2013 and January 1, 2015, the DXY index increased by 13.2%. During this period, the world currencies had depreciated by 11.6% versus the USD.

Figure 3.1.1.9

Structure of time deposits and the share of time deposits in foreign currency at banks in the EAEU countries, by groups



Source: NBRK, CBRF, NBRB, calculation by NBRK

In Russia, a significant growth in foreign currency deposits to a larger extent occurred as a result of exchange rate revaluation of foreign currency deposits. In the group of medium-sized banks, there is a growth in foreign currency deposits of legal entities mainly due to the overflow of deposits from small banks. It should be mentioned that, most likely, such outflow was stipulated by more attractive terms and conditions on foreign currency deposits as compared to the Top 5 group. At the same time, in 2014 an outflow of foreign currency deposits of individuals was observed in all groups of banks. The main reason for the outflow was the desire of the general public to realize the gain received as a result of revaluation of foreign currency deposits: there was a significant increase in the consumer demand for those goods and services whose price in the local currency was not adjusted.

In Belarus, the share of foreign currency time deposits has been steadily high over the last three years in all groups of banks: Top 5 – 65.8%, medium-sized – 69.8%, foreign – 66.6%.

At the end of 2014, Russian banks had the smallest concentration of foreign currency deposits as compared to banks in Kazakhstan and Belarus, which is generally perceived as an advantage. First, the occurrence of default on foreign currency liabilities is lower in Russian banks. Second, Russian banks will pass their foreign currency liabilities on the economy to a lesser extent.

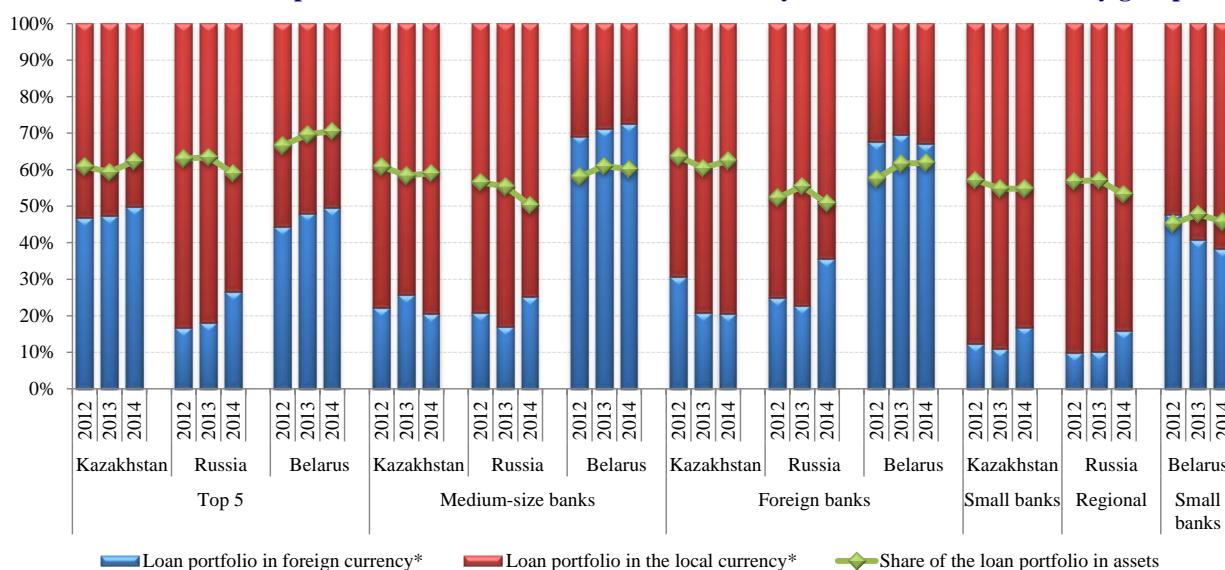
In Kazakhstan, during 2014 the growth in foreign currency loans was hidden by significant write-offs of old non-performing loans, including foreign currency loans. High concentration of foreign currency loans is noted in the Top 5 group – 49.7%; this is caused by accumulated old loans a major portion of which was classified as non-performing loans. As for other groups of Kazakh banks, the share of foreign currency loans is maintained within the same range with Russian banks.

In all groups of Russian banks, there is an increase in the share of foreign currency loans (Figure 3.1.1.10). However, only medium-sized banks responded to the growth in foreign currency deposits of legal entities by building up their foreign currency loan portfolio.

In Belarus, there is a high percentage of foreign currency loans in the loan portfolio in all groups of banks. Based on a high percentage of time deposits and the loan portfolio in foreign currency in all groups of banks excluding small banks, one may make a conclusion about a high degree of dollarization of the banking sector in Belarus.

Figure 3.1.1.10

Structure of the loan portfolio of banks of the EAEU countries by currencies broken down by groups



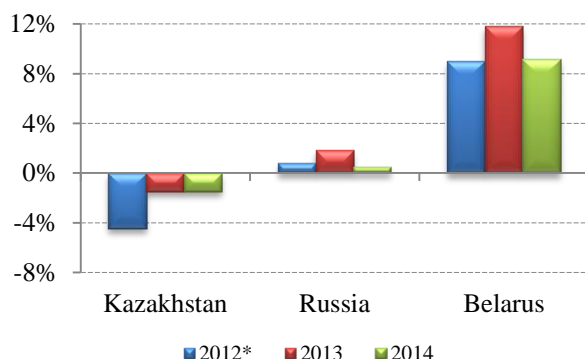
Note: *re. Belarus - except past due loans, overdue payment instruments; loan debts, undue payment instruments classified under IV – V risk groups**; past due on provided loans

** According to the Instruction about the procedure for creation and use of specific reserves by banks and non-bank credit and financial organizations against potential losses on assets and operations not recorded on the balance sheet as approved by the Board Resolution of the National Bank of the Republic of Belarus dated September 28, 2006 No. 138 and internal regulations of a bank or a non-bank credit and financial organization.

Source: NBRK, CBRF, NBRB, calculation by NBRK

Figure 3.1.1.11

FX exposure to the equity of the banking systems of the EAEU countries



* For the 2012 data for Kazakhstan provided excl. JSC BTABank due to the reporting period negative capital

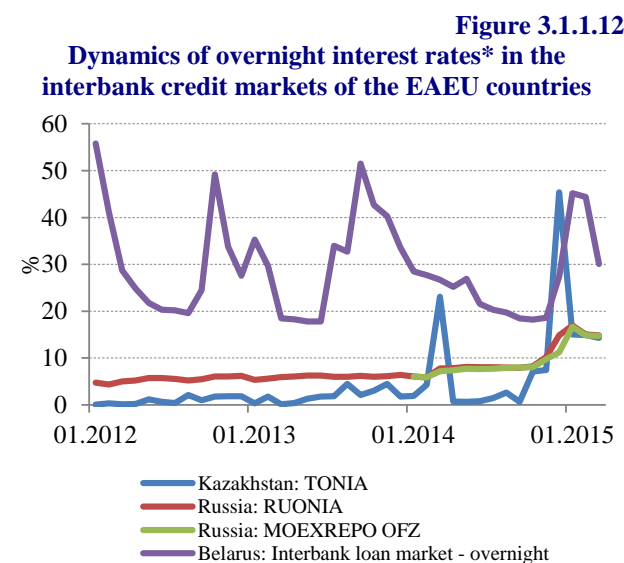
Source: NBRK, CBRF, NBRB, calculation by NBRK

future Kazakh banks will be trying to increase the share of the loan portfolio in foreign currency in order to minimize foreign exchange risks.

A smaller percentage of foreign currency time deposits and loans is an advantage for Russian banks which were less exposed to the change in the foreign currency structure of their balance sheet, as opposed to Kazakh and Belorussian banks. In the Russian banking system as a whole, there is a minor long position on currencies whose effect on the banks' capital is minimal – 0.5%.

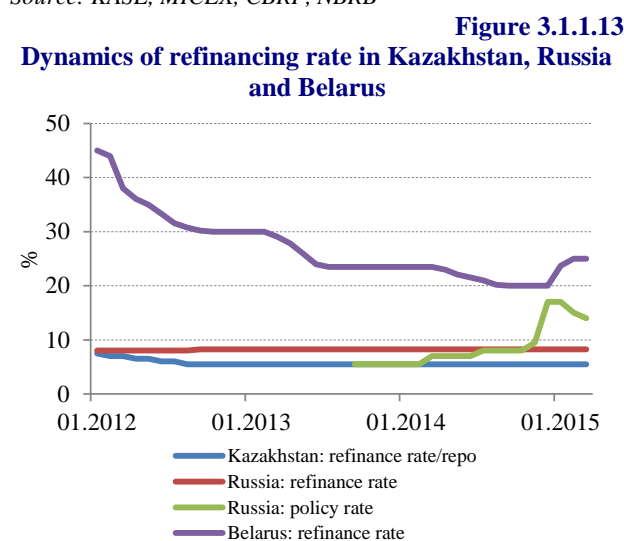
Given the fact that the currency structure of time deposits and the loan portfolio of Belorussian banks had not changed significantly as well as the fact that foreign currency assets exceeded liabilities, a long currency position had developed in the banking system. As compared to the EAEU countries, the pressure of the FX exposure on the capital of Belorussian banks is the largest – 9.2%. On the one hand, an advantage of the long currency position for Belorussian banks is a lower exposure to negative revaluation in the event of a further depreciation of the local

currency. On the other hand, indirect foreign exchange risk of banks is growing through borrower's credit exposure due to the growth in foreign currency debt burden. Moreover, a long position in the Belorussian banking system may be covered in the mid-term since the NBRB imposed a limitation on retail lending in foreign currency, except individual entrepreneurs⁶¹, as well as legal entities not engaged in foreign trade operations⁶².



Note: *in lotting the chart, weighted average monthly rates were used

Source: KASE, MICEX, CBRF, NBRB



Source: NBRK, CBRF, NBRB

Moreover, liquidity ratios show that among the EAEU countries Russian banks have low liquidity ratios (Figure 3.1.1.14).

In 2014, the adjustment of the domestic currency exchange rate in Kazakhstan and Russia determined the situation with banks liquidity. As a result, interest rates on instruments denominated in the domestic currency were growing in the interbank operations market (Figure 3.1.1.12).

In Russia, as a result of significant depreciation of the exchange rate of the domestic currency in the second half of 2014, the CBRF, with a view to restrain further depreciation of the Ruble, made the decision to increase the key rate⁶³, from 5.5% in 2013 to 17% in 2014 (Figure 3.1.1.13). Increasing the key rate at which banks borrow short-term resources from the CBRF became the main reason for increase in the cost of liquid resources in the banking system. As a result, rates of borrowing in the interbank market also increased.

In Belarus, during 2014, within the framework of the NBRB's monetary policy aimed to ensure the price stability and reduce the inflation rate, the refinance rate was gradually lowered; as a result, interbank market rates also demonstrated reduction. However, in December 2014, against the backdrop of the situation in Russia, the refinance rate and interbank market rates increased.

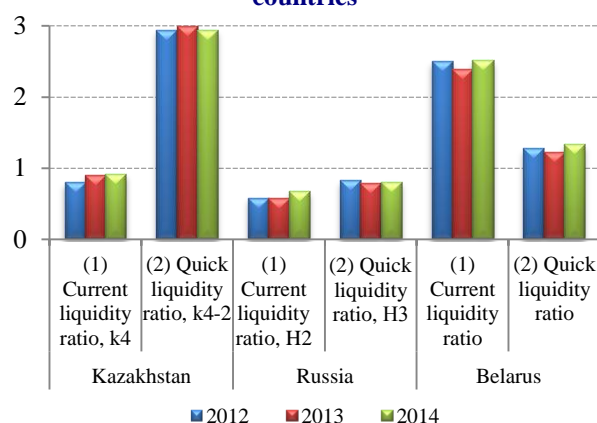
Given the current increase in the cost of liquid resources as well as the fact that banks in Russia and Belarus are actively using funding from the central bank and interbank operations, banks in these countries may face the problems of liquid resources in the nearest time.

⁶¹ The Board Resolution of the National Bank of the Republic of Belarus dated July 14, 2009 No.105 "On Amendments to the Instruction on the Procedure on the Provision (Placement) of Funds by Banks in the Form of a Loan and their Repayment of December 30, 2003 No.226".

⁶² The Board Resolution of the National Bank of the Republic of Belarus dated January 04, 2014 No.3 "On Amendments to the Board Resolution of the National Bank of the Republic of Belarus on Provision of Foreign Currency Loans of November 13, 2012 No. 577".

⁶³ Key rate of the CBRF – a one-week auction rate for liquidity provision and absorption.

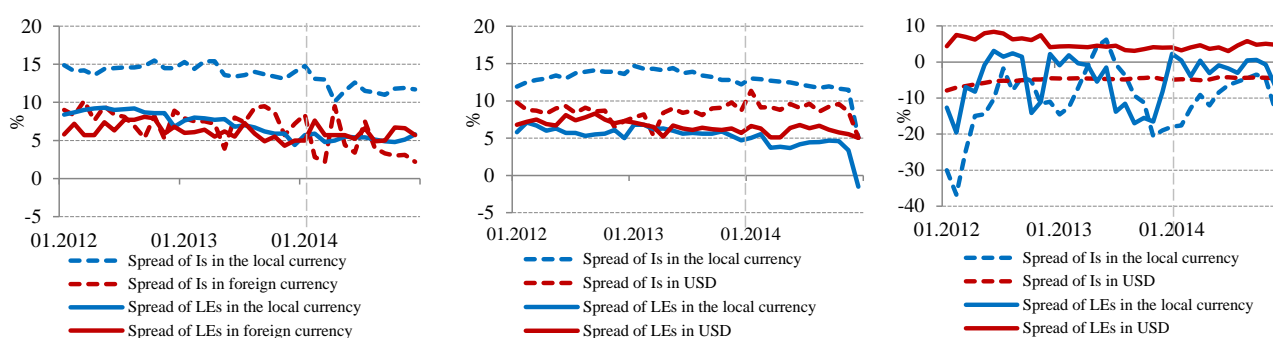
Figure 3.1.1.14
Liquidity ratios of the banking systems of the EAEU countries⁶⁴



Source: NBRK, CBRF, NBRB

the domestic currency, despite increasing interest rate risk, Kazakh and Russian banks increased attractiveness of savings in the domestic currency by increasing interest rates on deposits. As a result, the spread between weighted average rates on new deposits and provided loans in the domestic currency was decreasing throughout 2014 (Figure 3.1.1.15). In doing so, the largest reduction of the spread was noted in the Russian banking sector in December 2014, when interest rates on retail deposits almost doubled and rates on corporate deposits increased by 1.5 times.

Figure 3.1.1.15
Interest rate spread between rates of new loans and deposits of banks of the EAEU countries
A. Kazakhstan* **B. Russia** **B. Belarus****



*In re. of Kazakhstan, spreads are calculated as the difference between weighted average interest rates on all provided loans and attracted deposits;

** In re. of Russia and Belarus, based on characteristics of loans as long-term instruments and characteristics of deposits as short-term instruments, spreads were calculated as the difference between weighted average interest rates on provided loans with the tenor over one year and attracted deposits with maturity less than one year;

Source: NBRK, CBRF, NBRB, calculation by NBRK

In Belarus, the spread between rates on new deposits and provided loans shows a negative value, except the spread on corporate instruments in foreign currency. Most likely, the reason for a negative spread is the provision of soft and subsidized loans to the economy and the population. During 2014, the spread in the Belorussian banking sector was increasing, which was a positive thing for the system. However, the growth of rates in the interbank market had an impact on the

⁶⁴ For the EAEU countries, the most similar liquidity ratios in terms of maturities of liabilities were taken: (1) demand liabilities:

- Kazakhstan – Highly liquid assets to demand liabilities, k4;

- Russia – Highly liquid assets to demand liabilities, H2;

- Belarus – Demand assets to demand liabilities, acid ratio.

(2) Demand liabilities and liabilities with maturity less than one month:

- Kazakhstan – Assets with maturity less than one month to short-term liabilities with maturity less than one month, k4-2;

- Russia – Liquid assets to short-term liabilities with maturity less than 30 days, H3;

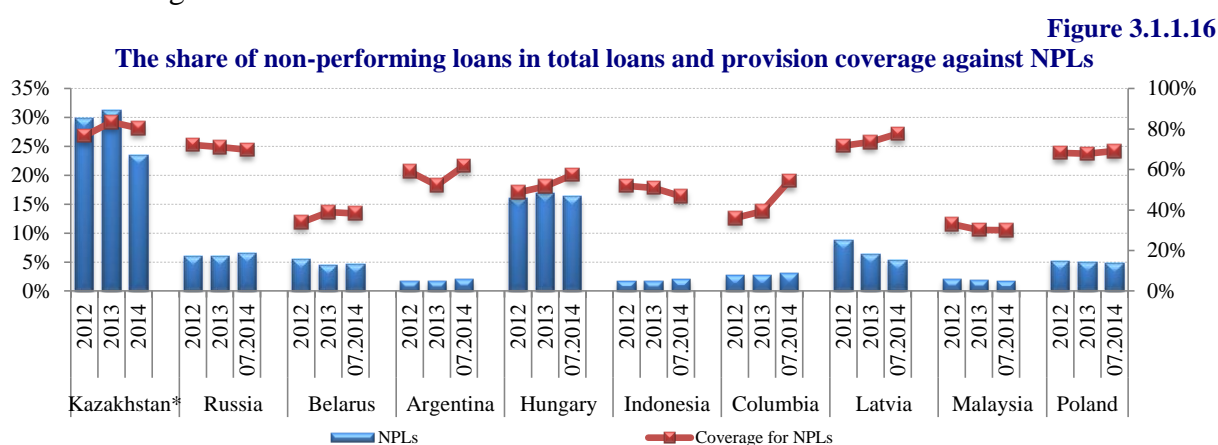
- Belarus – Assets with maturity less than 30 days to liabilities with maturity less than 30 days, current liquidity ratio.

cost of the deposit base in the domestic currency, which again caused the decrease of spreads in the domestic currency.

The decreased spreads between interest rates on loans and deposits later will have a negative impact on profitability of banks in the EAEU countries. The largest effect from decreased interest rate spreads is anticipated in the banking sectors of Russia and Belarus.

A high percentage of non-performing loans, despite some reduction, does not allow large Kazakh banks to rapidly adjust to the changing environment. A low percentage of non-performing loans in the loan portfolio is the advantage of Russia and Belarus; however, the adjustment of the domestic currency exchange rate, slowing growth of the retail portfolio and the growth in the inflation rate in 2014 were the reasons for the growth of credit risk in the retail loan portfolio.

In 2014, the share of non-performing loans in the banking system of Kazakhstan decreased from 31.2% in 2013 to 23.5% in 2014. However, the loan portfolio quality in Kazakhstan still remains at a low level as compared to the EAEU countries and countries in the sample (Figure 3.1.1.16). In Russia and Belarus, the share of non-performing loans in the system is much lower and is within the range of 4–7%.



Note: *data on Kazakhstan are provided as of 01.01.2015

Source: IMF, NBRK, calculation by NBRK

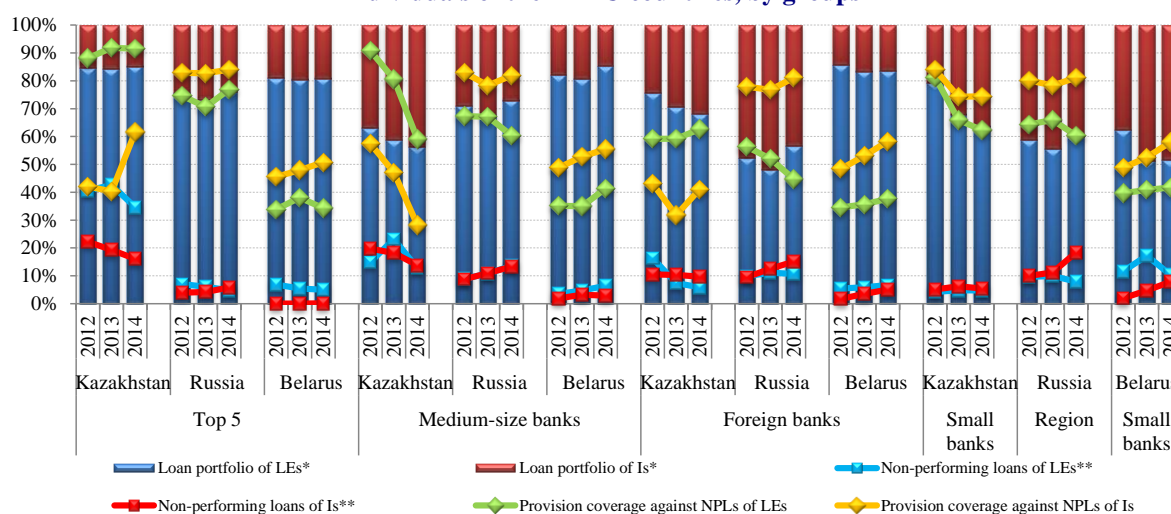
At the same time, a fairly high level of provisioning against non-performing loans is a positive thing for the banking system of Kazakhstan. At the end of 2014, the coverage ratio for non-performing loans accounted for 80.4%. This points to the fact that the major portion of losses from the loan portfolio impairment is absorbed in the capital of banks and banks are able to reduce the level of non-performing loans in future. Also, a high level of provisioning is noted in the Russian banking system – 69.8%. In Belarus, the coverage ratio for non-performing loans in the system is the lowest among the EAEU countries – 38.3%. Given an insignificant share of non-performing loans in the loan portfolio and a high level of capitalization in the banking system of Belarus⁶⁵, in general a low level of coverage for non-performing loans does not bear significant risks for the banking system. However, if non-performing loans grow, losses from realized credit risk may affect capital of Belorussian banks.

In Kazakhstan, the largest input in a low loan portfolio quality is made by “old” non-performing loans of legal entities accumulated during 2008-2009. The major share of non-performing loans of legal entities is concentrated in largest and medium-sized banks that have been operating in the Kazakh market for a long time (Figure 3.1.1.17). A low loan portfolio quality of legal entities forced banks to create a larger coverage against non-performing loans as compared to coverage against non-performing loans of individuals. In the group of Top 5, the level of coverage against non-performing loans of legal entities accounts for more than 90%, and in the remaining groups of Kazakh banks – for more than 60%.

⁶⁵ The analysis of capitalization of three systems of the EAEU countries is provided below in the text.

Figure 3.1.1.17

The share of non-performing loans and of provisions against NPLs in the loan portfolio of legal entities and individuals of the EAEU countries, by groups



Note: *in re. of Belarus - loans to clients under lines of lending according to Instruction No. 138.

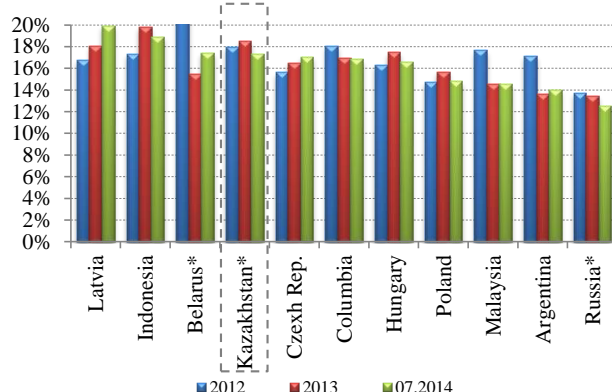
**in re. of Belarus - assets classified under III-V risk groups according to Instruction No. 138.

Source: NBRK, CBRF, NBRB, calculation by NBRK

In Russia and Belarus, slowed rates of growth of the retail loan portfolio, growth of the inflation rate as well as falling living standards of the population caused the retail loan portfolio impairment in all groups of banks in 2014. In the retail loan portfolio, credit risk was building up in respect of loans provided for consumer purposes, which, just like in Kazakhstan, demonstrated intensive growth in 2011-2013 in the period of consumer lending boom. Both in Russia and in Belarus, the lowest loan quality was demonstrated by small banks and medium-sized banks with

foreign equity where the largest share of retail loans is concentrated. Given the fact that the buildup of risks occurred in the second half of 2014, the probability of further deterioration in the asset quality in the two countries cannot be excluded.

Figure 3.1.1.18
Capital adequacy ratios as of 01.07.2014



Note: *data on the EAEU countries are provided as of 01.01.2015

Source: IMF, NBRK, CBRF, NBRB

banking sector, which will enable to absorb arising risks in case of negative developments.

Versus comparable countries, Kazakhstan and Belarus are the most prepared countries to absorb risks with their owners' equity. Capital adequacy ratio of Kazakhstan is well above the required ratio⁶⁶ and amounted to 17.3% at the end of 2014; the ratio in Belarus is 17.4% (Figure 3.1.1.18). Capital adequacy of Russian banks is slightly above the required ratio – 12.5%⁶⁷.

⁶⁶ Capital adequacy ratios of the EAEU countries:

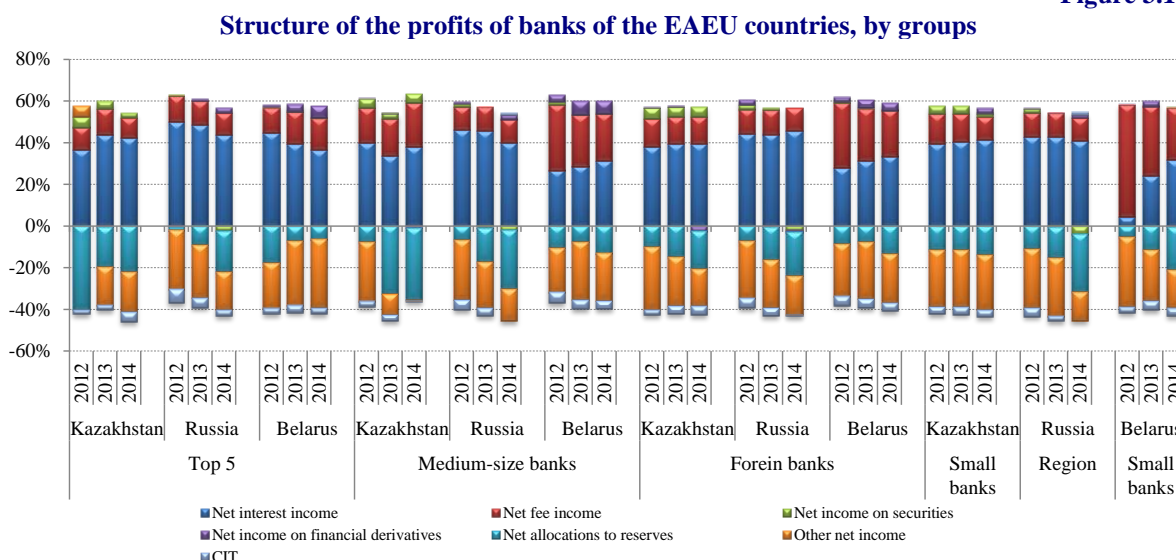
- (1) Capital (owners' equity) adequacy ratio for Russian banks H1.0 – a regulatory minimum required ratio is set at 10%;
- (2) Regulatory capital adequacy ratio for Belorussian banks – at 10%;
- (3) Equity adequacy ratio for Kazakh banks κ2 – at least 12%.

⁶⁷ In 2014, in order to prevent violations of prudential ratios due to the change in the exchange rate of the Russian ruble and negative revaluation of the securities portfolio, the CBRF initiated a number of measures to support sustainability of the Russian banking

The main contribution to profits of Kazakh and Russian banks is made by interest income, whereas Belorussian banks are equally relying on their fee income. In the banking sector of Belarus and Russia, there is a significant increase in reserves for potential losses from customer loans and, as a result, the reduced return on assets and return on equity of banks.

Interest income has traditionally made the main contribution to net profit of a bank. The highest contribution to net profit from interest income is received by Russian and Kazakh banks (Figure 3.1.1.19). In all groups of Belorussian banks, except the Top 5 group, the contribution to net profit by fee income is equal to interest income. The contribution from operations with financial derivatives is also noted in the profit structure of all groups of Belorussian banks. In Kazakhstan, the contribution by fee income to net profit is the most significant in medium-sized banks.

Figure 3.1.1.19



Source: NBRK, CBRF, NBRB, calculation by NBRK

In 2014, the growth in allocations to reserves for potential losses in the structure of expenses is observed in the banking systems of the EAEU countries. If allocations to reserves for potential losses were high for Kazakh banks throughout the last three years, a massive provisioning for potential losses in the loan portfolio for Belorussian banks, except the Top 5 group, and for Russian banks occurred in 2014. The reasons for the growth in allocations to reserves in Russian and Belorussian banks are expectations about deterioration in the financial position of borrowers as a result of the economic downturn.

At the end of 2014, profits of Kazakh and Belorussian banks increased but the growth was half as big as in 2013.

The growth in net profit of the Kazakh banking sector was secured by significant profit growth in medium-sized banks. In the Belorussian banking sector, the growth in net profit was demonstrated by all groups except small banks. In 2014, profit of Russian banks decreased by more than 36% versus 2013. As a result, return on assets and return on equity of Russian banks decreased because of losses from operations with securities as well as due to significant growth in allocations for potential losses.

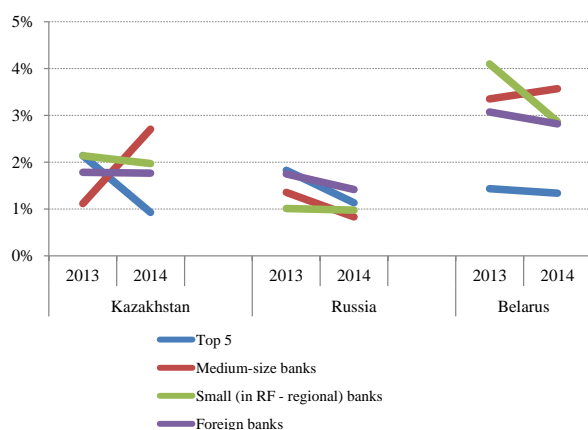
In general, profitability of the Kazakh and Russian banking systems is at a similar level, except medium-sized Kazakh banks which are actively reinforcing their positions in the market (Figure 3.1.1.20 A, B). In Belarus, the best performance is demonstrated by medium-sized banks and banks with foreign equity whereas return on assets and return on equity in the Top 5 group is comparable with profitability of Kazakh and Russian banks.

sector. Russian banks were allowed to: (1) record operations on balance-sheet and off-balance sheet accounts at the official foreign exchange rate versus the Ruble as of October 1, 2014; (2) a temporary moratorium was introduced for recognition of negative revaluation of securities portfolios, till July 1, 2015; (3) an opportunity was provided not to deteriorate the assessment of the quality of debt service, irrespective of the assessment of a borrower's financial position. In future, with a view to prevent violations of prudential ratios, the CBRF plans to increase capital of the banking sector with the help of government resources.

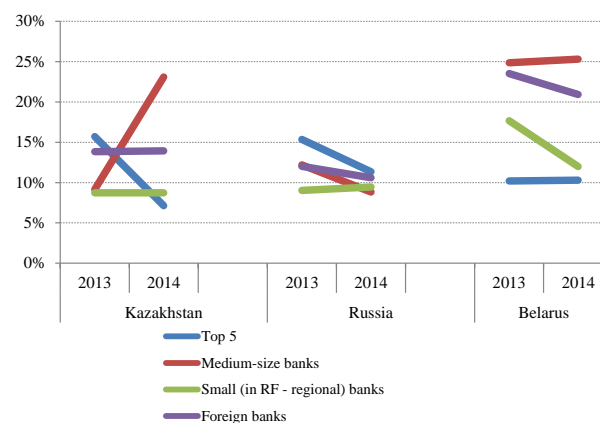
Figure 3.1.1.20

Profitability ratios of banks of the EAEU countries, by groups

A. Return on Assets (ROA*)



B. Return on Equity (ROE**)



Note: *Net profit to average assest

**Net profit to average capital

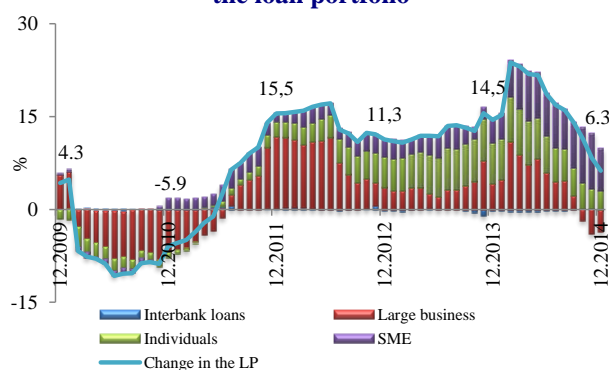
Source: NBRK, CBRF, NBRB, calculation by NBRK

3.1.2. Credit Risk

The year 2014 was characterized by the lowest rates of growth of the loan portfolio over the last four-year period. New lending and revaluation of foreign currency loans were partly offset by significant reduction in the non-performing loan portfolio within the attempt to comply with regulatory requirements⁶⁸. Credit risk keeps concentrating in the portfolio of loans provided to large business entities; however, provisions created for them including collateral cover losses

Figure 3.1.2.1

Contribution by borrowing entities to the change in the loan portfolio



Note: Change in the loan portfolio is presented as a percentage change versus the corresponding period of the previous year.

Source: NBRK

refinancing.

4) -29,4% – repayment of loan debts.

A high lending activity of banks was observed in the SME sector, including as part of implementation of the government business support programs. Versus the 25.2% growth in 2013, the growth in the portfolio of loans provided to SME entities accounted for 38.7%. The portfolio of loans provided to individuals was demonstrating a decline in the rates of lending from 30.3% in 2013 to 12.5%, mainly due to regulatory measures introduced by the NBRK to limit the growth in unsecured customer loans. Reduced demand for loan product on the part of borrowers at the beginning of the year because of negative exchange rate expectations as well as reduced supply of

arising from realization of credit risk.

At the end of 2014, there was a slowdown in the loan portfolio growth from 14.5% in 2013 to 6.3% (Figure 3.1.2.1). The contribution of factors which were determining the loan portfolio dynamics during 2014 was as follows:

1) +7% – revaluation of the loan portfolio denominated in foreign currency as a result of adjustment of the Tenge exchange rate versus the US Dollar in February 2014;

2) -16% – reduction of the non-performing portfolio as a result of joint efforts of the NBRK and banks to reduce the share of non-performing loans in the loan portfolio;

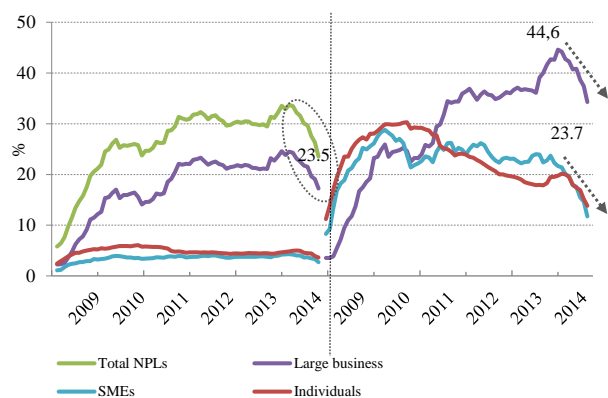
3) +44,7% – new lending, including

⁶⁸ Achieving the level of 15% of non-performing loans in the loan portfolio at the beginning of 2015.

the domestic currency loans on the part of banks at the end of the year due to shortage of the Tenge liquidity also

Figure 3.1.2.2

Loan portfolio quality, by borrowing entities
A. Share of non-performing loans in the loan portfolio **B. Share of non-performing loans, by each portfolio**



Source: NBRK

in December 2014 (Figure 3.1.2.2, B).

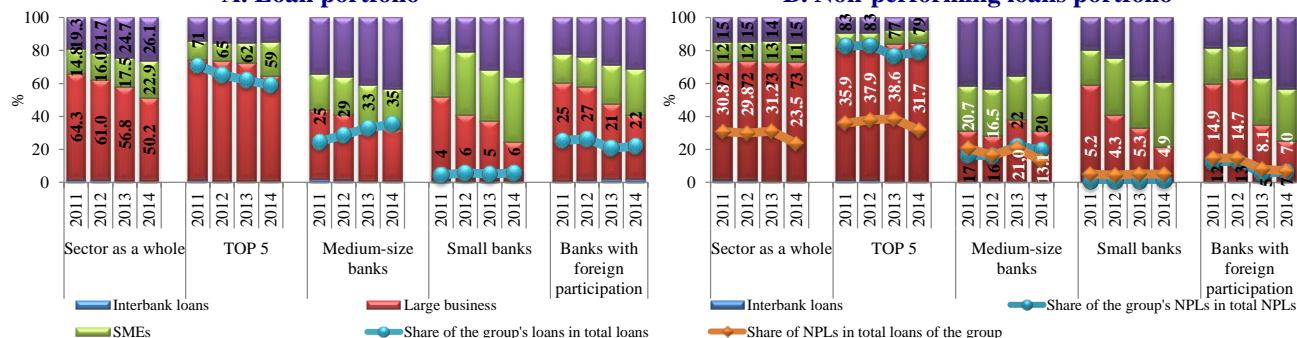
A nearly two-fold reduction in the share of non-performing loans in the portfolio of SME entities was secured, on the one hand, by their write-off and, on the other hand, by provision of new loans. However, high lending rates require that banks conduct proper assessment of credit risk of potential borrowers. If internal risk management systems are not adequate, loans provided in 2014 may later have negative impact on the quality of SMEs portfolio. The share of non-performing loans in the retail loan portfolio was reduced primarily due to their write-off.

Concentration of loans to the large business in the loan portfolio is decreasing; however, the share of non-performing loans of this sector remains high, mainly in the loan portfolio of five largest banks.

In 2014, the banking sector's strategy continued to change by way of shifting lending from the large business to individuals and SMEs (Figure 3.1.2.3, A). The change in the portfolio structure was observed in all groups of banks. In particular, medium-sized banks continued to conquer the larger share of the lending market, in the retail segment among others.

Figure 3.1.2.3

Loan portfolio structure of groups of banks, by borrowing entities
A. Loan portfolio **B. Non-performing loans portfolio**



Note: Banks are grouped as of the end of each period. TOP 5 - five largest banks in terms of their assets; medium-size banks - players whose asset share exceeded 1% of total assets in the system; small banks - players with the asset share below 1%. The group of banks with foreign participation is represented by banks which conformed to p.5 Art.3 of the Banking Law

Source: NBRK

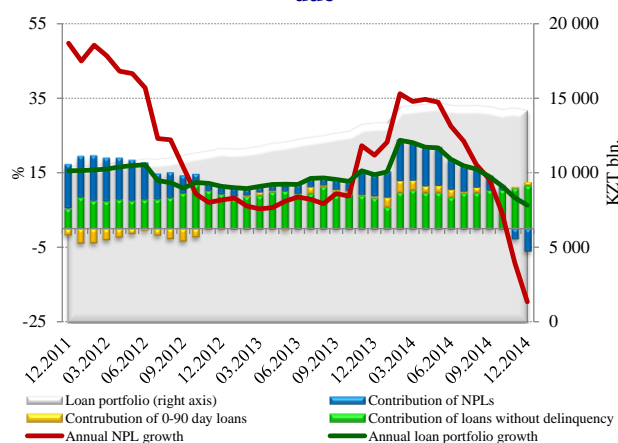
As a result, the structure of the loan portfolio in the banking sector undergone sizeable changes:

⁶⁹ At July 1, 2015, non-performing loans accounted for 10% of the loan portfolio of banks.

- loans provided to the large business are dominant, however, their share decreased from 56.8% to 50.2%;
- the share of SME lending increased from 17.5% to 22.9% as a result of intensive building of a portfolio;
- the share of loans to individuals increased insignificantly, from 24.7% to 26.1%.

In 2014, active work of the NBRK with banks aimed to reduce the level of non-performing loans, mainly with the Top 5 banks and medium-sized banks, resulted in tangible improvement of quality of portfolios. However, despite structural changes in the loan portfolio of banks, the

Figure 3.1.2.4
Contribution of loans to the change in the loan portfolio, broken down by the number of days past due



Note: "0-90 day loans" are loans where their principal and/or accrued interest are past due from 0 to 90 days

Source: NBRK

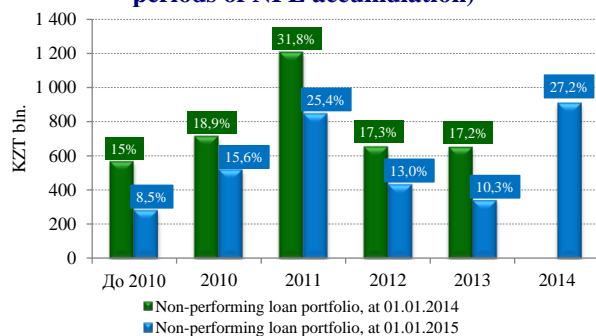
structure of non-performing loans of the banking sector had not changed a lot (Figure 3.1.2.3, B). As before, loans to the large business are dominant; a smaller share falls on loans provided to individuals and SMEs.

Great influence on the structure of non-performing loans is exerted by the Top 5 banks' portfolio which accounts for 79%. In general, in 2014 the share of non-performing loans in the Top 5 banks' portfolio decreased from 38.6% to 31.7%; however, this level is still quite high.

A different picture is observed in the portfolio of non-performing loans of medium-sized banks, which account for 20% of the total portfolio. The main concentration of non-performing loans falls on the growing share of individuals and SMEs whereas already an insignificant share of the large business loan portfolio continues to decrease. The 29% reduction of the non-performing loan portfolio with the 14% growth of the loan portfolio of medium-sized banks in 2014 contributed to significant reduction in the share of non-performing loans in such banks from 21% to 13.1%.

Small banks as well as banks with foreign equity participation demonstrate a similar structure. There is a replacement of non-performing loans of the large business with non-performing loans of individuals and SMEs. The portfolio quality in small banks and banks with foreign equity participation shows improvement.

Figure 3.1.2.5
Change in the structure of the non-performing portfolio as a result of effort made in 2014 to reduce the share of non-performing loans (broken down by periods of NPL accumulation)



Note: The share of non-performing loans accumulated during each period in the loan portfolio at 01.01.2014 and 01.01.2015 is shown as percentage

Source: NBRK

Despite significant decrease of the non-performing portfolio in 2014, half of it is still represented by loans accumulated before 2012, which are concentrated mainly in large problem banks. In 2013-2014, the increase in "new"⁷⁰ non-performing loans was observed in large and medium-sized banks with a high lending activity.

At the end of 2014, the portfolio of non-performing loans decreased by 19.7% (Figure 3.1.2.4). Such decrease was achieved due to input of the following factors:

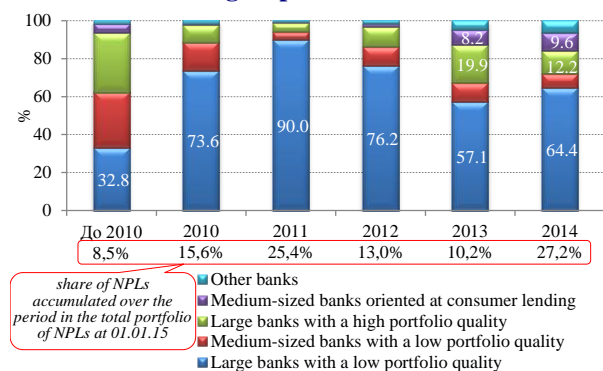
- 1) +9.9% – revaluation of non-performing loans in foreign currency under the impact of the domestic currency exchange rate adjustment;

⁷⁰ "New" non-performing loans are those loans which became past due more than 90 days on the principal and/or accrued interest in 2014.

- 2) -51.6% – the result of joint effort of the NBRK with banks to reduce non-performing loans (Box 6);
- 3) +22.1% – appearance of “new” non-performing loans, including 1.5% – because of loans provided in 2014.

Despite significant reduction of the non-performing portfolio, half of it still consists of non-performing loans accumulated before 2012, including 25.4% – loans transferred to the non-performing category in 2011 in the period of significant deterioration in the loan portfolio quality (the annual growth of non-performing loans was 50%). In doing so, the growth in “new” non-

Figure 3.1.2.6
Structure of the non-performing portfolio at 01.01.15, broken down by the period of NPL accumulation, by groups of banks



Note: As of 01.01.15: Large banks – where a bank's share in the system's loan portfolio is over 6%, medium-sized banks – over 1%, banks oriented at consumer lending – the share of consumer loans in the bank's loan portfolio is over 35%.

A low portfolio quality – the share of non-performing loans in the loan portfolio is over 15%; a high portfolio quality – less than 5%.

Source: NBRK, Loan register.

performing loans which account for 27.2% of the total on-performing portfolio remained hidden behind significant volumes of write-offs (Figure 3.1.2.5).

In 2013-2014, credit risk had been building up in large banks with a better portfolio quality as well as in medium-sized banks oriented at consumer lending (Figure 3.1.2.6).

Box 6

A set of legislative measures implemented by the NBRK to reduce NPLs in the banking sector

In 2014, with a view to stir up the process of reduction in the level of non-performing loans, the NBRK made an active effort to strengthen supervisory measures and initiatives in order to make necessary amendments to the legal framework. Particularly, special emphasis was made on creating enabling environment for banks in respect of affordable framework for reducing the number of non-performing loans.

In addition, in May 2014 the NBRK established the Panel for assessment and control of the effort on reduction of past due loans, which monitors the effectiveness of measures taken by banks to rehabilitate their loan portfolio, on a case-by-case basis. Fundamentals, instruments and measures required to manage past due loans were defined in the adopted Unified policy for reduction of past due loans in the second-tier banks.

In order to reduce non-performing loans and speed up the solution of the problem, the NBRK made some arrangements to optimize the tax legislation and reduce administrative barriers for banks in relation to:

- prolongation of tax abatements in remission of bad debt (in the amount not exceeding 10% of the loan portfolio) till 2016;
- recognition in the tax accounting of losses from writing off bad loans from the balance sheet of banks;
- recognition in the tax accounting of losses from the transfer of problem assets to the SPV at discount, under the temporary preferential tax regime (the tax abatement is in effect from January 1, 2012 to January 1, 2018);

- exemption from taxation of income of individuals in writing off bad debt to off-balance sheet items as well as in remission of debt in a number of cases¹;
- provision of tax abatements to banks which had undergone restructuring with a view to assist in addressing the problem of non-performing loans;
- expansion of authorities of SPVs for making all arrangements to improve the problem asset quality.
- optimization of criteria for remission of bad debt.

In addition, a prudential ratio on maximum share of non-performing loans in the bank loan portfolio of not more than 10% will be introduced from January 1, 2016.

To intensify the activity of the “Problem Loans Fund” JSC, a new Concept for Functioning of the “Problem Loans Fund” JSC was adopted, which is aimed at a more active and multi-faceted interaction of the Fund with banks via the mechanisms of fair risk distribution in the course of problem loans repurchase.

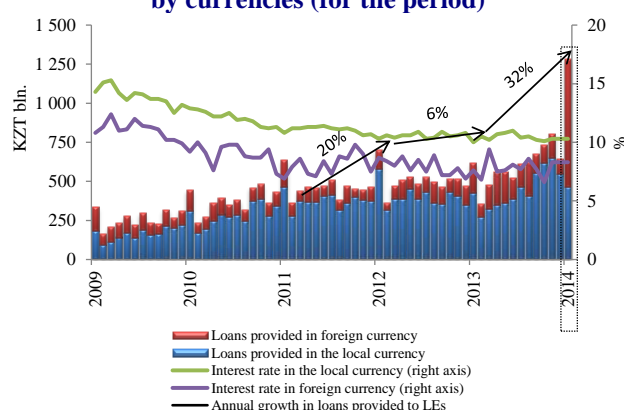
¹ Income of individuals arising when a bad debt is charged off the balance sheet without suspending the claim administration by a bank as well as in case of the waiver of debt subject to personal income tax, in the following instances:

- when forgiving the debt of certain socially vulnerable categories of individuals.
- when selling pledged property at a price below the amount of outstanding liability.
- when actions taken by an enforcement agent in order to identify the property or income of a borrower – natural person appeared to have no effect.

The growth in the volume of loans to legal entities in 2014 was to a large extent supported by the government funding. In doing so, potentially risky sectors showing vulnerable financial position still represent top-priority areas for new lending.

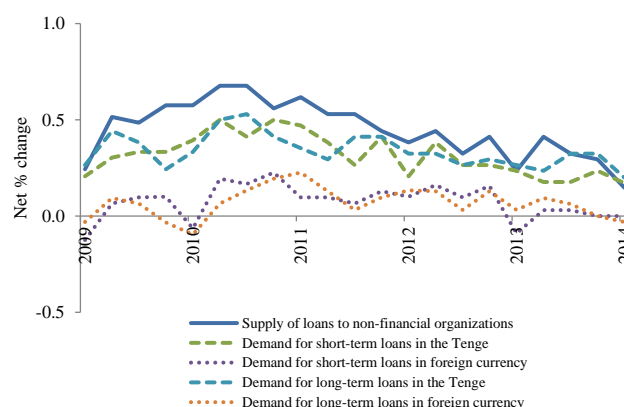
In 2014, the market of loans to legal entities⁷¹ (excluding non-residents) demonstrates active behavior, the volume of “new” loans increased by 32% versus 6% in 2013 (Figure 3.1.2.7). The growth of lending was secured by virtually all groups of banks – both by those where the government resources made a significant contribution to their funding and those which raised the required resources on their own. So, in the second half of 2014, the “UAPF” JSC placed deposits with banks (over KZT 500 bln.) and bought bonds (over KZT 300 bln.) of banks. In addition, the contribution to the growth in “new” loans was made with KZT 100 bln. of resources provided by the “DAMU” Enterprise Development Fund” JSC and channeled to the development of SMEs in the manufacturing industry.

Figure 3.1.2.7
New loan disbursements to legal entities broken down by currencies (for the period)



Source: NBRK

Figure 3.1.2.8
Trends in the demand and supply of loan products



Note: Net % change is calculated as the difference of % respondents that noted the increase /mitigation of the demand or supply parameters.

Source: NBRK

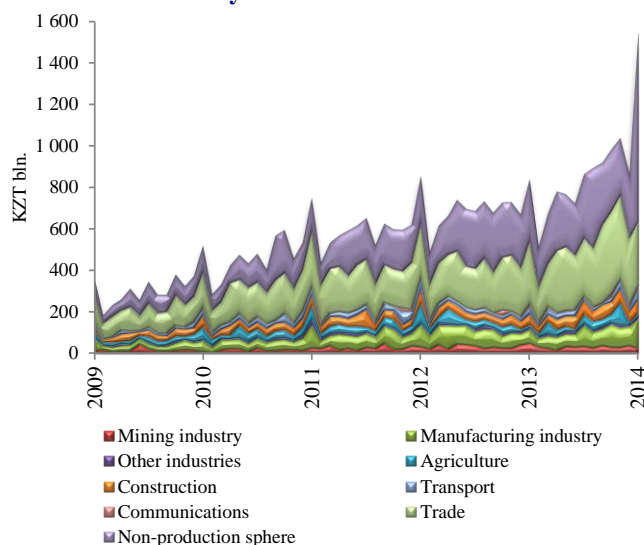
A significant overflow of deposits from the domestic currency into foreign currency was conducive to the increased lending activity in foreign currency. In addition, a significant volume of

⁷¹ Legal entities shall mean small, middle-sized and large business enterprises.

foreign currency loans was provided in December 2014, of which 60% fell on loans provided by banks to their subsidiaries engaged in distressed assets management.

Figure 3.1.2.9

New loan disbursements to the economy, broken down by economic sectors



Source: NBRK

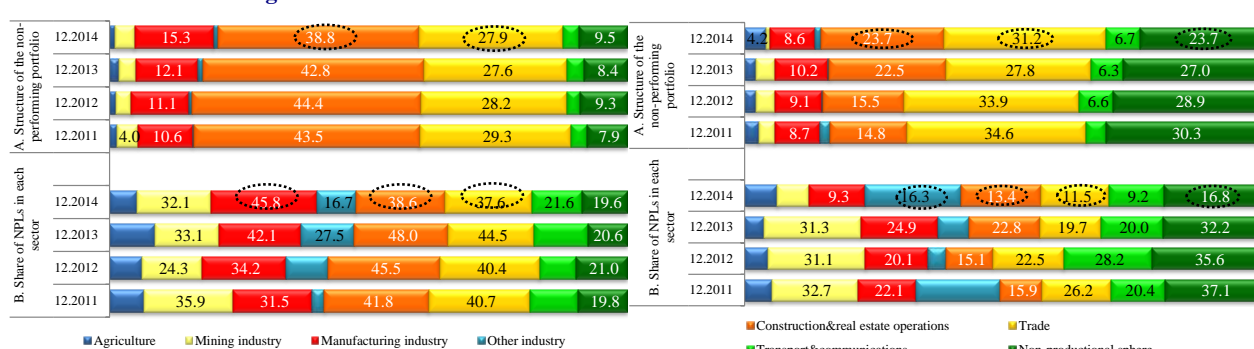
liquidity shortage in the domestic currency may later become the reason for a larger scale of lending in foreign currency.

Just as during the prior years, “trade”, “non-production sphere” and the “manufacturing industry” remain the top-priority sectors for “new” lending (Figure 3.1.2.9).

The dominating areas of lending account for more than 50% in the structure of non-performing portfolio. At the same time, the quality of loans to these sectors is at the lowest level. The share of non-performing loans in the sector of “trade” in the portfolio of loans to large enterprises accounts for 37.6% and in the portfolio of loans to SME entities – 11.5% (Figure 3.1.2.10).

Figure 3.1.2.10

Structure of the non-performing portfolio of loans to legal entities broken down by sectors, %



Note: In the NPL portfolio of legal entities, 86.5% falls on loans to large business and 13.5% - on loans to SMEs.

Source: NBRK

The quality of portfolio of large enterprises in the “non-production sphere” accounts for 19.6% and it is also the lowest for SME entities – 16.8%. In the meantime, the “manufacturing industry” has the lowest quality in the portfolio of loans to large enterprises – 45.8%. In the portfolio of loans to SME entities, in 2014 the share of non-performing loans in this sector decreased from 24.9% to 9.3% due to increased lending.

In general, the “construction” industry which is one of the most heavily credited sectors accounts for the largest share in the structure of non-performing loans of legal entities. The quality

⁷² A questionnaire filled out as part of the “State and Forecast of the Credit Market Parameters” survey conducted among STBs.

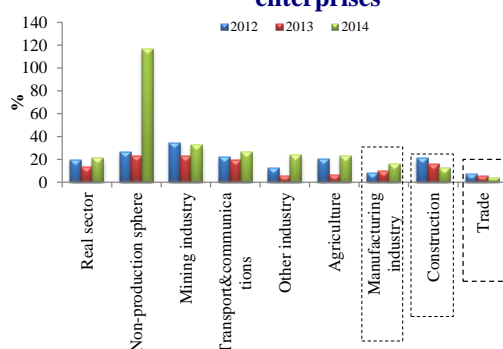
of this sector in the portfolio of loans to the large business accounts for 38.8%, and in the SME loan portfolio – 23.7%. A high share in the non-performing portfolio as well as a low quality of the loan portfolio of the “construction” sector is explained by credit risk accumulated during the period after 2007-2008 when real estate prices fell significantly.

During 9 months of 2014, there were 2 134 large and middle-sized enterprises in the real sector of the economy with delinquencies to banks (1 979 in 2013). On a year-over-year basis, delinquency of these enterprises to banks increased by 65%, amounting to KZT 9 529 bln. in 2014. Finding new good quality borrowers in the less credited sectors of the economy such as transport and communications, agriculture as well as other segments of the industry⁷³ would help banks to diversify their loan portfolio and reduce the credit risk concentration. The analysis of financial ratios in these sectors shows that their position is sounder as compared to the more credited sectors (Figure 3.1.2.11).

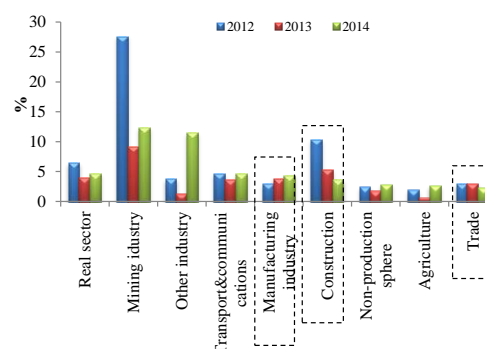
Figure 3.1.2.11

Financial soundness indicators of the corporate sector (large and middle-sized enterprises) broken down by sectors

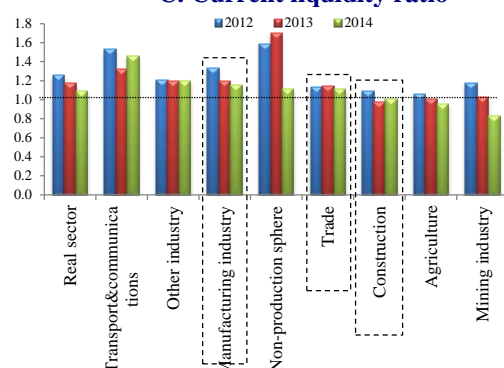
A. Operating profit margin of large and middle-size enterprises



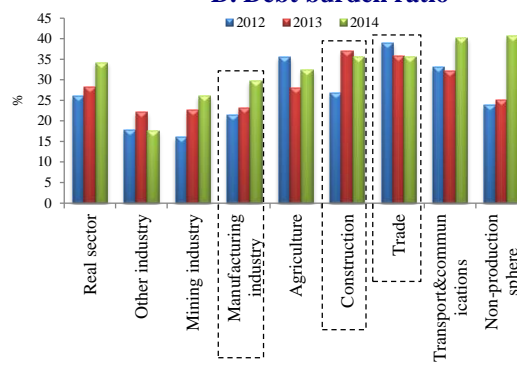
B. Interest coverage from operating activity



C. Current liquidity ratio



D. Debt burden ratio



Note: Operating profit margin is the ratio of earnings before interest and tax (EBIT) and gross revenues from core operations;

Debt burden ratio is the ratio of liabilities to banks and sum of assets;

Interest coverage from operating activities is earnings before payment of interest and tax (EBIT) to interest;

Current liquidity ratio – short-term assets to short-term liabilities.

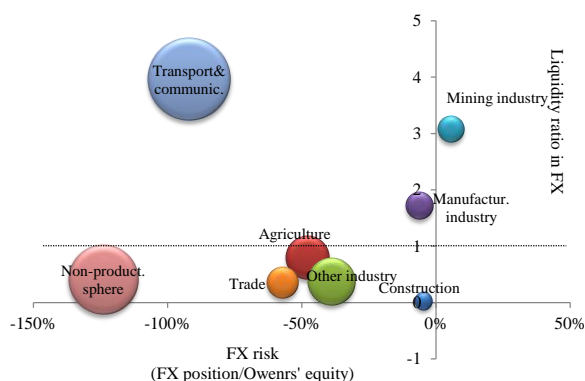
Source: CS MNE RK, calculation by NBRK

In 2014, financial performance in the “construction” and “trade” sectors somewhat deteriorated. Should this trend persist, credit risk in these sectors whose share in the non-performing portfolio of legal entities accounts for 65% will be increasing. The possibility for discharging financial obligations in these sectors is threatened because the operating margin was decreasing during three years. The interest coverage ratio for loans is at quite a low level. If in 2013 operating income in the “construction” sector exceeded financial expenses by 5.2 times, at the end of 2014 such excess was 3.6 times. The interest coverage ratio in the “trade” sector decreased from 2.9 to 2.2. Moreover, liquid funds of these sectors are at a relatively low level, current liquidity ratio in the “construction” sector equals 1, and in the “trade” sector – 1.1.

⁷³ Other industry is represented by the following sectors: “Water supply; Sewage system, control over waste collection and disposal”, Electricity supply, water and gas supply and air conditioning.

The manufacturing industry which has been provoking increased interest lately owing to the SME lending shows a stable financial position. The operating margin increased to 16.2% in 2014, and the interest coverage ratio for liabilities improved to 4.3.

Figure 3.1.2.12
Interest coverage from operating activities



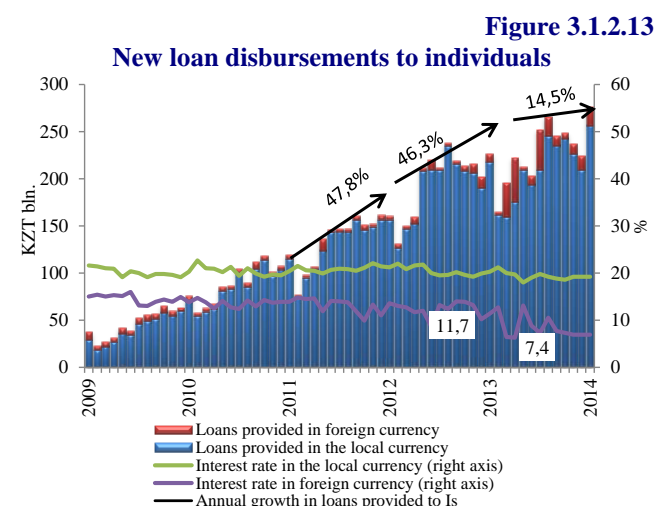
Note: The circumference's diameter corresponds to the share of loans from STBs in total loans from STBs on the balance sheets of large and medium-sized enterprises

Source: CS MNE RK, calculation by NBRK

currency liabilities accounts for more than 120%.

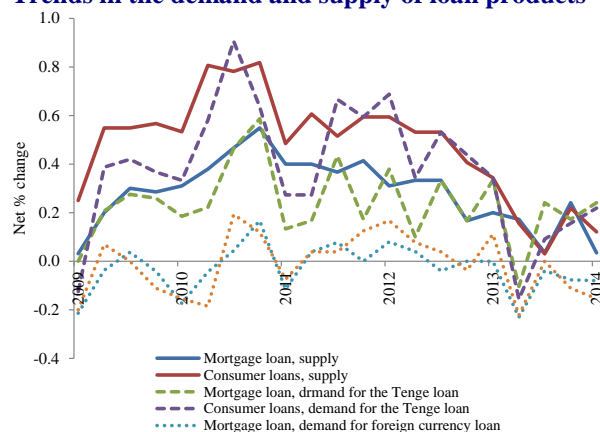
Regulatory restrictions in respect of consumer lending slowed down the growth of the portfolio of loans to individuals. The structure of portfolio of non-performing loans to individuals remains acceptable.

The annual growth in “new” loans provided to the general public had been below corresponding indicators for prior years. If in 2012 and 2013 the growth in the volume of “new” loans provided to individuals was equal to 48% and 46%, in 2014 the growth accounted for 14.5% (Figure 3.1.2.13). High expectations about adjustment of the domestic currency exchange rate as well as the shortage of the Tenge liquidity in the domestic market brought about the revision of retail lending strategies resulting in reduced supply on the part of banks (Figure 3.1.2.14).



Source: NBRK

Figure 3.1.2.14
Trends in the demand and supply of loan products



Note: Net % change is calculated as the difference of % respondents that noted the increase /mitigation of the demand or supply parameters.

Source: NBRK

Despite the fact that the demand for the Tenge loans on the part of the general public was growing during 2014, banks were willing to provide mainly foreign currency loans. Thus, a more active retail lending in foreign currency was noted during 2014 as a means of cash flow protection on the part of banks. Moreover, the cost of lending in foreign currency decreased significantly, the

weighted average annual interest rate on foreign currency loans fell from 11.7% in 2013 to 7.4% in 2014.

The main driver for the growth, just like in the prior years, was consumer lending which accounted for 82.2% of the volume of retail loans provided in 2014. High return and short maturities on this product made it rather attractive for banks (Box 7). Vigorous growth of consumer lending was primarily achieved due to unsecured loans. However, with a view to prevent credit risk concentration, the regulator imposed a restriction on the maximum growth of unsecured consumer loans in the bank loan portfolio of not more than 30%⁷⁴, as well as the maximum debt burden ratio of a borrower of not more than 50%⁷⁵.

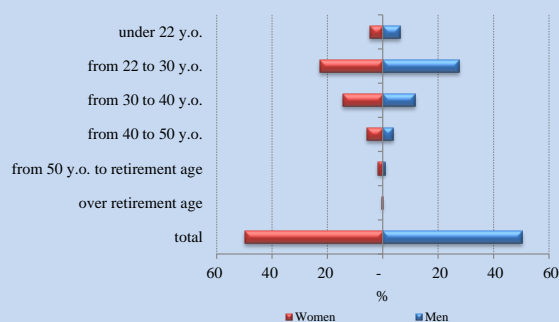
Box 7

Developing new products in the segment of short-term consumer lending (pay-day lending)

At present, companies which provide retail lending within the framework of the civil legislation and which are not official providers of financial services started to pan out in Kazakhstan. Specific features of loan products provided by such companies are their small amount (up to KZT 100 000 тенге), short maturity (less than 1 month) as well as high interest rates up to 2.5% a day, which is equal to 730% per annum. Loans are provided on-line via communication means (Internet).

Internationally, similar-type unsecured retail loans provided by microfinance organizations and other organizations to the general public for short term and against high interest rates are known as pay-day lending (PDL) and are quite a common practice. So, according to the Consultation Paper «Proposals for a price cap on high cost short term credit»¹, the volume of the US PDL market is estimated at USD 48 bln. with the quantity of transactions amounting to 120 mln. transactions a year. The PDL market in the United Kingdom in 2013 was estimated at 2.5 bln. pounds of sterling, with 1.6 million individuals making use of such loans. In Finland, in 2013 pay-day loans or instant loans totaling Euro400 mln. were provided by about 80 companies. In Russia, at September 30, 2014, PDLs accounted for 13% of the loan portfolio of microfinance organizations or RUB 6.1 bln.².

Figure 1
Distribution of companies' borrowers by gender and age



Source: NBRK's estimates made on the basis of data provided by companies

In Kazakhstan, despite positive growth dynamics and existence of certain demand, volumes of PDLs on the part of companies from the unregulated sector are insignificant and are incomparable with activities of microfinance and micro-lending organizations. The NBRK designed the borrower profile of such companies that provide short-term pay-day loans within the framework of the civil legislation³. So, the data on the gender distribution of borrowers shows that products of these companies are equally popular among men and among women (Figure 1). The users of PDLs are the most economically active

groups of population at the age between 22 and 30 years old (50% of borrowers) and between 30 and 40 years old (26% of borrowers). Borrowers younger than 22 and borrowers of the retirement age who can be referred to the categories of less financially secured in terms of their income are not the target audience for the companies.

The overwhelming majority of borrowers of such companies are employees with regular source of income. Therefore, borrowers of the companies are within the target audience of professional credit organizations (Figure 2). Besides, the fact that nearly 2/3 of borrowers of the

⁷⁴ Board Resolution of the National Bank of the Republic of Kazakhstan dated December 25, 2013 No. 294 "On Amendments to Some Legislative Acts of the Republic of Kazakhstan Regarding Regulation of the Banking Activities".

⁷⁵ Board Resolution of the National Bank of the Republic of Kazakhstan dated December 25, 2013 No. 292 "On Imposition of Restrictions for Conducting Certain Types of Banking Operations and Other Operations by Financial Organizations".

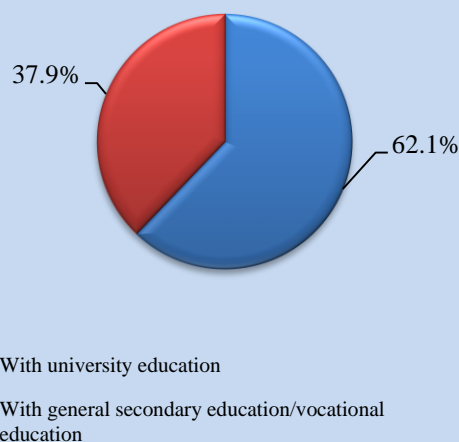
companies have university education proves that, as a rule, a borrower is in a position to adequately assess the risks associated with obtaining high cost credit resources from the companies (Figure 3).

Figure 2
Data about employment of companies' borrowers



Source: NBRK's estimates made on the basis of data provided by companies

Figure 3
Education of companies' borrowers



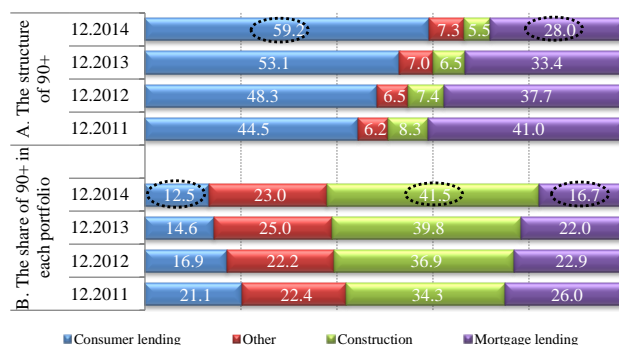
Source: NBRK's estimates made on the basis of data provided by companies

¹ Proposals for a price cap on high cost short term credit, CP14/10, Financial Conduct Authority.

² Based on the data from the CB RF.

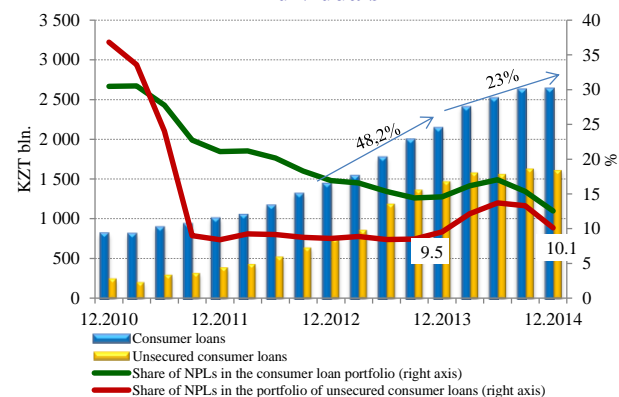
³ Based on the data provided by the companies in response to a respective inquiry from the NBRK.

Figure 3.1.2.15
Structure of the non-performing loan portfolio of individuals, by lending purposes, %



Source: NBRK

Figure 3.1.2.16
Dynamics and quality of consumer loans to individuals



Source: NBRK, STBs at the NBRK's request

In 2014, the share of non-performing loans in the retail loans portfolio decreased from 18% to 15%. At the same time, the credit risk concentration in consumer loans which account for 59.2% of the non-performing retail portfolio keeps growing (Figure 3.1.2.15). However, due to the fact that consumer lending shows a better portfolio quality versus other products provided to individuals, the existing structure of the retail portfolio of non-performing loans remains acceptable.

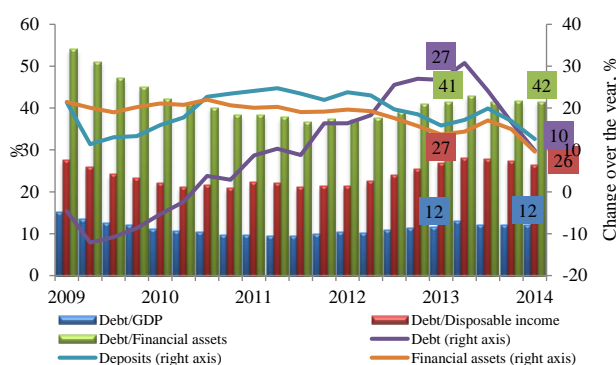
In its turn, 61% of loans in the consumer loan portfolio are unsecured loans whose share decreased from 68.6% on a year-over-year basis as a result of regulatory restrictions. The quality of unsecured consumer loan portfolio impaired insignificantly – from 9.5% to 10.1% (Figure 3.1.2.16). Thus, it may happen that such trend will continue in 2015, given slowing growth of lending in this segment. In future, the quality of the consumer lending portfolio will be to a larger extent determined by the quality of the retail loan portfolio as a whole.

Current financial position of the population shows that the growth of credit risk in the household sector is unlikely.

In 2014, the economic activity of households decreased. First, since banks are

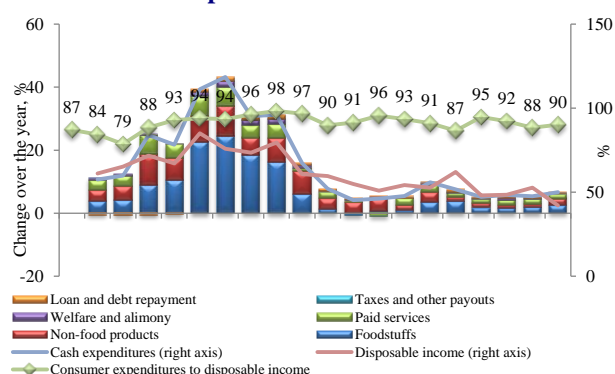
main creditors to the population⁷⁶, a slowdown in retail lending also caused a slowdown in the growth of the total household debt which grew by 10% versus 27% in 2013 (Figure 3.1.2.17). However, a slowdown in the growth of the total household debt did not affect the decrease in household debt burden; debt to GDP ratio decreased by 1 pp and debt to disposable income remained unchanged. If an assessment of the effect from a slowdown in credits to the economy is made, the decrease in liquid resources for the general public in the form of bank loans will be expected. Moreover, given the fact that the major growth of retail lending in prior years was primarily among consumer loans, the slowdown in lending may affect consumption as a whole. Second, there has been a trend of slowing economic activity of the general public over the last three years (Figure 3.1.2.18). Most likely, the reason for the downturn was the slowdown in income of the general public. However, there is no significant pressure on disposable income on the part of consumer expenditures.

Figure 3.1.2.17
Household debt and financial assets



Source: КС МНЭРК, расчеты NBRK

Figure 3.1.2.18
Contribution of expenditure items to the change in cash expenditures of households



Source: CS MNE RK, calculation by NBRK

In general, based on financial indicators, there are no obvious prerequisites for the buildup of credit risk for the population. On the other hand, high inflationary expectations in the market may provoke the growth in prices for main consumer products, which will have a negative effect on creditworthiness of the population later.

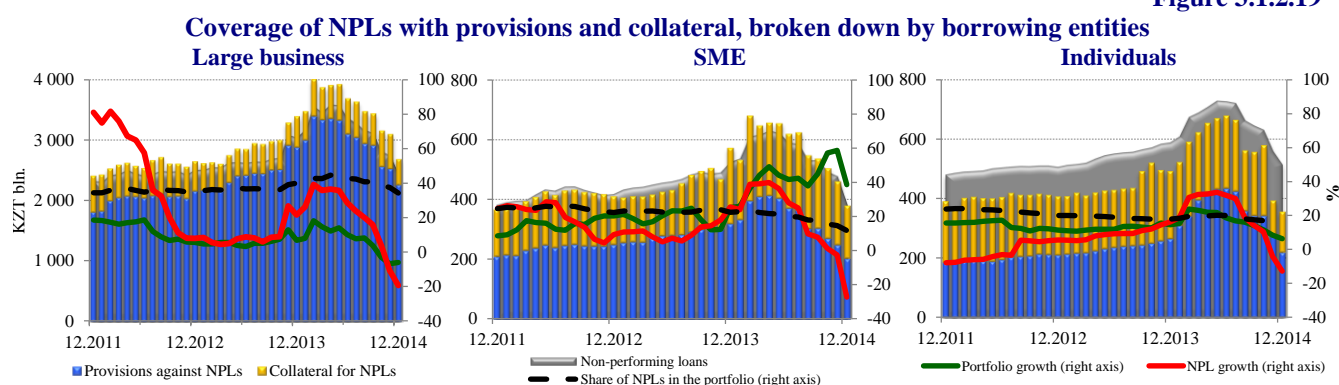
The propensity to recognize losses from non-performing loans is still low. However, the level of coverage for non-performing loans with collateral and provisions shows that a significant part of credit risk is absorbed and banks have an opportunity to continue cleaning up their portfolios.

Internationally, a generally accepted level of provisioning is not established. However, if one assumes that collateral is adequately assessed i.e. that banks will not incur additional expenses in the course of its realization, provisions created against non-performing loans are expected to cover the remaining part to the full extent.

In the breakdown by borrowing entities in portfolio of loans to the large business, provisions and collateral cover non-performing loans to the full extent; in this connection, one may say that the realized credit risk of large businesses is absorbed and loans can be written off (Figure 3.1.2.19). At the end of 2014, the ratio of provisions and collateral to non-performing loans accounted for 93% and 17%, respectively.

⁷⁶ In 2014, the share of debt to banks in the total basket of liabilities of individuals accounted for 94%.

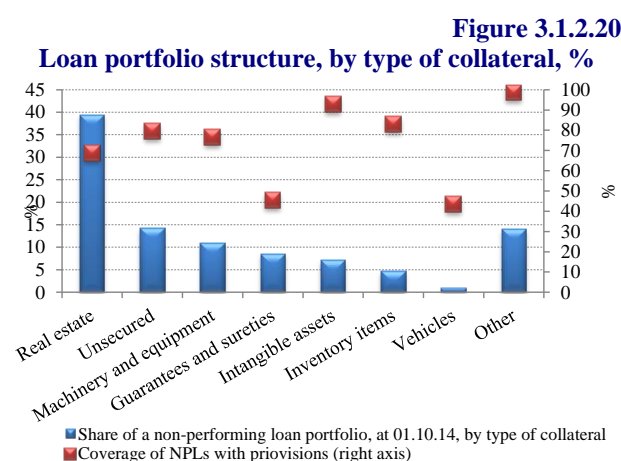
Figure 3.1.2.19



Source: NBRK

In the portfolio of loans to SMEs, coverage of non-performing loans with provisions and collateral is at a fairly high level, however, coverage of non-performing loans with provisions is lower (46%) than coverage with collateral (53%). In the retail loan portfolio, the ratio of provisions and collateral to non-performing loans accounts for 27% and 43%, respectively, and on aggregate, collateral and provisions do not cover non-performing loans to a sufficient extent.

Collateral represents an important factor of reduction of losses arising as a result of credit risk realization. Accordingly, underestimation of potential risks associated with accepted collateral may result in additional unforeseen expenses.



Source: NBRK, Loan Register

Subject to the type of collateral, loans secured with real estate prevail in the structure of non-performing portfolio – 39.5% (Figure 3.1.2.20). Currently, the market value of security accepted as collateral before the crisis in the time of explosive growth of the real estate market decreased significantly. Therefore, unwillingness of banks to realize collateral at current prices is quite understandable. However, if there are capacities to deal with such loans, there is a probability of generating earnings from using such type of collateral with a concurrent clean-up of the balance sheet. A high share of other security (guarantees, intangible assets, inventory items, etc.) which accounts for about 20%, raises concerns. Based on the fact that such security is taken into account in creation of provisions for loans as well as taking into consideration the specifics of collateral, one cannot guarantee compensation of losses in case of realization of such collateral.

In general, there is a positive trend in respect of the change in the policy of provisioning for non-performing loans. However, a low level of coverage with provisions as well as subsequent recognition of losses on existing loans with a view to comply with the regulatory requirement may have a negative impact on operation of certain banks.

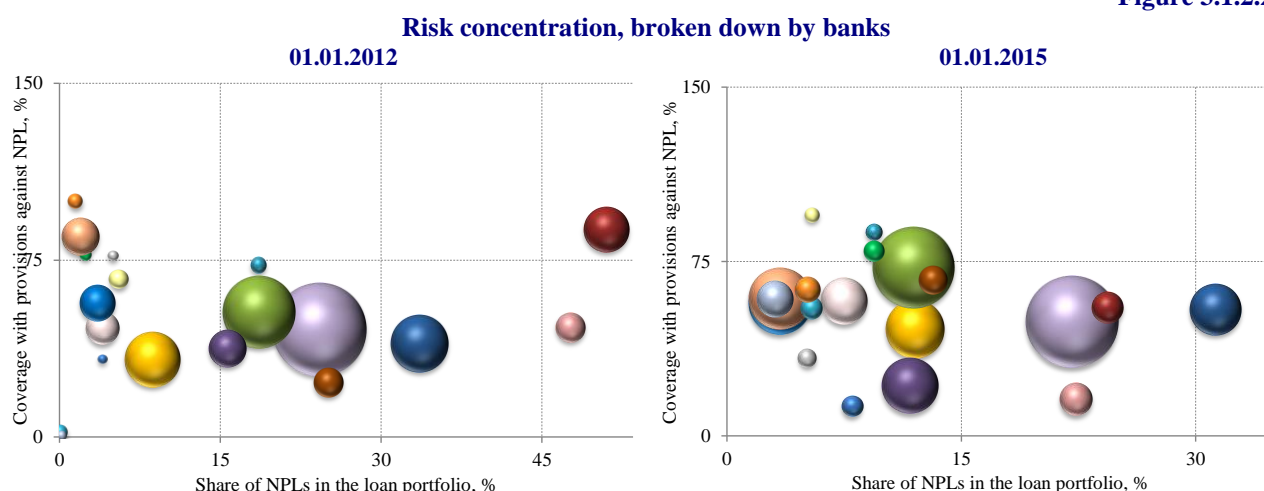
One of the key performance indicators in asset management is the return. However, given a significant volume of non-performing loans with a low level of provisioning, high profitability ratios can be achieved by banks only in the short-term.

The analysis shows the existence of a positive upward trend in the provisioning coverage ratio and reduction in non-performing loans (Figure 3.1.2.21). The level of 75% is accepted as a minimum desired level of the provisioning coverage, given the fact that collateral coverage of non-performing loans in the system on average accounts for 23-25%.

Based on the performance in 2014, clustering of banks is observed in 2 zones: Zone 3 – a low level of provisioning coverage combined with a low (<15%) share of non-performing loans; Zone 4 – a low level of provisioning coverage combined with a high (>15%) share of non-

performing loans. At the same time, insufficient provisioning for non-performing loans may be indicative of an inefficient asset management strategy. Given that the share of non-performing loans must be reduced to 10% according to regulatory requirements, significant volumes of loan write-offs are expected to continue in 2015. To do so, banks will have to recognize losses on existing loans, which, in its turn, may negatively affect profitability ratios of banks in future periods.

Figure 3.1.2.21



Note: circumference diameters correspond to the Bank's share in the total loan portfolio

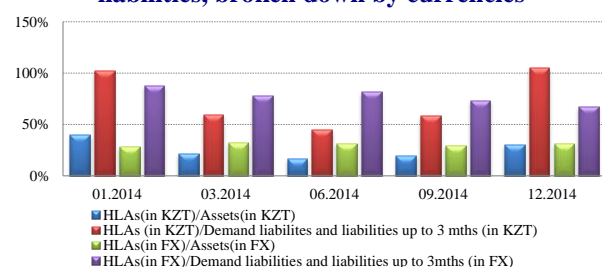
Source: NBRK

3.1.3 Risks Associated with Liquidity and Funding Structure

Currency, maturities and types of funding attracted by banks throughout 2014 were subject to structural changes as a result of a number of developments, namely: (1) growth in the level of dollarization of bank deposits and increased gap between the currency of assets and the currency of funding attracted by banks; (2) the “depositor runoff” as a result of dissemination of false information about financial insolvency of three banks that demonstrated high instability of retail deposits; 3) appearance of new investor in the Tenge deposits in the person of the “UAPF” JSC, which allowed reducing the mismatch between assets and liabilities of banks in the domestic currency.

Liabilities to clients form the basis for the bank funding; by the end of 2014, over a half of liabilities to clients were denominated in foreign currency.

Figure 3.1.3.1
Highly liquid assets of banks as % of total assets and liabilities, broken down by currencies



Source: NBRK

During several years, customer deposits represented the main source of funding for banks; the share of customer deposits account for more than 70% of banks' total liabilities. During 2014, the growth in deposit volumes accounted for 15%, and excluding revaluation of foreign currency deposits after the exchange rate adjustment – for 8%.

Also, the media coverage which imploded at the end of 2014 as a result of falling oil prices, depreciation of the Ruble and complicated

geopolitical situation around the Russian Federation, created new negative expectations about the Tenge exchange rate by the end of the year, which resulted in depositors' behavior of converting their deposits from the domestic currency into foreign currency. As a result, the gap between the currency of attracted funding and the currency of assets increased significantly. To provide an appropriate liquidity level, banks increased their HLA in foreign currency. In doing so, the majority of banks maintain their foreign currency liquidity at a level higher than their Tenge liquidity, which is proved by the ratio of foreign currency HLA to foreign currency assets versus the corresponding ratio in the Tenge (Figure 3.1.3.1). Moreover, during the year, the ratio of HLA to demand

liabilities and liabilities with maturity less than 3 months in foreign currency was at a steadily high level – over 60%, as opposed to the dynamics of the corresponding ratio in the Tenge. There was a significant increase in the volume of HLA in the Tenge by the end of the year; this is likely to be associated with the end of the tax period.

If one compares the dynamics of the increase in retail foreign currency deposits in 2014 with the corresponding trends in 2009, the rate at which the volume of Tenge deposits were decreasing had very negative dynamics (-34.7%), whereas in 2009 the decrease was virtually non-observed (-3.5%) (Figures 3.1.3.2 and 3.1.3.3). Thus, unstable economic situation in the Russian Federation against the backdrop of persisting decline in prices for raw materials and slowing growth of the global economy in 2014 had a greater impact on the depositors' behavior, which resulted in a larger outflow of deposits.

Figure 3.1.3.2
Deposits of individuals, broken down by currencies, and their annual growth

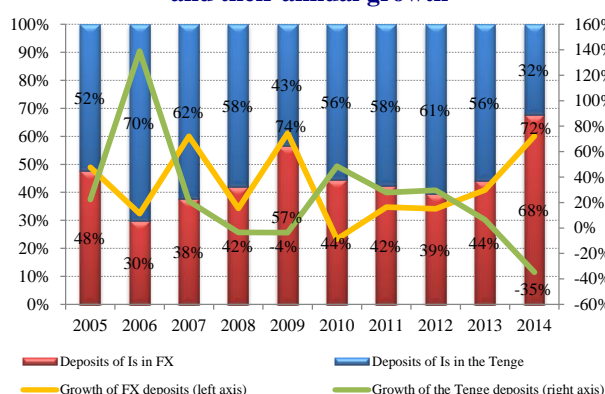
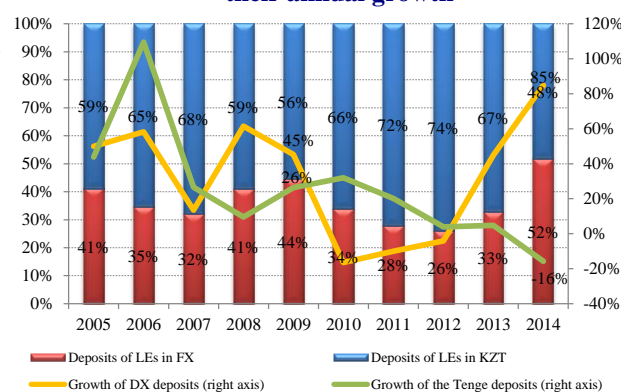


Figure 3.1.3.3
Deposits of legal entities, broken down by currencies, and their annual growth



Source: NBRK

Despite general reduction in the customer deposit base in the domestic currency, there was an increase in the Tenge deposits with maturity over 3 years in the deposit structure itself due to replacement of deposits with a shorter maturity. Such changes were mainly related with a significant growth in investments of pension assets held at the “UAPF” JSC in bank deposits with maturity over 3 years.

The increase in the share of banks' liabilities in the domestic currency with maturity over 3 years in 2014 accounted for 80%. Since the deposit base of banks in the Tenge was significantly

Figure 3.1.3.4
Clients deposits in the Tenge, broken down by maturities, KZT bln.

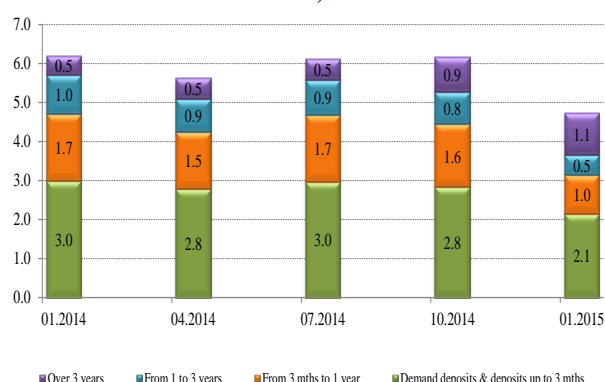
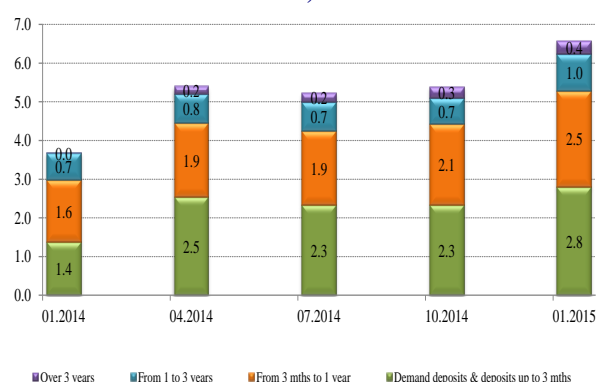


Figure 3.1.3.5
Clients deposits in foreign currency, broken down by maturities, KZT bln.



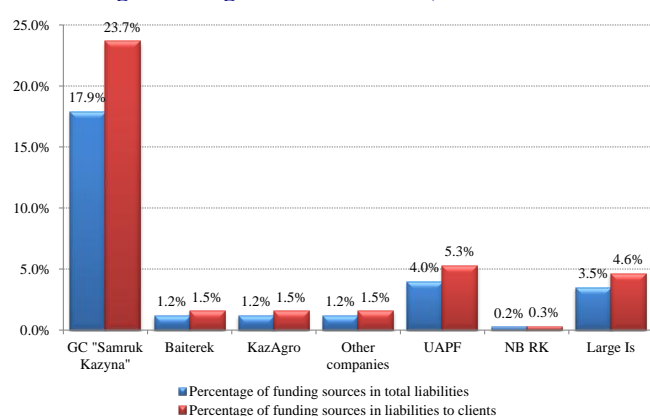
Source: NBRK

reduced, the growth in the domestic currency deposits with maturity over 3 years was mainly secured due to replacement of demand deposits and deposits with maturity less than 3 months, which was especially visible in the last quarter of 2014 (Figure 3.1.3.4). As compared to the growth in the Tenge deposits, foreign currency deposits with maturity over 3 years increased but

insignificantly (Figure 3.1.3.5). The growth in such deposits was observed in 7 large banks and was mainly secured by the increased investment of pension assets of the “UAPF” JSC in deposits of large banks with maturity over 3 years.

The share of foreign currency deposits with maturity over 3 years in the total volume of deposits of legal entities increased from 0.02% to 1.5% and the share of deposits in the domestic currency increased from 6.5% to 13%. The growth in time deposits of the “UAPF” JSC in 2014 accounted for 131%⁷⁷, and 76% (the current value in the portfolio of KZT 546 bln.) of such deposits were placed for the term over 3 years. As a result, the mismatch between assets and liabilities in the domestic currency reduced significantly. At January 1, 2015, the present value of total investments of the “UAPF” JSC with pension assets in deposits and bonds of the banking sector accounted for 8.8% of total liabilities of banks.

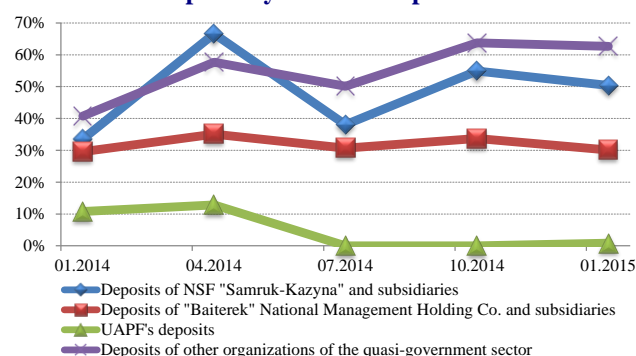
Figure 3.1.3.6
Large funding sources of banks, at 01.01.2015



Note: Data is provided for 18 large banks whose total assets account for over 90% of assets of the banking system, except "Zhilstroysberbank" JSC. Deposits accounting for more than 5% of bank liabilities are regarded as large funding sources. Companies from the quasi-government sector refer to Other companies.

Source: NBRK

Figure 3.1.3.7
The change in the share of foreign currency deposits of publicly owned companies



Source: STBs

stable funding for the majority of banks. At the same time, a high concentration of banks' depositors may result in liquidity problems for a bank and further – to realization of the funding risk, should one or two clients withdraw their deposits.

The “depositor run-off” from certain banks in February 2014 demonstrated a high degree of instability in the behavior of individuals and their situation-based reaction to negative information, as compared to legal entities. In this case, short-term liquidity of banks that were

The majority of banks have a high concentration of depositors which are represented mainly by publicly owned companies, in the structure of their liabilities. Such trend poses both the liquidity risk and funding risk for banks concurrently.

A significant part of funding of banks in the form of deposits, loans and securities issues is provided by the government in the person of groups of publicly owned companies, quasi-government companies as well as the “UAPF” JSC. At the end of 2014, the volume of funding provided by the government in the form of placed deposits and provided loans amounted to over KZT 4 trln., which accounted for 26% of total liabilities of the banking system (Figure 3.1.3.6). Total deposits of all publicly-owned companies in the banking sector during 2013-2014 increased by 86%. By the end of 2014, more than a half of deposits of the SWF “Samruk-Kazyna” JSC, its subsidiaries as well as other companies from the quasi-government sector were denominated in foreign currency (Figure 3.1.3.7).

In 10 largest banks in terms of their asset size, the share of funding with resources from the group of publicly-owned companies and the “UAPF” JSC was in the range of 12-54% of total liabilities of each bank. In the second group of top ten banks in terms of their asset size, this ratio reached 60%. Therefore, deposits of publicly-owned companies which increase their volumes from year to year are large sources of

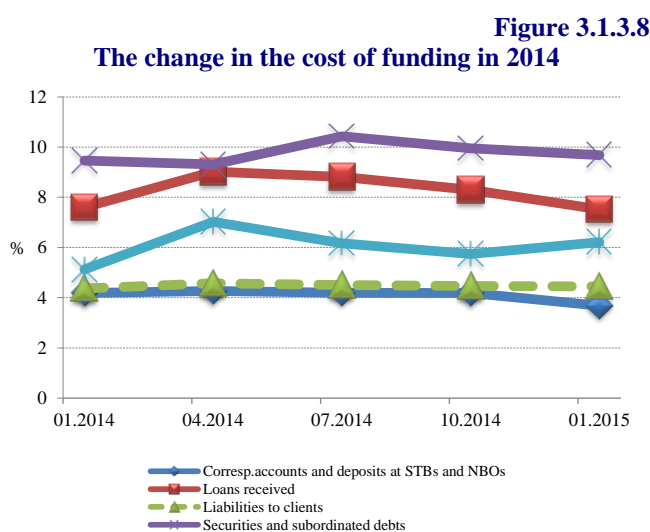
⁷⁷ As compared to the amount of deposits of non-consolidated accumulation pension funds and the “UAPF” JSC at the beginning of 2014.

exposed to the “depositor run-off” was secured with special-purpose loans borrowed from the NBRK.

In the second decade of February 2014, information about insolvency of three banks from the top 10 banks in terms of their assets was disseminated. As a result, these banks were challenged with significant volumes of customer deposit withdrawals. In doing so, deposits of individuals were more prone to withdrawals and the maximum level of outflow on such deposits of 56% of retail deposits (25% of the total volume of liabilities to clients) was reached already in mid-March 2014. The outflow of deposits of legal entities continued until mid-June 2014, and the maximum accumulated outflow accounted for 40% of deposits of legal entities (10% of the total volume of liabilities to clients). The outflow of retail deposits was observed both in the domestic currency and in foreign currency whereas legal entities tended to withdraw their deposits to a larger extent in the domestic currency. Such outflow was not replenished by the receipt of new deposits to the deposit base virtually until the 3rd quarter of 2014.

In order to meet their obligations to clients, those banks which encountered dissemination of negative information were provided liquidity by the NBRK, amounting to KZT 220 bln. (10.5% of the banking system’s equity as of 01.01.2014) in the form of special-purpose loans. By the end of the year, such banks generally were able to restore the level of their deposit base.

In general, at February 1, 2014, in the majority of Kazakh banks, according to the retrospective assessment of LCR (liquidity coverage ratio) under the Basel III requirements, this ratio was above the minimum value. This ratio was calculated based on a conservative approach, which took into account a possibility of early deposit withdrawals by individuals and legal entities irrespective of their maturities (Box 8).



Source: NBRK

the banking system accounts for 4.5%, and in some banks it reaches 8%. Since the volume of foreign currency deposits considerably increased and the cost of foreign currency deposits is significantly lower than the cost of the Tenge deposits, total expenses of banks on liabilities to clients decreased.

It should be noted that virtually the entire volume of lending among the first group of top 10 banks in terms of their asset size is adequate to the volume of attracted funding in the form of customer deposits; this is evidenced by the loan to deposit ratio (LTD). LTD values for 10 large banks are ranging between 100 and 140, i.e. the volume of provided loans is adequate to or exceeds the volume of attracted customer deposits (Figure 3.1.3.9). Over 70% of earning assets of such banks are represented by provided loans and the overall share of customer deposits accounts for 78% of the total deposit base of the banking system. The interest rate spread⁷⁸ of these banks does not exceed 9%.

In general, LTD ratio may be regarded as an indicator of a bank’s assets and liability management policy. For instance, banks with a low LTD ratio are passive in their lending strategy

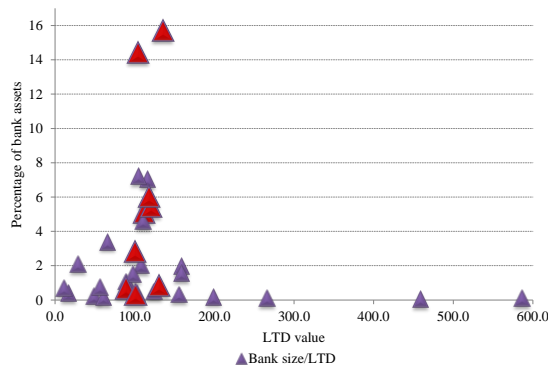
Expenses of banks under this type of funding increased because of loans borrowed from the NBRK (Figure 3.1.3.8). Also, in the 1st quarter of 2014, there was a significant growth in the volume of funding due to repo operations in the on-exchange and interbank market; as a result, the growth in cost of such operations in some banks reached 17 pp, and it grew by 2 pp in the banking system. Similarly, in the first and the last quarters of 2014 there were upsurges in the market value of stock exchange currency swaps.

The cost of the customer deposit-taking remains the most stable and low for the majority of banks. The weighted average of the rate of return on customer deposits in the

⁷⁸ The interest rate spread is calculated as the difference between the rate of return on loans and the rate of return on deposits.

Figure 3.1.3.9

LTD ratio and a bank size, at 01.01.2015



Note: Values of 10 large banks in terms of their assets are highlighted in red.

Source: NBRK

and are mostly oriented at provision of other banking services than investment in other types of assets. Banks with a high LTD ratio do not implement an active policy of deposit-taking and therefore customer deposits are not their main source of funding; their owners' equity serves as the funding base. Therefore, banks with either a very low or a very high LTD ratio are represented mainly by banks with foreign equity participation that have small shares in the banking system in terms of their asset size and the attracted deposits.

Box 8

Liquidity coverage ratio under the Basel III framework

The Basel Committee on Banking Supervision, as a result of bank liquidity problems identified during the 2007 crisis, drafted two standards which pursue different but complementary goals in the supervision of liquidity risk. So far, the calculation methodology was fully designed and approved for only one ratio – Liquidity Coverage Ratio, whose purpose is to ensure a bank's sustainability to liquidity risk in the short term.

Liquidity Coverage Ratio is calculated as the ratio between the amount of high quality liquid assets (HQLA) and the amount of net cash outflows calculated under the stress environment during 30 days:

$$\frac{\text{Stock of HQLA}}{\text{Total net cash outflows over the next 30 days}} \geq 100\%$$

The Basel III provides for a stage-by-stage implementation of the LCR, starting from January 1, 2015, and for establishing a minimum value of 60%. By January 1, 2019, there is an intention to gradually increase the minimum value to 100%.

Liquidity Coverage Ratio is characterized by incorporation of different risks in the liquidity assessment model within 30-day stress scenario designed based on the analysis of the 2007 crisis, specifically:

- *accounting for assets with a high degree of liquidity only* (defining the criteria for highly quality liquid assets and using the discount);
- *availability and reliability of funding sources* (establishing different levels of outflow for each type of liability);
- *limited access to revenues* (revenue recognition in the assessment of liquidity to a limited extent as well as with the use of different levels of inflows for each type of revenue).

HQLA consists of cash and other assets which are assets with a high quality of liquidity – they are easily realizable both under normal conditions and in stress situations, i.e. such assets can be realized without a significant discount. Also, the possibility of quick realization of such assets at any time during the thirty-day period of the stress is an important factor, which speaks for the absence of any encumbrance on such assets with liabilities. HQLA are classified into three categories according to the level of their liquidity: Level 1 HQLA are the most liquid assets; Level 2 HQLA (a sum of Level 2A and Level 2B HQLA) – less liquid assets recognized with discount.

Since Level 2 HQLA are less liquid, they are recognized within the total volume of HQLA with limitations: *the volume of Level 2 HQLA cannot exceed 40% of the total volume of HQLA and the volume of Level 2B HQLA cannot exceed 15% of the total volume of HQLA*. At the same time, the Basel III framework leaves the possibility of including Level 2B assets into the total volume of HQLA to the regulator's discretion.

According to the calculation requirements, a part of cash outflows can be covered from the bank's revenues within the amount not exceeding 75% of cash outflows. Such limitation is

aimed to exclude the possibility of banks' reliance on cash receipts for covering their liabilities. Thus, at least 25% of outflows on bank liabilities are secured by the presence of HQLA.

In addition, the volume of bank's cash outflows and inflows is calculated based on the haircut applied to the outflows and inflows. *Haircuts of outflows are set subject to client's reliability, type of liability to such client and other potential factors.*

List of highly liquid assets according to the requirements of the Basel III framework	
A. Level 1 HQLA	Level of Discount
<ul style="list-style-type: none"> • Cash • Eligible securities issued by governments, central banks, public sector enterprises, and development banks • Eligible reserves at a central bank • Debt securities of a government or a central bank in the home jurisdiction of a bank, for countries with the risk weighting above zero 	100%
B. Level 2 HQLA (maximum 40% of the total volume of HQLA)	
Level 2A HQLA	
<ul style="list-style-type: none"> • Eligible securities issued by governments, central banks, public sector enterprises, and development banks. Eligible for the level of risk-weighting of 20%. • Eligible corporate debt securities rated AA- or above • Secured bonds rated AA- or above 	85%
Level 2B HQLA (maximum 15% of the total volume of HQLA)	
<ul style="list-style-type: none"> • Mortgage-backed securities • Corporate debt securities rated from BBB- to A+ • Stock 	75% 50% 50%

The Basel Committee on Banking Supervision determined that if bank liabilities in foreign currency exceed 5% of its total liabilities. The bank must calculate LCR in that currency and all calculation metrics should be in that currency. In doing so, the Basel III does not specify the maximum LCR value in foreign currency. This decision is left to the regulator's discretion but it is recommended to establish the minimum level with a view to reduce large gaps in foreign currency positions of banks. It is also recommended to calculate LCR on an on-going basis and report to the regulator at least once a month, considering a possibility of a more frequent reporting on the LCR calculation – weekly and/or daily.

International experience of LCR implementation

As of today, not all foreign countries designed key requirements for the procedure of LCR calculation and defined the period for its implementation. A number of countries such as Singapore, Australia, the USA, established and approved requirements to LCR calculation which, in their turn, are tighter than those of the Basel Committee on Banking Supervision. In Russia, the procedure for LCR calculation was approved but its minimum numerical value was not determined.

Singapore

In Singapore, LCR requirements are determined by the prescribed framework of differentiation of financial institutions based on residency, systemic importance and affiliation with a banking group. For all types of banks, except large international banking groups, a forced transition to LCR calculation was established, starting from January 1, 2015, with a minimum value of 100% in the domestic currency (SGD) for large international banking groups (DBS, OCBC, UOB) and January 1, 2016 – for other banks.

In addition, Level 2B HQLA are divided into two sub-levels and assets of the second sub-level may account for only 5% of the total volume of HQLA. This measure is aimed to encourage banks to build better quality portfolios.

Australia

Australia accomplished the transition to the minimum LCR of 100% from January 1, 2014, without its gradual increase. The regulator reviewed the sample of 200 largest world banks as of the first half of 2012, the weighted average LCR was 125% and three-thirds of banks in the sample could comply with the minimum ratio of 100%. The majority of banks in Australia

formed a part of the said group of banks complying with the minimum requirement. At the same time, *the LCR requirement only applies to the largest banks of Australia*, the rest of banks must comply with another liquidity ratio. Also, Level 2B HQLA must not be included in the calculation of LCR in Australia.

USA

The USA deviates from the Basel III standards, both in terms of the accelerated schedule of LCR implementation and in terms of various LCR requirements in place depending on the size of a financial institution. So, three categories of financial institutions are looked at: (1) large financial institutions with assets over USD 250 bln., which comply with LCR requirements; (2) financial institutions with the asset size of less than USD 250 bln., which comply with the calculation of modified LCR; (3) financial institutions with the asset size of less than USD 50 bln., which are not required to comply with LCR requirements. From January 1, 2015, the LCR requirement to the category of large financial institutions will be at least 80% and, being increased by 10% every year, will reach 100% in 2017.

The modified LCR calculation differs in that the modeled period of stress is 21 days, which has a downward effect on the projected cash inflows and outflows. Therefore, the projected volume of cash receipts and outflows is 30% less than in case of a normal LCR calculation. Similar to Singapore's experience, *the USA established additional limitations for the composition of highly liquid assets*: securities issued by public sector enterprises are excluded from Level 1 HQLA, corporate securities are excluded from Level 2A HQLA and mortgage-backed securities are excluded from Level 2B HQLA. Such limitations are conditioned by the presence of a large number of financial instruments which are guaranteed by the Federal Reserve and have the highest rating, in the US financial market. To that end, the US banks have an opportunity to maintain a high liquidity level without the need to extend the list of instruments eligible to be included in HQLA.

Russia and China

Russia also designed and approved the methods for LCR calculation with requirements close to those of Basel III standards. From the time when the requirement to calculate LCR became effective (July 1, 2014), the minimum value for LCR was not established and banks are reporting to the regulator on LCR calculation so far only for the purposes of monitoring and analysis. Plans to establish the minimum LCR value of 60% were postponed from January 1, 2015 to July 1, 2015. Alongside with that, the LCR calculation methods have some differences from recommendations of the Basel Committee on Banking Supervision. So, in calculation of outflows on retail deposits the entire volume of retail deposits guaranteed by the government is taken into account, irrespective of their maturities, whereas according to the Basel III requirements, deposits with a 30-day maturity and with a possibility of early deposit withdrawal according to the terms of the deposit agreement shall be taken into account.

Also, in the Russian version of the liquidity standard, securities are included in HLA in accordance with the OECD country rating, as opposed to the Basel III Paper which provides for a percentage of risk-weighting in accordance with the Basel II standardized approach (boils down to the rating of one of the rating agencies).

China also has a certain approved differentiation based on a bank's size, the so-called two-tier system of statutory requirements to liquidity regulation. Banks whose total assets exceed CNY 200 bln. and which have a complex asset structure will be required to comply with LCR requirements. The rest of the banks will be required to comply with national regulatory requirements.

European Union

The European Union adopted the latest draft of LCR requirements which has a lot of differences from requirements of the Basel Committee on Banking Supervision regarding HQLA composition, the cash inflow accounting as well as implementation time frames and minimum values for the transition period. However, these differing requirements are established solely at

discretion of local regulators. So, the HQLA composition for European banks was significantly expanded; also, they provide for a number of cash flows which can be taken into account in the calculation of net cash outflows without limitations. Thus, in the European Union differences in requirements to the LCR calculation to a greater extent represent easing of requirements for banks. For instance, level 1 HQLA can additionally include high-quality secured bonds complying with requirements of the EU Directive CRR/CRD IV, and Level 2B HQLA may include securitized assets. Besides, removal of restrictions in accounting for inflows will help reduce the volume of net cash outflows and, respectively, reduce the burden on HQLA.

From October 1, 2015, the minimum LCR value in the European Union will be set at 60%; during two years, it will be increasing with an increment of 10% to 80%, and already from January 1, 2018 it will be set at 100%.

Results of calculations for Kazakh banks

The procedure for LCR calculation approved by the Basel Committee on Banking Supervision is universal and does not provide for certain specifics of regulation in all countries. Therefore, a regulator decision is required when establishing certain requirements for LCR calculation. For instance, the following specifics of LCR calculation do not conform to the banking legislation and practice in Kazakhstan:

- *Including mandatory reserves established with the Central Bank into HQLA within the amount allowed to be withdrawn during the stress period.* The existing legislation of Kazakhstan does not provide for a possibility that banks would withdraw their held minimum reserve requirements during the stress period. Moreover, when calculating LCR in the Tenge and in foreign currency, there was a problem in accounting for minimum reserve requirements broken down by currencies, because their total volume is calculated in the Tenge.

- *Accounting for retail and corporate deposits.* According to the Basel III requirements, outflows are represented by funding sources with maturity less than 30 days or by those liabilities where there is an opportunity of early withdrawal without significant penalties exceeding accrued interest in material terms. The Civil Code of the Republic of Kazakhstan provides for the depositor's right for early repayment of a time deposit or before the occurrence of circumstances with which the repayment of an escrow deposits is associated in the bank deposit agreement. Based on the established legislative provisions, all banks' deposits with any maturity and terms and conditions should be included in the calculation base of cash outflows, because a depositor has the right for early withdrawal of his/her deposit with a bank. When calculating LCR taking into account the possibility of early withdrawal, the LCR level is reduced significantly. For example, when the possibility of early deposit withdrawal from four large banks is taken into consideration, the LCR value goes down below 60% from the level much above 100%.

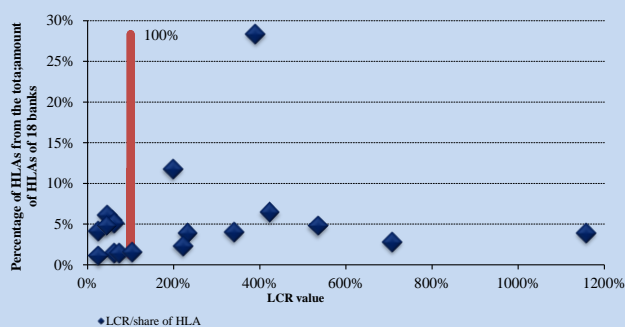
LCR calculations were made for 18 banks whose total volume of assets accounts for more than 90% of assets in the banking system (Figure 1). A conservative assessment formed the basis of LCR calculation, both in relation to the HQLA volume and the level of outflows from banks.

At 01.01.2015, the weighted average of total LCR for 18 banks accounted for 122%, in the Tenge - 91% (minimum value of 13%, maximum value of 5120%), and in foreign currency - 162% (minimum value of 14%, maximum value of 1308%). Also, out of the sample of 18 banks:

- (1) 8 banks have the LCR value below 100%, both in terms of the total value and broken down by currencies;

- (2) 2 banks have the LCR value below 100% broken down by currencies only.

Figure 1
LCR of a bank and share of HQLA, at 01.01.2015



Source: STBs, calculation by NBRK

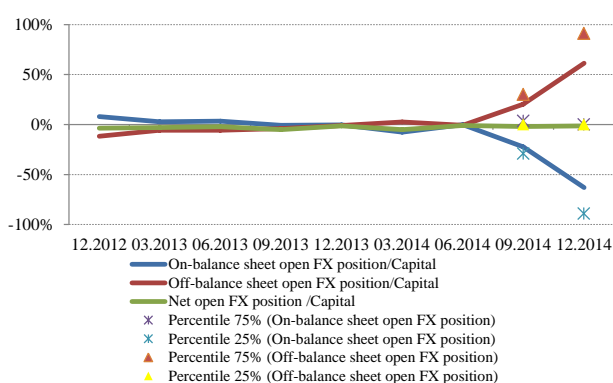
large corporate clients, small and medium-sized businesses as well as to individuals. Virtually the entire volume of HQLA is represented by Level 1 HQLA. This fact demonstrates a conservative approach of banks in maintaining their liquidity, however, this also may be caused by the lack of other good-quality and highly liquid instruments with acceptable returns.

Due to significant disproportions in the size of assets and liabilities of banks broken down by currencies, LCR positions broken down by currencies are not balanced in the majority of banks. Moreover, 10 banks out of 18 demonstrated a decreasing LCR value during 2014, especially those banks where corporate deposits were prevailing in the deposit base since they have higher outflow ratios. Banks' inflows mostly consist of balances on accounts with other banks and repayments on performing loans provided to

3.1.4. Foreign Exchange Risks

Direct foreign exchange (FX) risk associated with the change of the Tenge exchange rate in 2014 remained insignificant contrary to indirect foreign exchange risk whose high level was caused by a significant volume of loans provided by banks in foreign currency. Risk of increasing banks' costs in case of the prolongation of a hedged foreign currency position (rolling risks) in the period of high volatility of market rates was offset by cross-currency interest rate swaps (CCIRSs) introduced by the NBRK in July 2014. However, the use of CCIRSs by the NBRK, along with a fast growth in foreign currency liabilities of banks, resulted in a significant expansion of imbalance between on-balance sheet and off-balance sheet open FX positions of banks.

Figure 3.1.4.1
Banks' open FX position to banks' capital, %



Source: NBRK

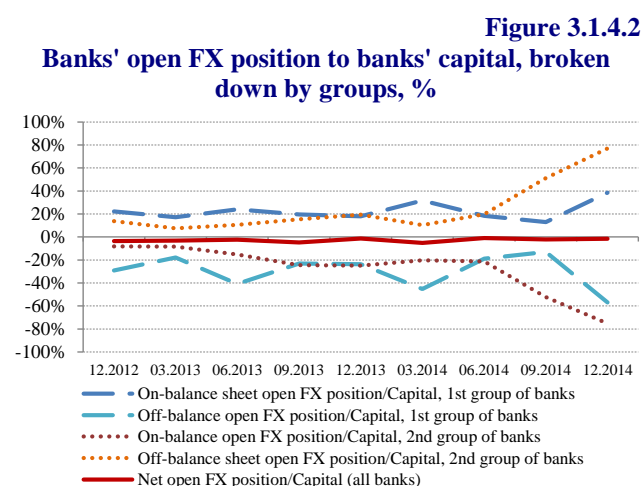
Despite a spike in the balance sheet liabilities of banks on foreign currency deposits at the end of 2014, direct FX risk of banks remained at a modest level due to off-balance sheet FX positions. So, during 2014, the structure of the balance sheet in the banking sector's foreign currency assets and liabilities was characterized by domination of foreign currency liabilities. At the same time, in order to comply with the existing limits on FX exposure (total limit for all currencies of not more than 25% of a bank's capital as well as limits for certain currencies), as well as with a view to mitigate FX risks and manage their short-term

liquidity, banks hedge FX risks present on the balance sheet accounts by building a "mirror" position on off-balance sheet accounts. As a result, net amount of FXE and, respectively, direct FX risk associated with the change in the Tenge exchange rate remained relatively low. In general, in 2014 the dynamics of net open FX position taking into account balance sheet accounts and off-balance sheet accounts did not change significantly since banks maintain net open FX position within the established regulatory limits. So, with a required ratio of net FXE of not more than 25% of capital, a total net open FX position in the banking sector accounts for 1.5% of the banking sector's capital; whereas the spread between on-balance sheet and off-balance sheet open FX positions increased dramatically beginning from the second half of 2014 (Figure 3.1.4.1).

The level of indirect FX risks of banks associated with the borrower credit risk is assessed as relatively high. As of 01.01.2015, more than one third of loans in the banks' loan portfolio is represented by loans provided in foreign currency, mainly in the US Dollars. At the same time, indirect FX risk from transactions with foreign currency derivatives recorded on off-balance sheet accounts is limited due to the introduction of a limit of not more than 30% of capital for exposure on transactions with foreign currency derivatives opened on off-balance sheet accounts, from July 1, 2014.

Risk of increasing banks' costs in the case of prolongation of a hedged foreign currency position (rolling risks) in the period of high volatility of market rates was offset by cross-currency interest rate swaps introduced by the NBRK (CCIRSs). However, significant expansion of imbalance between on-balance sheet and off-balance sheet open FX positions of banks from the 3rd quarter of 2014 keeps this type of risk at a fairly high level. The introduction of long-term CCIRSs by the NBRK in July 2014, with a view to provide the Tenge liquidity to banks, affected the situation in the money market and helped to reduce volatility of market rates and also allowed temporarily reduce banks' costs in the prolongation of a hedged foreign currency position in the period of high volatility of market rates at the end of 2014.

At the same time, the presence of a significant imbalance between on-balance sheet and off-balance sheet open FX positions later while closing the second part of transactions on long-term CCIRSs will result in increased shortage of the Tenge liquidity. A possible result may be the increase in the market rates and, respectively, the risk of increasing costs in the prolongation of a hedged foreign currency position (rolling risks). In this connection, banks need to reduce such FX imbalance between on-balance sheet and off-balance sheet open FX positions to be less vulnerable in future during the periods of volatility of market rates.



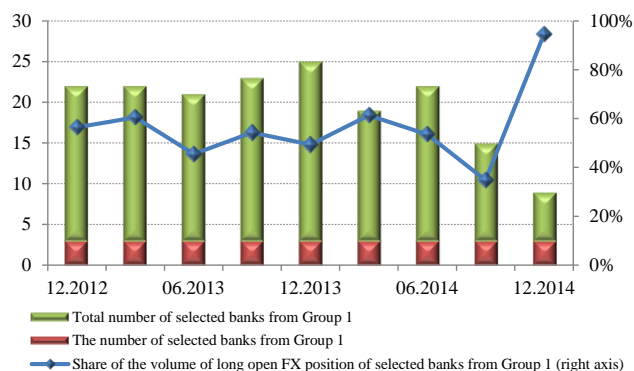
Source: NBRK

In general, banks with a long open FX position on balance sheet accounts have a proportionally short open FX position on off-balance sheet accounts, and vice versa, banks with a short open FX position on balance sheet accounts have a long open FX position on off-balance sheet accounts. In this connection, with a view to analyze the change in the on-balance and off-balance sheet open FX positions 2 groups of banks were examined: the 1st group – banks with a long open FX position on the balance sheet accounts, and the 2nd group – banks with a short open FX position on the balance sheet accounts (Figure 3.1.4.2).

In 2014, the number of banks where balance sheet assets exceed balance sheet liabilities (the 1st group) decreased from 25 to 9 banks. The main volume of imbalance between on-balance sheet and off-balance sheet open FX positions (including open FX position on derivatives) in the 1st group of banks is concentrated in three banks only, including in banks with foreign participation. The remaining banks from the 1st group had an insignificant volume of imbalance between on-balance sheet and off-balance sheet open FX positions. A significant surplus in the volume of on-balance sheet foreign currency claims (mainly, on placed deposits) over foreign currency liabilities in the mentioned three banks enabled them to open large volumes of a short off-balance sheet open FX position including on transactions with derivatives and FX spot transactions (Figure 3.1.4.3 and Figure 3.1.4.4). In this connection, with a view to exercise optimum control over the scale of FX positions of banks on foreign currency derivatives and to reduce the pressure of large-scale transactions on the Tenge exchange rate, the limit for a bank's open FX position on derivatives was introduced which should not exceed 30% of the bank's capital. Along with that, with a view to restrict the impact of such limit on the development of the swap market as well as

taking into account low indirect credit risks, the following operations were excluded from the calculation of the ratio: (i) transactions with derivatives where the NBRK is a counterparty; (ii) exchange operations with foreign currency instruments with a value date of two days or less; (iv) transactions with derivatives where a foreign currency pair which does not contain the domestic currency is an underlying asset. It should be noted that after the introduction of the ratio in the second half of 2014, the amount of open FX position on foreign currency derivatives in these selected banks dropped and was within the established limit (Figure 3.1.4.4).

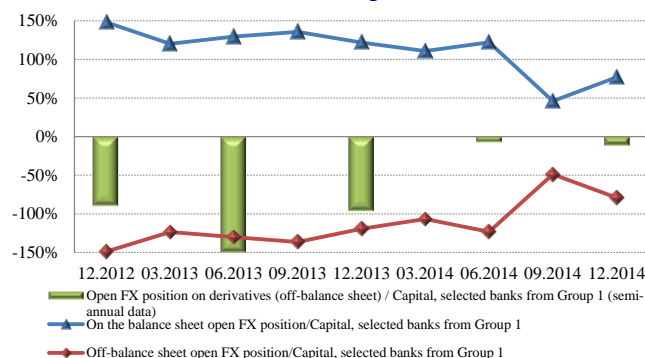
Figure 3.1.4.3
Characteristic of selected banks from Group 1



Note: 1) Group 1: banks with long open FX position on on-balance sheet accounts and short open FX position on off-balance sheet accounts; 2) Selected banks from Group 1: banks in which long open FX position on on-balance sheet accounts and short open FX position on off-balance sheet accounts exceeded 30% of their capital on an average annual basis; 3) the calculation of open FX position on foreign currency derivatives excludes: derivatives where the NBRK acts as a counterparty; exchange operations with foreign currency instruments with a value date of two days and less; derivatives where the underlying asset is a foreign currency pair which does not include the national currency.

Source: NBRK

Figure 3.1.4.4
Open FX position/Capital, including open FX position on derivatives, for selected banks from Group 1



Source: NBRK

The volume of balance sheet foreign currency liabilities (mainly, on foreign currency deposits) in banks from the 2nd group exceeds foreign currency assets. A significant increase in the imbalance between the on-balance sheet and off-balance sheet open FX positions in banks from the 2nd group in the 4th quarter of 2014 was caused by a fast growth in liabilities on foreign currency deposits. At the same time, the largest portion of a short open FX position on balance sheet accounts had been hedged as of the end of 2014, including with long-term and short-term CCIRSs of the NBRK.

At the same time, a rapid growth of imbalance between an on-balance sheet and off-balance sheet open FX positions started to be observed already in the 3rd quarter of 2014. Specifically, the ratio of a short open FX position to capital in the 2nd group of banks increased from -1.3% to -52.4% in the 3rd quarter of 2014, with parallel growth of a long off-balance sheet open FX position from 19.7% to 51.1% (Figure 3.1.4.2). Such rapid growth in the 3rd quarter of 2014 was observed only in certain banks from the 2nd group, which had entered into long-term CCIRSs with the NBRK. At the same time, in the 3rd quarter the majority of those banks did not demonstrate a rapid growth in liabilities on foreign currency deposits that would explain the reason for such imbalance between on-balance sheet and off-balance sheet open FX positions. On the contrary, some banks from the 2nd group, which had entered into long-term CCIRSs with the NBRK, demonstrated a minor decrease in liabilities on foreign currency deposits in the 3rd quarter of 2014. Alongside with that, these banks reduced their balance sheet assets in foreign currency in the 3rd quarter of 2014 (mainly on placed foreign currency deposits) and increased the Tenge liquidity as a result of Tenge purchase in exchange of US Dollars within the first part of CCIRS transactions with the NBRK. In this connection, despite a significant increase in a long open FX position on off-balance sheet accounts, net open FX position remained within the required limits. However, banks from the 2nd group need to reduce foreign currency imbalance between on-balance sheet and off-balance sheet

open FX positions so that in future, upon maturity of transactions with long-term CCIRs, they incur less costs associated with prolongation of a hedged FX position (rolling-risks).

3.1.5 Capital Adequacy

3.1.5.1 Decomposition of Capital: Channels of the Change in Capital Adequacy

In 2014, banks' capital adequacy ratio slightly decreased, caused by negative impact of the growth in risk assets, despite positive impact of the growth in the size of regulatory capital. Meantime, banks' capital adequacy ratios calculated according to new Basel III requirements, significantly exceed required minimum ratios as of 01.01.2015.

Amidst the growth in the size of regulatory capital in 2014 (18.4% in all banks, 19% in Top 5 banks, 19.5% in medium-sized banks, 12.8% in small banks and 11.5% in banks with foreign participation), the capital adequacy ratio slightly decreased virtually in all groups of banks, except in Top 5 banks (Table 3.1.5.1.1).

Table 3.1.5.1.1

Change in the capital adequacy ratios during 2014

Sample	Change K/RWA	Capital growth		RWA growth		Assets growth		RWA/Assets growth
	pp	KZT bln.	%	KZT bln.	%	KZT bln.	%	pp
Full sample	-0,61	366,4	18,4%	2 520,5	22,6%	2 707,6	20,8%	1,27
Top 5	0,22	198,5	19,0%	1 109,7	17,4%	1 200,7	17,4%	-0,002
Medium-size banks	-1,49	134,7	19,5%	1 224,6	30,7%	1 293,9	25,8%	3,10
Small banks	-2,65	33,2	12,8%	186,2	23,0%	213,0	18,9%	2,47
Foreign participation	-0,99	67,6	11,5%	597,8	18,1%	738,5	19,6%	-1,14

Note: Full sample includes 34 banks (excl. BTA Bank, Alliance Bank, Temir Bank and Forte Bank)

Source: calculation by NBRK

Within the framework of enforcement of new capital requirements under the Basel III from 2015, channels of the change in capital adequacy of Kazakh banks during 2014 were reviewed. Assessment of sources of the change in capital adequacy in 2014 using the decomposition of capital adequacy (capital to risk-weighted assets)⁷⁹ changes helps identify those factors which influence the change in capital adequacy ratio, specifically: (i) the change in regulatory capital; (ii) the change in the ratio of risk-weighted assets to total assets; (iii) the change in assets.

Decomposition of capital adequacy ratios⁸⁰ changes shows that the 0.61 pp decrease in capital adequacy ratio in 2014 in the entire sample of banks, on the one hand, had a positive effect

⁷⁹ Decomposition was done in accordance with the Methodology of Cohen and Scatigna (2014), Monetary and Economic Department of the Bank for International Settlements WP443 «Banks and capital requirements: channels of adjustment» (2014). The following formula was used for decomposition of capital adequacy ratio:

$$\frac{K_1/RWA_1}{K_0/RWA_0} = \frac{1 + Inc_1/K_0 + Oth_1/K_0}{\frac{RWA_1}{RWA_0} \frac{TA_1}{TA_0} * \frac{TA_1}{TA_0}} \quad (1)$$

where: K_i – regulatory capital for period i ; RWA_i – risk-weighted assets for period i ; TA_i – assets for period i ; Inc_1 – net income and changes in retained net earnings for prior years for period i ; Oth_1 – other changes to regulatory capital (apart from net income and retained profit) for period i .

⁸⁰ With a view to further analyze the effect of different factors on the change in capital adequacy ratio, elementary decomposition of the ratio was transformed as additive components of the adjustment factors (capital growth, RWA growth, growth of RWA/Assets, and growth of assets) in the form of percentage points of the capital adequacy ratio. The term “additive” means the model where a dependent variable (i.e. capital ratio) is obtained by a simple addition of appropriately computed effects of each of the factors (independent variables).

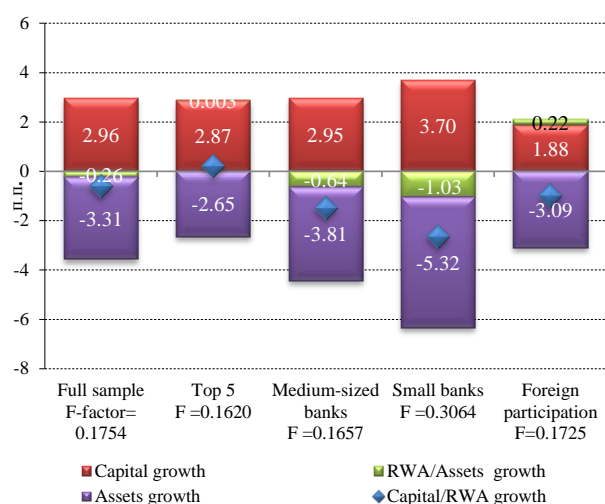
The decomposition formula (1) is transformed by taking the logarithm and adjusting both sides of the equation for F-factor of normalization:

$$\frac{K_1}{RWA_1} - \frac{K_0}{RWA_0} = F \ln \left(1 + \frac{Inc_1}{K_0} + \frac{Oth_1}{K_0} \right) - F \left(\ln \left(\frac{RWA_1}{TA_1} \right) - \ln \left(\frac{RWA_0}{TA_0} \right) \right) - F \ln \left(\frac{TA_1}{TA_0} \right) \quad (2)$$

due to the 2.96 pp growth in regulatory capital and, on the other hand, a negative effect on the 3.57 pp growth in risk assets. In all groups of banks, except Top 5 banks, capital adequacy decreased since a negative impact on capital adequacy by the growth in risk assets had overridden capital growth. However, in the Top 5 banks, positive impact by the capital growth exceeded negative impact of the growth in risk assets, which resulted in a minor increase in capital adequacy by 0.22 pp.

The growth in total assets served as a main source of the increase in risk assets, both in all banks and in the breakdown by individual groups of banks. So, 3.31 pp out of 3.57 pp of the growth in risk assets in the entire sample of banks is explained by the increase in total assets of banks. At the same time, the change in risk weighting had a minor impact on the increase in risk assets – only the 0.26 pp growth in risk assets is explained by the increased risk weighting of assets, i.e. by the ratio of RWA/total assets (Figure 3.1.5.1.1).

Figure 3.1.5.1.1
Decomposition of the change in Capital/RWA in 2014
via F-factor of normalization of percentage points



Note: Additive dependence of the variable (change of Capital/RWA) is characterized by the following identity: $a = b - c = b - (d + e)$; $a = \text{growth in Capital/RWA} = \text{Capital1/RWA1} - \text{Capital0/RWA0}$; $b = \text{Capital growth} = F \cdot \ln(\text{Capital1/Capital0})$; $c = \text{growth in RWA} = F \cdot \ln(\text{RWA1/RWA0})$; $d = \text{growth in RWA/Assets} = F \cdot (\ln(\text{RWA1/Assets1}) - \ln(\text{RWA0/Assets0}))$; $e = \text{Assets growth} = F \cdot \ln(\text{Assets1/Assets0})$; where, F-factor is calculated under formula (3);

For the purposes of visualization, asset ratios are given with a negative sign since the RWA growth negatively affects capital adequacy.

Source: calculation by NBRK

In order to assess the impact of net income and retained profit factors as well as of other sources on the amount of regulatory capital and to plot additive dependence between those variables, the applied formulas for assessment of capital⁸¹ adjustment need to be further reconstructed.

The computation of the capital adjustment factors shows that the increase in the size of capital in 2014 was 2.96 pp in the full sample of banks, including 2.87 pp – in Top 5 banks, 2.95 pp – in medium-sized banks, 3.7 pp – in small banks and 1.9 pp – in banks with foreign participation. Both in the full group of banks and in the breakdown by groups of banks, the capital growth occurred due to the increase in retained net profit of prior years and net income for 2014, whereas other sources had negative impact on the adjustment in the banks' capital, having reduced it by 1.88 pp. As for medium-sized banks and small banks, other sources of capital adjustment impacted the change in capital to a lesser extent.

A negative impact of other sources on the size of capital in the reviewed groups of banks shows that no additional issue of shareholders equity took place (Figure

3.1.5.1.2). A negative impact of other sources on the change of capital may be caused by payment of dividends on banks' shares in 2014, by capital expenses, by the increased amount of own shares repurchased by banks and other factors.

where: F – factor of normalization of percentage points of the change in capital adequacy ratio as calculated under the following formula:

$$F = (K_1 \text{ RWA}_1 - K_0 \text{ RWA}_0) / \ln(K_1 \text{ RWA}_1 - \ln(K_0 \text{ RWA}_0)) \quad (3)$$

⁸¹ A further transformation of the capital adjustment equation is done under the following formula:

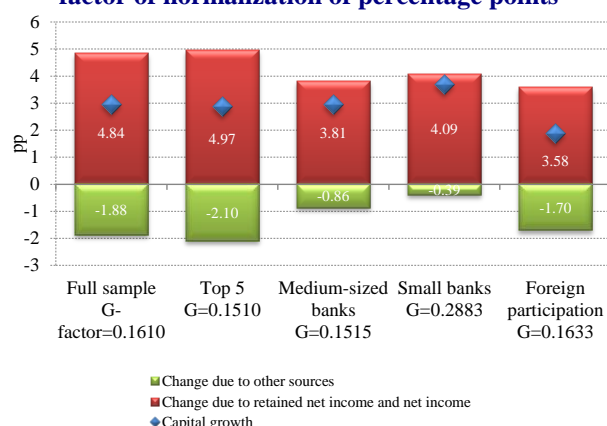
$$F \ln \frac{K_1}{K_0} = G \frac{\ln c_1}{K_0} + G \frac{\ln oth_1}{K_0} \quad (4),$$

where: G – factor of normalization of percentage points of the change in capital adequacy ratio as calculated under the following

$$\text{formula: } G = \frac{F \ln \frac{K_1}{K_0}}{\frac{K_1}{K_0} - 1} \quad (5)$$

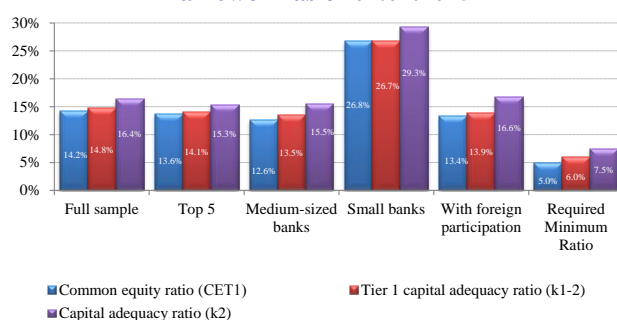
At the end of 2014, capital adequacy ratios of banks taking into account new capital

Figure 3.1.5.1.2
Decomposition of the change in Capital in 2014 via G-factor of normalization of percentage points



"Note: Additive dependence of the variable (change in Capital) with factors is characterized by the following identity: $a = b + c$: a =change in Capital = $F \cdot \ln(\text{Capital}_1 / \text{Capital}_0)$; b =change due to the growth in RNI of prior years and NI of the current period = $G \cdot (NII + (RNI - RNI_0) / K_0)$; c =change due to other sources = $G \cdot \text{Other sources of the change in capital} / K_0$; where, G-factor is calculated under formula (5).

Figure 3.1.5.1.3
Capital adequacy ratios in accordance with Basel III framework as of 01.01.2015



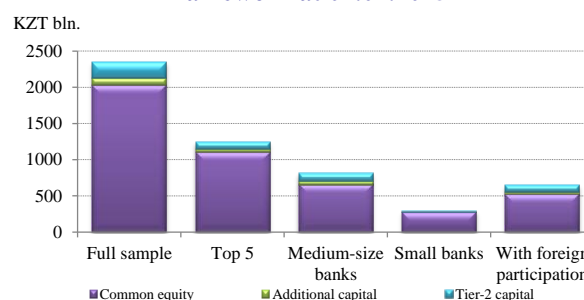
Note: Full sample includes 34 banks (except BTA Bank, Alliance Bank, Temir Bank and Forte Банк), Top 5 -five largest banks in terms of the share of assets (except BTA Bank); medium-sized banks - participants whose share of assets exceeded 1% of total assets in the system (except Alliance Bank, Temir Bank); small banks - participants whose share of assets was below 1% (except Forte Банк). The group of banks with foreign participation consists of banks which conformed to p.5 Art.3 of the Law of the RK "On Banks and Banking Activity in the Republic of Kazakhstan";

Source: STBs

requirements in accordance with the Basel III, in the banking sector exceeded minimum required ratios set as part of transition to new capital standards (Figure 3.1.5.1.3 and Figure 3.1.5.1.4).

As the Financial Stability Report of Kazakhstan for 2013 shows, the NBRK prepared a phase-by-phase schedule of transition to new capital requirements under the Basel III, which provide for proportional distribution of banks' capital burden over time. From 01.01.2015, ratios are reduced and then they will gradually increase till 01.01.2019. Concurrently, financial instruments which do not meet required criteria will be gradually deducted from capital (before 31.12.2019), and capital buffers will be gradually introduced, including the conservation buffer – from 01.01.2015r. (1%-3%), the systemic buffer – from 01.01.2016r (1%) and the countercyclical buffer – from 01.01.2016, whose size and necessity are assessed separately (Box 9).

Figure 3.1.5.1.4
Regulatory capital in accordance with Basel III framework at 01.01.2015



The implementation of the countercyclical capital buffer in Kazakhstan

In accordance with the transition to the Basel III capital standards, implementation of the countercyclical capital buffer into the regulatory practice in Kazakhstan is planned. The countercyclical capital buffer is accumulated by banks during the period of boom and they use it to absorb losses, in case of a crisis. Since the countercyclical capital buffer is aimed to smooth a financial cycle by restraining excessive credit growth, it is essential to determine when the "credit boom" period occurs in order to make a timely decision about the build-up of the countercyclical buffer. With this view, many countries (the United Kingdom, the USA, Norway, Sweden, Denmark, Switzerland and others) perform the analysis and monitor various macroeconomic indicators and the financial sector ratios. With a view to determine the list of indicators which will help identify accumulation of systemic risks in the Kazakh economy, the NBRK performed the analysis of indicators that encompass various sectors of the economy. On the basis of historical data, some of

Box 9

the indicators demonstrated good ability to signalize the occurrence of a boom. The noise-to-signal ratio (NSR) was used to determine the quality of such signals (false/precise). According to this approach, *an indicator gives more precise signals about the occurrence of a boom if the NSR approaches zero*. In case of a high NSR, an indicator is considered to be of lesser quality and may give false signals.

The BCBS recommends that credits to GDP, namely the deviation of this ratio from its long-term trend (credit-to-GDP gap) should be used as the key indicator. The signal for the occurrence of a boom period is when the credit-to-GDP gap exceeds its lower threshold. According to the BIS methodology, the lower threshold was determined as the 65th percentile of historical values of the credit-to-GDP gap and accounted for 6 pp for Kazakhstan. The upper threshold was determined as the 95th percentile of historical values of the credit-to-GDP gap and accounted for 12 pp. For the OECD countries, the BIS determined these thresholds as follows: 2 pp for the lower threshold and 10 pp for the upper threshold.

In addition, various options of trend construction were reviewed and the highest-quality signals of the occurrence of a credit boom were received when using *one-sided* Hodrick-Prescott filter with the smoothing parameter of $\lambda = 400\,000$. In Kazakhstan, the credit-to-GDP gap exceeded the set lower threshold in 8 quarters before the beginning of the 2007 crisis, signaling about the beginning of a credit boom in 2005. The NSR value for this indicator is the lowest (2%).

The performed analysis also indicates that the most precise signals about the boom in 2005 were coming from the indicators related to foreign borrowings of banks. However, today a probability of excessive growth in foreign borrowings of banks is low, which justifies also for the necessity to perform the analysis of other indicators, despite the fact that their historical data demonstrate a high NSR value.

The structure of banks' assets and liabilities had changed versus prior years; therefore, there is a probability that systemic risk will be realized in a different form than in 2007-2008. In order to identify abnormal increases and deviations of various financial sector indicators and the economy as a whole from their trends, a more extensive list of indicators is required to perform the analysis. With this view, indicators were divided into three major groups:

- *macroeconomic indicators* (various indicators of the economy in respect of GDP);
- *the banking sector indicators* (also include such indicators which may signal about the necessity to cancel the countercyclical buffer and its use);
- *other indicators* (include the data of the corporate sector and household sector).

Based on the practice used in the Bank of England¹, with a view to identify the occurrence of a boom on a timely basis and to make the decision about the necessity of building-up the countercyclical capital buffer, the NBRK is planning to perform an on-going analysis of the above indicators and their regular updating (Appendix 2 to the Report, p.108).

In the process of decision-making about the build-up of the countercyclical capital buffer, in addition to determining the period of its build-up, it is also important to determine its required size, since a small size of the countercyclical capital buffer may be insufficient for restraining excessive banking activity; this may result in accumulation of "bubbles" in the economy followed by a financial crisis.

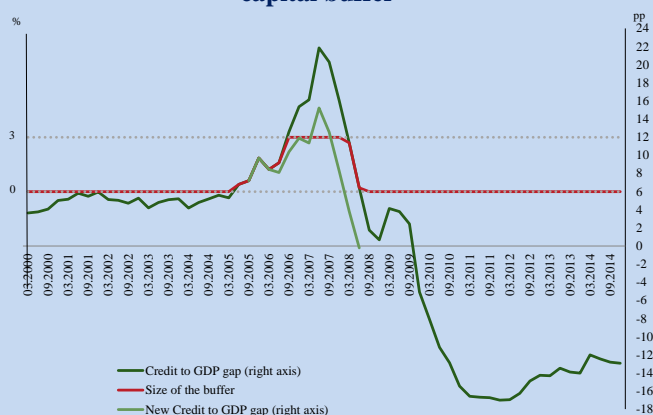
Under the current legislation, the countercyclical capital buffer may be fixed in the amount up to 3%, and the necessity of its build-up should be announced by the NBRK at least 12 months before its official build-up. A number of foreign central banks, in order to determine the size of the countercyclical buffer, use the formula recommended by the BCBS.

This formula assumes the use of the required maximum size of the countercyclical buffer (3% for Kazakhstan), actual quarterly values of the credit-to-GDP gap (Z_t), as well as its lower (L) and high (H) boundaries. Thus, the countercyclical buffer required for each quarter is calculated. By using this formula, the size of the countercyclical buffer for Kazakh banks in 2005-2008 was calculated. According to estimates, the signal about the necessity to build-up the buffer (exceeding

$$CCB = \begin{cases} 0 & \text{if } Z_t < L \\ \frac{Z_t - L}{H - L} \cdot 2.5 & \text{if } L \leq Z_t \leq H \\ 2.5 & \text{if } H < Z_t \end{cases}$$

the lower threshold of 6 pp) appears from the 2nd quarter of 2005 (Figure 1). Given the requirement that banks need to be provided a 12-month period for accumulation of the buffer, *banks should have started to build up the countercyclical buffer from the 3rd quarter of 2006 in the amount of 3% and*

Figure 1
Credit to GDP gap and the size of the countercyclical capital buffer



Note:

(1) The period of credit boom is highlighted in grey. The boom period is determined by using the noise-to-signal ratio (NSR).

(2) The buffer's size is equal to 0%, if the Credit to GDP gap does not exceed 6 pp, if the Credit to GDP gap is equal to or exceeds 12 pp., then the buffer's size will be equal to 3% of risk-weighted assets.

(3) * Preliminary data is indicated

Source: NBRK

by 0.82 pp. Based on the model results, the effect on credits in the banking system was calculated in case of increased bank capital requirements as a result of build-up of the countercyclical buffer. The historical growth of lending was adjusted for an estimated level of the decrease in lending and based on new data on lending the credit-to-GDP gap was calculated for the period of build-up of the countercyclical buffer (Figure 1).

New values of the credit-to-GDP gap obtained based on revaluation of the credit growth are lower than actual values. However, such deviation is not significant since *it continues to exceed the upper threshold for the credit-to-GDP gap of 12 pp*. Besides, the build-up of the buffer affects lending with a lag of 1 quarter and the highest effect falls on the end of 2008.

Currently, the credit-to-GDP gap in Kazakhstan is negative, indicating the absence of the necessity to build-up the countercyclical capital buffer since there are no signals about potential occurrence of a credit boom.

¹ The Bank of England every quarter publishes the updated information and analysis of indicators to determine the necessity of introducing the counter-cyclical capital buffer, «The Financial Policy Committee's powers to supplement capital requirements. A Policy Statement».

² «The model of evaluating banking sector indicators' and economic indicators' influence on lending growth" was presented in the Financial Stability Report of Kazakhstan for the year 2012, Box 4.

banks would need to maintain it during five quarters.

It should be noted that in order to make the decision about determining the size of the countercyclical capital buffer, the use of the BCBS formula *is problematic*, because the size of the countercyclical buffer is calculated based on actual information about provided credits and GDP of Kazakhstan and banks have to be given a one-year period for accumulation of the countercyclical buffer for future periods.

In the meantime, additional assessment was made in respect of reduction of lending by banks if the countercyclical capital buffer was built-up in 2005-2008 in the size computed according to the required formula. The assessment was made with the use of an econometric model that assesses the impact of regulatory requirements to banks' capital on their lending activity². According to the updated results of the model, *the 1 pp increase in capital requirements for Kazakh banks results in decreased growth of lending*

Thus, at the initial stage of transition to the Basel III framework, banks have a certain capital cushion (extra capital), which will be narrowing once capital requirements are gradually increased and instruments not complying with required criteria are excluded.

3.1.5.2 Stress-testing of the Banking Sector's Sustainability

Reduced external demand (especially on the part of Russia, China and Europe), persisting tension associated with the economic situation in Russia because of sanctions imposed in respect

of the country as well as declining oil prices found its way in scenarios of conducted stress-testing of the banking sector. Based on the assessment of this scenario, due to the increased share of non-performing loans, the level of required additional capitalization increases to 2.7% of the total volume of common capital of banks included into the assessment (0.4% of risk-weighted assets of these banks).

Apart from that, there is a pressure on capital on the part of the market risk since there is the 4.6 pp shift in the yield curve⁸² during two years of the stress scenario and revaluation of foreign currency positions of banks including off-balance sheet accounts. As a result, a required level of additional capitalization in the stress scenario during two years will increase to 3.7% of core capital of the system (0.5% of risk-weighted assets of the banking system).

For the purpose of a comprehensive assessment of soundness of banks' financial position, the stress-testing methodology was supplemented with the market risk assessment (Box 10). Respectively, the Report contains the results of stress-testing of banks' credit and market risks⁸³ as of January 1, 2015 with a 2-year time horizon. Stress-testing scenarios are based on the following assumptions (Table 3.1.5.2.1):

- a slowdown in the global economy,
- decreasing GDP growth rates of Kazakhstan's trading partners, Russia in particular,
- decline in the oil price to USD 34/barrel during 3 quarters and subsequent recovery to USD 50 /barrel.

Scenarios used as part of the stress-testing were designed based on forecasted values of macro-economic indicators as of 1.01.2015.

The following assumptions were made when conducting the stress-testing:

- a total loss based on the results of stress-testing is determined as the sum of losses in the models of credit and market risks;
- assets and the loan portfolio of banks are annualized in accordance with the forecast for the rate of growth in credits to the economy obtained on the basis of a macro-economic forecast model from the multi-factor model;
- the parameter of net profit of banks whose growth is estimated as equal to the real GDP growth is included in the calculation of capital adequacy ratios;
- the probability of default for the bank's loan portfolio by economic sectors is assessed in the stress-testing models based on the volume of loans which are past due more than 90 days;
- the effect of reduced rates of change in the real GDP as a result of decreased lending of banks which violate capital adequacy ratio based on the results of the first year of stress-testing is superposed on macro-economic scenarios.

Table 3.1.5.2.1

Stress-testing scenarios

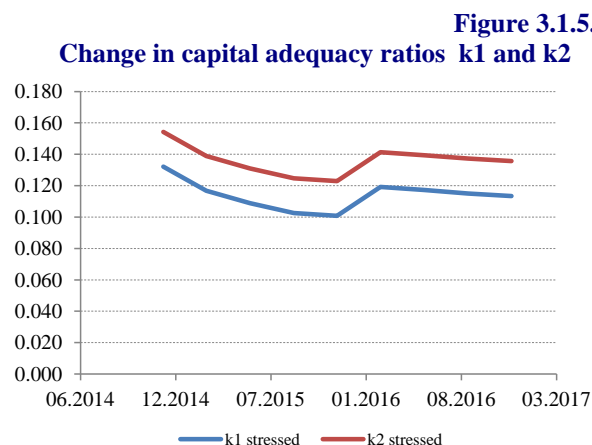
Macroeconomic indicators	Стрессовый сценарий	
	4th quarter 2015	4th quarter 2016
1	2	3
Price of oil, Brent (USD, average for the period)	USD 38	50 тоғл. США
Real GDP of Russia (for the period, RUB bln.)	3.6% decline	2.7% growth
Exports of goods and services, RK (in USD mln.)	52% decline	36% growth
Kazakhstan's real GDP (for the eperiod, KZT bln.)	1.4% growth	4.2% growth
Production in the mining industry	3.1% decline	4.7% growth
Production in the manufacturing industry	1.1% decline	4.6% growth
Production in the construction sector	3.6% decline	
Production in the sector of trade	1.9% growth	5.9% decline
Yield on government securities, %	growth by 3.9 pp	8% decline

Source: calculation by NBRK

⁸² The change in the yield of debt securities is based on the change in the yield curve on medium-term government securities (MEOKAM).

⁸³ The bank sample includes 27 banks whose share of total assets accounts for 82% of the banking system's assets.

Given the transition to calculation of capital adequacy ratios in accordance with the Basel III framework⁸⁴ (on a stage-by stage basis from January 1, 2015), results of the stress-testing are presented according to new requirements. Respectively, the results of conducted stress-testing are presented as capital adequacy ratios on the core capital (k1) and on owners' equity (k2).



Note: calculated for 27 banks
Source: calculation by NBRK

Based on the results of conducted stress-testing, in realization of stress-scenarios by the end of the first year violation of capital adequacy ratios is noted in 2 banks, causing expenses related to additional capitalization and decreasing lending activity of these banks. With this view, the reduction in the growth rates of credits to the economy was assessed versus actual values as a result of realization of the stress scenario; it accounted for 2.9% in annual terms for the two reviewed banks that violate the k1 ratio. In its turn, such reduction leads to reduction in the forecasted GDP by 0.07 pp during the second year of the forecast.

In general, when the stress-scenario is implemented, capital adequacy ratios at the end of the 4th quarter of 2016 decrease as follows: for k1 - to 0.113 with the minimum required ratio of 0.05, and for k2 – to 0.136 with the minimum required ratio of 0.075 (Figure 3.1.5.2.1).

In its turn, the increase in capital adequacy ratios during the second year is explained by the growth in net profit in the banks' capital.

In order to increase financial soundness of banks, the required level of additional capitalization⁸⁶ with regard to credit risk is estimated at KZT 32.2 bln. and KZT 29.2 bln. in the first

Table 3.1.5.2.2
Level of additional capitalization⁸⁵ in case of stress scenario on k1 and k2, in KZT bln.

	Ratio	at the end of Q4 2015	at the end of Q4 2016
k1	Required minimum capital for compliance with the ratio	1 138,2	1 428,2
	Required level of additional capitalization**	32,2	49,9
k2	Required minimum capital for compliance with the ratio	1 097,5	1 390,2
	Required level of additional capitalization	29,2	41,6

Source: calculation by NBRK

Table 3.1.5.2.3
Losses from the market risk, in KZT bln.⁸⁷

№	Item	Stress-scenario	
		at 31.12.2015	at 31.12.2016
1	Gain/loss from revaluation of securities	-96,9	-110,7
2	Gain/loss from revaluation of currency positions	-13,0	-11,5
3	Total gain/loss	-109,9	-122,1

Source: calculation by NBRK

year, KZT 49.9 bln. и 41.6 bln. in the second year, for the core capital and owners' equity, respectively (Table 3.1.5.2.2).

This level of the core capital accounts for 1.8% of the core capital of the banks' sample during the first year and for 2.7% during the second year of the stress-testing (0.2% and 0.4% of risk-weighted assets of these banks, respectively), and of owners' equity – 1.4% of the respective capital during the first year and 1.9% during the second year of the stress-testing (0.2% and 0.3% of risk-

⁸⁴ The Board Resolution of the National Bank of the Republic of Kazakhstan dated December 24, 2014 No.242 "On Amendments to Some Legislative Acts of the Republic of Kazakhstan Regarding Regulation of the Banking Activity".

⁸⁵ On 27 banks included in the stress-testing.

⁸⁶ Based on the data about expected losses of households obtained as a result of the credit risk stress-testing in respect of loans provided to individuals by banks.

⁸⁷ Losses arising from the market risk are presented on a cumulative basis for two years.

weighted assets of banks in the sample банков, respectively).

In addition to credit risk, realization of the market risk also affects banks' sustainability via revaluation of financial instruments due to increased yield on such instruments as well as due to revaluation of foreign currency positions of banks including off-balance sheet accounts (Table 3.1.5.2.3, Figure 3.1.5.2.2).

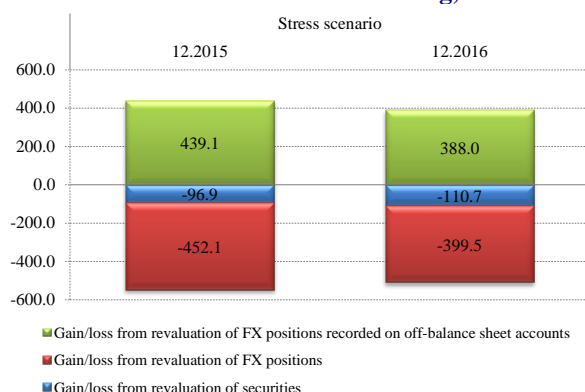
As a result of the stress-testing of market risk, as of January 1, 2015 the major portion of losses generated as a result of realization of the stress scenario on market risk are the losses associated with revaluation of debt securities in the banks' portfolio, as a result of increase in their yield-to-maturity. In their turn, banks also have a significant volume of liabilities denominated in

foreign currency that would entail certain losses in case if the domestic currency depreciates. At the same time, this risk is hedged by banks via their positions recorded on off-balance sheet accounts.

Given losses arising from the market risk, capital adequacy ratios will be decreasing and at the end of the 4th quarter of 2016 they will account for 0.104 for k1 ratio and 0.127 – for k2. Thus, the level of additional capitalization during the first year is estimated at KZT 49.2 bln. and KZT 35.7 bln., and during the second year – at KZT 67.5 bln. and KZT 48.1 bln. for the core capital and owners' equity, respectively. In terms of percentage, the level of additional capitalization during the first year of the stress scenario increases to 2.7% of the core capital of banks in the sample and to 3.7% during two years of the stress scenario (0.4% and 0.3% of risk-weighted assets of these banks, respectively). In its turn, in respect of the owners' equity this ratio accounts for 1.7% of the respective capital during the first year and 2.2% during the second year of the stress-testing (0.5% and 0.3% of risk-weighted assets of banks in the sample, respectively).

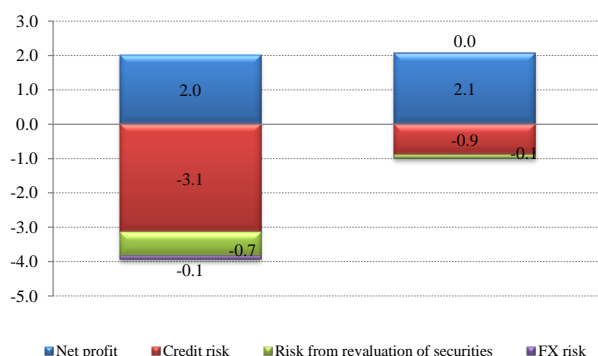
As for the structure of distribution of losses in relation to risk-weighted assets, their largest part

Figure 3.1.5.2.2
Gains and losses generated/incurred by a bank as a result of the market risk stress-testing, in KZT bln.



Source: calculation by NBRK

Figure 3.1.5.2.3
Distribution of losses and gains as percentage of RWA of banks sample



Source: calculation by NBRK

is represented by losses arising from the credit risk (Figure 3.1.5.2.3).

Based on the results of stress-testing, a low need in additional capitalization in the banking system is caused by a low level of new capital adequacy requirements. So, given that the level of banks' capital remains at the same level, actual values of capital adequacy ratios are significantly higher than minimum requirements to such ratios.

Box 10

Stress-testing methodology for the Market Risk of Banks

With a view to expand the range of analyzed risks within the existing practice of stress-testing of the banking sector's sustainability and to assess banks' financial performance in the environment of change in the key market parameters, the methodology for stress-testing of the market risk was developed.

In its turn, the methodology includes evaluation of gain/loss from revaluation of debt securities and foreign currency positions of banks. The shift in the yield curve on government securities and the change in the exchange rate of the US Dollar versus the Tenge in realization of

shock from the decline in oil price are considered as the stress-scenario.

The change in the yield on government securities is based on the change in the yield curve on medium-term government securities (MEOKAM) due to a significant portion of these securities in banks' portfolios (as of January 1, 2015 – 14.2% or KZT 257 bln.).

In its turn, the market risk stress-testing methodology corresponds to the international practice and consists of several steps:

I. Revaluation of present values of debt securities in portfolios of STBs, based on forecasted changes in yields-to-maturities of such securities. Debt securities traded in the domestic market are used in the calculation.

II. Revaluation of present values of debt securities based on the probability of default of certain issuers on issued securities due to implementation of the stress-scenario.

III. Calculation of corresponding gain/loss as a result of such revaluation.

IV. Revaluation of on-balance sheet and off-balance sheet positions as a result of implementation of the stress-scenario on the US Dollar/Tenge exchange rate and calculation of corresponding gain/loss.

The adjustment of the change in present values based on default on securities assumes that coupon payments for the next year as part of the technical default are excluded from the calculation of present values of securities rated C, D or unrated first sub-category securities. Present values of securities which are “unrated second sub-category securities” or unrated, are brought to zero as part of default on the principal amount. In their turn, present values of securities rated above C are left unchanged.

3.2 Risks of the Non-Bank Sector

3.2.1 Insurance Sector

Existing disproportions in the insurance market development lead to the growth of negative trends which are related to the transfer of risks to external reinsurance, investment activities, and persistence of high fees of insurance agents.

Reinsurance risks. Excessive outflow of resources via reinsurance channels limits the growth of the insurance sector capitalization and constrains the full-pledged development of the insurance market in general. Starting from 2000, insurance premiums worth KZT 550.9 bln. were ceded to non-resident reinsurers; alongside with that, only KZT 61.4 bln. or 11% of ceded insurance premiums were received as an indemnity for insured events (net outflow of insurance premiums amounts to KZT 489.5 bln.). The statistics of external reinsurance shows inefficiency of reinsurance activity of the domestic insurance organizations (Table 3.2.1.1).

Table 3.2.1.1

Insurance premiums ceded to non-resident reinsurers

Item								(KZT mln.)
	2008	2009	2010	2011	2012	2013	2014	Total
Ceded to non-resident reinsurers	51 876	48 668	53 058	50 620	48 248	60 934	62 829	376 233
Indemnity received from non-residents under reinsurance contracts	5 855	9 150	2 785	6 493	8 307	8 409	6 340	47 339

Source: NBRK

The highest portion of reinsurance with non-residents is noted in the voluntary property insurance business. In 2014, the share of reinsurance on this insurance class accounted for 50.5%. In most cases, insurance organizations while possessing a significant capital stock act as intermediaries for foreign insurance (reinsurance) organizations, receiving fees payable for intermediation and they do not have interest in underwriting of risks and own retention. Such reinsurance is carried out under long-term general agreements entered into with large foreign companies, mainly operating in the oil and gas sector and the mining industry.

Despite the fact that in 2012 the NBRK set minimum limits for own retention of risks and insurance premiums under large and other insurance contracts⁸⁸, no significant impact on volumes of reinsurance abroad is observed. The share of reinsurance premiums on property insurance ceded to non-residents of the Republic of Kazakhstan, during 2014 decreased to 50.5% (in 2011 – 68.9%); the overall volume of reinsurance premiums ceded to non-residents decreased insignificantly to KZT 51.0 bln. (in 2011 – KZT 51.3 bln.), respectively (Table 3.2.1.2).

Table 3.2.1.2

Insurance premiums ceded to reinsurance in 2014 (by insurance classes)

(KZT mln.)

Insurance class	Insurance premiums	Insurance premiums ceded to reinsurance	Insurance premiums ceded to non-resident reinsurers	Share of insurance premiums ceded to non-residents of Kazakhstan
Compulsory insurance	58 044	17 929	9 669	16,7%
motor civil liability insurance	33 641	5 460	5 457	16,2%
accident insurance of workers in discharge of their labor (official) duties	20 462	12 288	4 100	20,0%
Voluntary personal insurance	77 166	6 062	2 065	2,7%
accident insurance	8 287	5 360	1 677	20,2%
Voluntary property insurance	101 201	55 909	51 095	50,5%
air carriers civil liability insurance	915	1 301	875	95,5%
water transport civil liability insurance	494	448	448	90,8%
air craft insurance	1 991	1 902	1 605	80,6%
water transport civil insurance	998	874	784	78,6%
freight insurance	4 248	2 764	2 708	63,8%
insurance from other financial losses	15 832	9 582	9 577	60,5%
civil liability insurance	17 480	11 239	10 558	60,4%
property insurance	38 461	25 250	22 306	58,0%

Source: NBRK

The situation in the insurance market is such that certain reinsurance contracts do not involve the transfer of risks. Over 90% of reinsurance premiums come back to insurance companies or their affiliated entities in the form of fees or bonus or to the insurance brokers; in doing so, the reinsurance terms and conditions do not provide real reinsurance protection. Such transactions are conducted for the purpose of asset stripping or tax optimization. In other cases, “risk-free” reinsurance transactions are made with a view to improve financial ratios of an insurance organization, in particular, to reduce the volume of insurance reserves, which can lead to the lack of resources to cover losses.

The highest share in the volume of insurance premiums ceded to reinsurance is represented by reinsurance organizations rated at least A- and only about 1/3 falls on reinsurance organizations with a lower rating or unrated organizations (Table 3.2.1.3).

Table 3.2.1.3

Insurance premiums ceded to reinsurance in 2014, broken down by ratings of reinsurance organizations

(KZT mln.)

Financial reliability rating	Volume of liabilities ceded to reinsurance	Insurance premiums ceded to a reinsurance organization	Share in reinsurance premiums, in %
from AAA to A-	21 330 444	48 162	63,3%
from BBB+ to B-	6 947 161	21 301	22,0%
below B- or unrated	3 112 670	10 437	14,7%
Total	31 390 274	79 900	100,0%

Source: NBRK

Inadequate assessment of the reinsure's share in insurance reserves causes the occurrence of a risk of inadequacy of insurance reserves, which may lead to a default under insurance contracts (Figure 3.2.1.1). When insurance reserves are created, the terms and conditions of pro rata and non-

⁸⁸ Own retention of insurance risks under large insurance contracts where the insured amount (liability limit) is at least KZT 1 bln., must be at least 5% of the actual solvency margin of an insurance organization (ASM), and in relation to risks of the air, water and railway transport – at least 2% of ASM. For other insurance contracts, limits for insurance premium retention (in the amount of at least 40%) as well as for the volume of insurance premiums ceded to non-residents of the Republic of Kazakhstan (in the amount of not more than 25%) are established.

pro rata reinsurance which provide for significant exceptions in relation to insurance indemnity may be not taken into account. In certain cases such contracts are concluded with a view to improve prudential ratios.

In the course of prudential ratio calculations without deduction of a reinsurer's share in insurance reserves, it was determined that there is a risk of insolvency of insurance organizations.

Figure 3.2.1.1
Insurance reserves and reinsurer's share

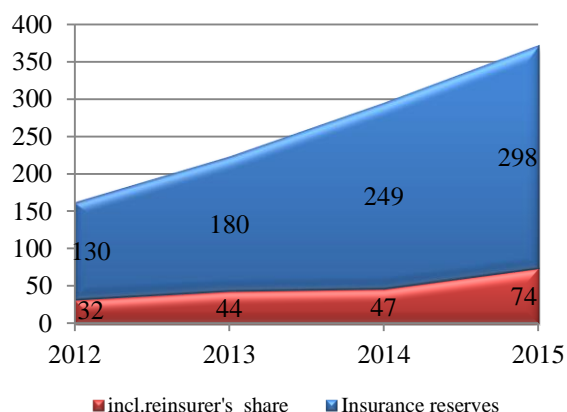
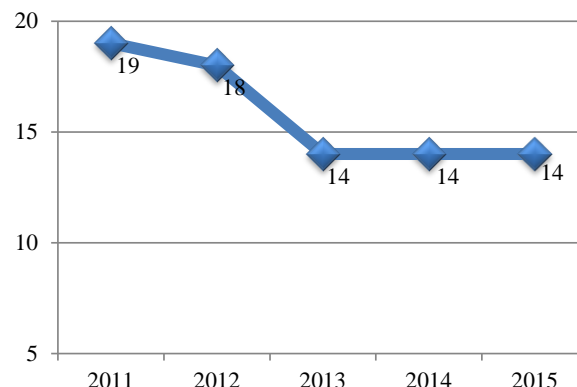


Figure 3.2.1.2
The number of insurance organizations in the risk zone of underestimated claim reserve



Source: NBRK

As of 01.01.2015, out of 34 insurance organizations, 1 insurance organization does not comply with the solvency margin ratio (SMR) less a reinsurer's share. In its turn, based on the results of SMR calculations where a full amount of insurance reserves is used without deducting the reinsurer's share, SMR values decrease significantly from 3.3 to 1.9. As a result, there is a risk of non-compliance with SMR by 14 insurance organizations (Figure 3.2.1.2).

Preservation of the existing risk insurance structure leads to an excessive outflow of resources through reinsurance channels limits the capitalization growth of the domestic insurance market and restrains its full-pledged development in general.

The total volume of owners' equity of insurance organizations in the Republic of Kazakhstan was KZT 286.9 bln. at 01.01.2015. Retention of a significant volume of insurance premiums during the last 15 years could result in significant capitalization of the insurance sector and in its becoming one of the strategic sectors of the economy. Today, the total volume of owners' equity of insurance organizations would exceed KZT 750 bln. and assets – KZT 1.1 trln.

Investment risks. During 2014, the total volume of the investment portfolio of insurance (reinsurance) organizations increased by 10.8% (Table 3.2.1.4); this happened mainly owing to placed deposits and increased volumes of government and non-government securities of resident issuers, including bonds. At the same time, the share of foreign securities in the portfolio of insurance organizations decreased by 30.0% on average. In the structure of securities at 01.01.2015, 97.3% falls on bonds, and their volume increased by 6.6% during 2014.

As of 01.01.2015, losses from depreciation of securities amounted to KZT 8.1 bln. Given negative developments associated with declining economic growth in the Russian Federation, losses from depreciation of securities of its issuers amounted to KZT 1.5 bln. Given narrow concentration of the domestic insurance organizations (mostly, medium-sized in terms of their assets) in securities of issuers of the Russian Federation, negative effect from depreciation in value will have impact on financial condition of relevant investors.

International ratings in respect of all securities of issuers of the Russian Federation that are included in the calculation of actual solvency margin are at a critical level in terms of compliance with prudential ratios and range from BBB- to BBB. When the stress-test for the one-level reduction in ratings of issuers of the Russian Federation (to BB- level) was conducted, it was determined that 4 insurance (reinsurance) organizations will violate SMR.

Table 3.2.1.4

Investment portfolio of insurance organizations

(KZT mln.)

Item	01.01.11	01.01.12	01.01.13	01.01.14	01.01.15
Cash & cash equivalents	27 431	24 358	11 909	19 579	17 589
Deposits	70 700	92 002	105 221	128 279	150 008
Government securities of the Republic of Kazakhstan	44 732	49 057	62 383	71 096	83 876
Non-government securities of Kazakhstani organizations	82 178	100 747	135 905	159 372	170 118
Government securities of foreign states	5 631	7 105	8 141	12 106	8 765
Non-government securities of issuers - non-residents of Kazakhstan	12 791	15 701	13 195	17 569	25 684
Securities of international financial organizations	5 619	9 278	9 677	8 660	5 412
Shares in investment funds	127	379	340	200	232
Total	249 303	298 628	346 771	416 863	461 683

Source: NBRK

Expenses related to the payment of commissions, general and administrative expenses. During 2014, the amount of expenses related to the payment of commissions decreased by 18.2% (Table 3.2.1.5). The corresponding share of commissions in insurance premiums decreased insignificantly from 15.8% to 13.6%. This was mainly caused by reduced collection of insurance premiums by some insurance organizations. The total share of expenses of insurance (reinsurance) organizations related to their business in the insurance market remained approximately the same (31.7% during 2014).

Table 3.2.1.5

Commission fees and general administrative expenses of insurance organizations

(KZT mln.)

Item	01.01.2011	01.01.2012	01.01.2013	01.01.2014	01.01.2015
Expenses related to payment of commission fee on insurance business	11 751	17 901	29 295	44 169	36 103
General and administrative expenses	27 177	34 570	38 123	45 988	48 142
Total amount of insurance premiums (under insurance/reinsurance contracts)	153 497	198 503	237 301	279 235	266 121
Total expense amount	73 203	104 958	156 831	180 893	182 440
Ratio of expenses related to payment of commission fee to insurance premiums received under insurance/reinsurance contracts	7,7%	9,0%	12,3%	15,8%	13,6%
Share of general and administrative expenses in total expenses of an insurance organization	37,1%	32,9%	24,3%	25,4%	26,4%
Ratio of expenses related to payment of commission fee and general and administrative expenses to insurance premiums received under insurance/reinsurance contracts	25,4%	26,4%	28,4%	32,3%	31,7%

Source: NBRK

In 2014, the highest share of commission expenses (80%) was in the life insurance class (Table 3.2.1.6), which is related to the specifics of the class characterized by a high one-time payment of commission in the first year of the insurance contract and a stage-by-stage payment of insurance premiums.

The amount of commissions under compulsory motor civil liability insurance (6.8% of insurance premiums) corresponds to the requirements of laws of the Republic of Kazakhstan. Insurance companies continue to indirectly finance the expenses of insurance agents providing them other material benefits in addition to agency fees at the expense of own funds. As a result, in 2014 general and administrative expenses of insurance organizations increased from KZT 45.9 bln. to KZT 48.1 bln.

Such practice used by insurance organizations negatively affects their ratios on compulsory lines of insurance (including loss ratios), which are subject to discrepancy. High amounts of commissions cause underestimation of insurance tariffs under voluntary insurance contracts and the growth in administrative expenses leads to the increase in loss ratio.

In this regard, the necessity arises to take measures in order to reduce costs related to payments for services of insurance agents at the level of by-laws including prudential ratios and requirements to risk management and internal control systems.

Table 3.2.1.6

Commission fees, by insurance classes

(KZT mln.)

Expenses related to payment of commission fee on insurance business, by insurance classes	Expense amount	Ratio to insurance premiums, in %
Compulsory insurance	4 500	6,8%
motor civil liability insurance	2 124	6,3%
Voluntary personal insurance	22 776	28,0%
life insurance	19 748	80,0%
Voluntary property insurance	8 827	7,4%
motor civil liability insurance	97	16,7%
property insurance	4 456	8,6%
civil liability insurance	1 663	8,7%
Total	36 103	13,6%

Source: NBRK

Receivables. The total amount of receivables increased by 10.6%, as compared to 2013. The past due to total debt ratio accounts for 34%, including 22% of past due more than 90 days (Table 3.2.1.7).

Table 3.2.1.7

Receivables of insurance organizations

(KZT mln.)

Item	01.01.2011	01.01.2012	01.01.2013	01.01.2014	01.01.2015
Insurance premiums receivable from the insurants and intermediaries (including impairment provisions)	18 485	23 505	25 581	22 506	27 768
Past due less than 90 days	2 616	2 517	2 560	3 073	3 158
Past due more than 90 days	3 390	8 190	6 253	5 379	6 194
Total amount past due	6 006	10 707	8 812	8 453	9 351
Share of past due in total insurance receivables	32%	46%	34%	38%	34%
Share of past due more than 90 days in total insurance receivables	18%	35%	24%	24%	22%

Source: NBRK

The insurance market demonstrates continuing existence of relatively high past due amounts associated with the specifics of how insurance organizations enter into insurance contracts with clients under voluntary lines of insurance (an option to pay insurance premium by installments) as well as with requirements of the Instruction on setting prudential ratios⁸⁹.

Where the amount past due less than 90 days is excluded from the amount of assets for the purpose of quality and liquidity and actual solvency margin calculation, SMR will be violated by 6 insurance (reinsurance) organizations. The share of the past due in these insurance (reinsurance) organizations included in the solvency margin calculation (past due less than 90 days) ranges from 5% to 30% of the amount of actual solvency margin.

Meantime, maintenance of a high share of past due receivables represents a potential factor of risk of shortage of insurance reserves that may lead to inability of an insurance organization to meet assumed obligations in case of an insured event occurrence.

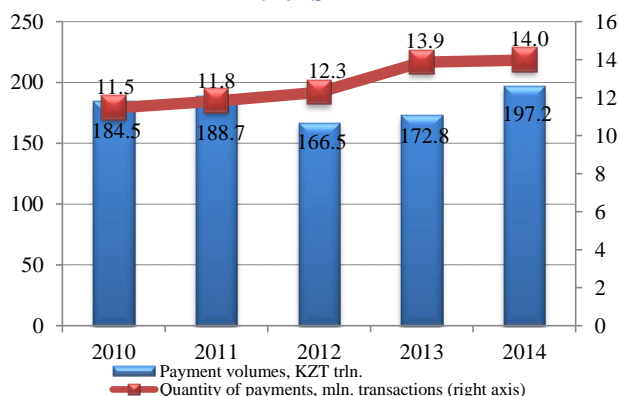
⁸⁹ Insurance premiums receivable from insurants are included in the calculation of the value of assets of an insurance (reinsurance) organization based on their classification in terms of quality and liquidity in case when the insurant pays 1/12 part of the insurance premium under the insurance contract or a first insurance fee under the endowment insurance contract (*sub-paragraph 6, paragraph 32 of the Board Resolution of the Agency of the Republic of Kazakhstan on Regulation and Supervision of the Financial Market and Financial Organizations dated August 22, 2008 No. 131 "Regarding approval of the Instruction on setting prudential ratios and other mandatory norms and limits for an insurance (reinsurance) organization and an insurance group, including minimum size of authorized capital, guarantee fund, solvency margin and time frames for submission of reports on compliance with prudential ratios"*).

3.3. Payment Systems of Kazakhstan

In 2014, national payment systems of Kazakhstan demonstrated stable functioning. At the same time, a further development of payment mechanisms including implementation of up-to-date technologies leads to the growth of the electronic payment service market and the necessity of regulation of inherent risks. In these circumstances, the NBRK needs to rapidly respond to such changes, to assess risks and manage them through adequate control and legal support.

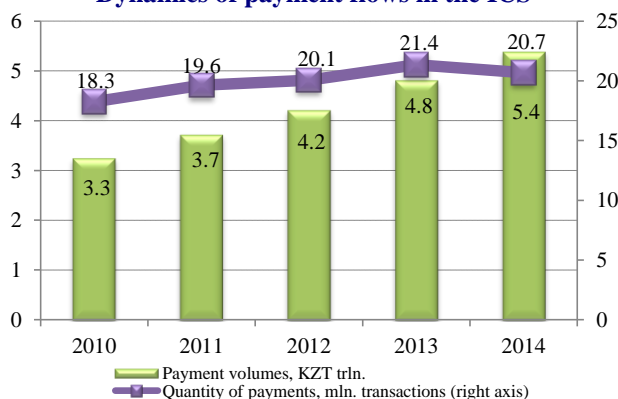
3.3.1. National Payment Systems of Kazakhstan

Figure 3.3.1.1
Dynamics of the amount and quantity of payments in the ISMT



Source: NBRK

Figure 3.3.1.2
Dynamics of payment flows in the ICS



Source: NBRK

Amidst a persistent trend of the growth in payment volumes in the national payment systems, a fairly high level of management of systemic, operational and technical risks inherent in the payment systems is maintained.

Based on the 2014 performance, the amount of payments in the national payment systems of Kazakhstan in 2014 increased by 14.1% (Figure 3.1.1.1 and 3.1.1.2). To a major extent, this was caused by the 42.3% increase in the amount of payments on deposit operations as well as on operations with foreign currency and precious metals by 31.7% (Table 3.3.1.1).

In 2014, 141 500 transactions a day on average were processed in the payment systems (the decrease of 1.2%) amounting to KZT 826.9 bln. (the growth of 14.5%). The peak in the volumes of processed payments during one day was recorded on December 31, 2014 and totaled KZT 2 752.2 bln., exceeding by 3.3 times the average amount of payments processed during 2014.

With a view to manage systemic⁹⁰ risk (liquidity risk, credit risk) which may have a significant impact on the stability of the country's financial system, measures are taken to manage liquidity⁹¹ and the queue management mechanism is used⁹² in the ISMT.

Based on the 2014 performance, the average daily liquidity volume of the system's users (opening balance⁹³ in the ISMT, by means of which users make their payments) amounted to KZT 927.9 bln., having increased by 0.3% versus 2013 (Figure 3.3.1.3). The average daily liquidity volume of the ISMT users exceeds the average daily amount of payments by 15%, which is indicative of availability of liquidity for the system's users sufficient for making payments.

During 2014, 4306 payments amounting to KZT 243.7 bln. were recorded in the queue, of which 12 payment documents in the amount of KZT 3.5 bln. were recalled by the payment systems user or cancelled by the KISC because of closing of the ISMT's operating day (such documents were successfully settled on the next day).

⁹⁰ Systemic risk is the risk that a failure of one user of the payment system to discharge its obligations under the money transfer will cause failures to discharge their obligations by other (one or more) users of the payment system.

⁹¹ Additional transfers of funds from a user's correspondent account to its position in the system.

⁹² Establishing an order of priority for execution of payment documents and the change in the order of priority of payment documents.

⁹³ User's opening balance is a cash amount that a user transfers from its correspondent account to the position in the system.

To manage systemic risk, the ICS uses the calculation of the money turnover ratio (MTR) and the analysis of the sum of net position of the users. During 2014, the average daily MTR in the ICS was equal to 4.8; this indicates a high turnover of the system (Figure 3.3.1.4). The average daily sum of the users' net position as a result of clearing equaled to KZT 4.8 bln. (0.6% of the amount of average daily turnover of users in the ISMT). This helps reduce liquidity risk when calculating net positions through the ISMT.

Table 3.3.1.1

Payment volumes in the ISMT and ICS, by types of payment purposes (KZT trln.)

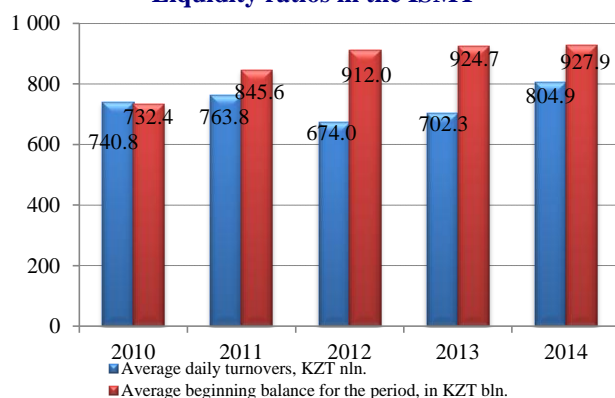
Items	2011r.	2012r.	2013r.	2014	Change, in %
Operations with foreign currency and precious metals	25,8	26,2	25,8	34,0	31,7%
Deposits	42,4	25,3	23,4	33,3	42,3%
Loans	1,7	2,0	2,4	2,8	15,5%
Securities, bills and certificates of deposit	83,3	73,3	79,6	76,5	-3, %
Goods, intangible assets and services	19,5	22,7	24,9	27,6	11 0%
Other payments*	19,6	21,2	19,6	28,5	31,8%
Total	192,4	170,7	175,6	202,6	14,1%

Note: * include pension payments and benefits, specific transfers, payments to the budget and payouts from the budget

Source: NBRK

Figure 3.3.1.3

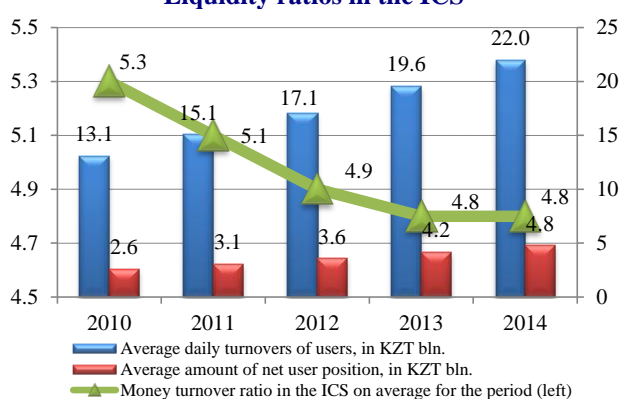
Liquidity ratios in the ISMT



Source: NBRK

Figure 3.3.1.4

Liquidity ratios in the ICS



Source: NBRK

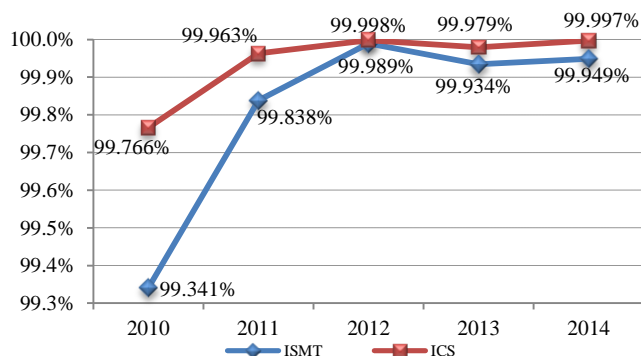
During 2014, 30 payment documents totaling KZT 37.9 mln. were rejected (recalled) in the ICS due to insufficient liquidity, accounting for only 0.001% of the total number and 0.00001% of the total amount of payment documents processed in the ICS (all rejected payments were passed through the ISMT again on the same operating day).

To manage operational and technical risks on an on-going basis, works are performed to monitor, support and modernize operation of the systems' software and hardware complex and other equipment, and electricity supply systems. To ensure uninterrupted functioning of payment systems and maintaining the backup center fully operational, the KISC transfers the payment systems to the software and hardware complex of the backup center twice a year. At the same time, not only the KISC payment systems are exposed to technical risk but also information systems of the payment system's users. So, in special cases, when the processing of payment messages by a payment system user or their exchange with the KISC is not feasible due to technical reasons, the NBRK extends the operating day in the payment system based on the application filed by such user.

During 2014, there were 71 instances when the operating days was extended based on applications filed by 25 users. The amount of processed payments during such extensions was KZT 232.2 bln., and the quantity of payments made – 16 400 payments.

Management of the operating day in the payment systems of Kazakhstan enables the payment system's users to fulfill their payment obligations to their clients.

Figure 3.3.1.5
Dynamics of the change in the operability coefficient of payment systems in 2010-2014

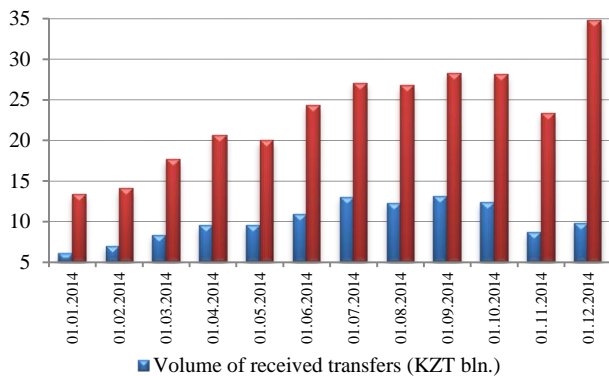


Source: NBRK

Technical Committee of the International Organization of Securities Commissions, experts gave their recommendations regarding a further development of Kazakhstan's payment systems. Specifically, with a view to address the problem of providing the payment systems' users with a reliable and effective access to liquidity, the following issues are studied: possibility of an overdraft loan to the ISMT users; establishing priority codes for payments based on significance of users in terms of their social profile, and their role in the securities market and foreign exchange market of Kazakhstan.

3.3.2 Alternative Payment Mechanisms

Figure 3.3.2.1
Volumes of payments transferred and received through the ISMT



Source: NBRK

Kazakhstan via the SIMT, the amount of money transferred from the country exceeds the amount of money transferred to the country by 2.3 times (Figure 3.3.2.1). The volume of money transferred via the SIMT abroad increased by 17.4%, and the volume of money received from abroad increased by 34.1%.

The domination and the growth of the volumes of money transferred abroad in 2014 were mainly associated with the consumer and migration active behavior of the population. So, in December 2014, there was a significant growth of the volume of payments and money transfers to Russia for purchases of goods (Table 3.3.2.1). The share of gratis money transfers sent and received via the SIMT accounts for 98% and 99.4% of the total amount of transfers, respectively; this shows

Thus, risks in the national payment systems of Kazakhstan are manageable; this fact is proved by a high coefficient of uninterrupted operation (operability)⁹⁴ of the payment systems which is one of the key indicators of effective development of national payment systems (Figure 3.3.1.5).

At the same time, in 2014 within the framework of the Technical Assessment of Payment Systems Operation for compliance with the Principles for Financial Market Infrastructures drafted by the Committee on Payments and Market Infrastructures with the Bank for International Settlements and the

The system of international money transfers (SIMT), which represents one of alternative payment mechanisms due to convenience and speed of transactions, becomes more and more popular among the population of Kazakhstan. The major flow of payments and money transfers is made with the CIS countries and Russia in particular.

Based on the 2014 performance, the volume of monies transferred via the SIMT increased by 14.2%. In doing so, 87.3% of the volume of money transferred via the SIMT in 2014 was sent by the population abroad. As for cross-border transfers of money from

⁹⁴ Payment system's operability coefficient for year is calculated as the ratio of real time of operations (period of time from opening of a business day till closing of a payment system's business day, less the time when a payment system was suspended) to the total time of operation of a payment system (period of time from opening of the payment system business day till closing of its business-day).

that the SIMT plays a liaison role in business transactions as well as in money transfers by labor migrants.

A key currency of money transfers both to the CIS countries and beyond the CIS is still the US Dollar (over 90% of all transfers), except transfers to Russia where over a half of the transfer volumes are made in the Russian rubles.

The most popular systems used for money transfers abroad via the SIMT are the Golden Crown and Western Union, which account for more than 50% of the total amount of money transfers made abroad via the SIMT. Money transfers via such systems as Contact, Unistream and Faster are also significant. The major flow of money transfers is coming to the country via such systems as the Golden Crown, Western Union, Faster and Unistream.

In spite of the fact that the government created conditions for development of retail electronic services, the population of Kazakhstan still uses the electronic payment mechanisms mostly to cash out.

Based on performance in 2014, about 80% of all commercial banks of Kazakhstan and the “Kazpost” provided electronic banking services to the general public via electronic terminals and remote access systems.

Payment cards still represent the main tool of retail non-cash payments for the population; 82% of the quantity and 70% of the volume of such payments were made with the use of such cards via the remote access systems and electronic terminals in 2014. However, the share of non-cash payments in the overall structure of payments with the use of payment cards remains low. So, in 2014 the volume of non-cash payments was three times less than the volume of operations on cash withdrawals (Table 3.3.2.2 and Table 3.3.2.3).

Table 3.3.2.2

Growth trends of payments with the use of payment cards

Period		2010	2011	2012	2013	2014
Quantity	non-cash	25,4%	20,4%	33,9%	31,3%	19,7%
	cash	13,3%	12,8%	17,2%	9,9%	9,3%
Amount	non-cash	34,9%	42,2%	31,6%	19,8%	7,3%
	cash	25,2%	28,2	27,4%	17,2%	20,1%

Source: NBRK

Table 3.3.2.3

Transactions performed in Kazakhstan with the use of payment cards in 2014 via electronic terminals and remote access systems

Means of Transactioning	non-cash		with the use of cash	
	Quantity (mln.trans.)	Volume (KZT bln.)	Quantity (mln.trans.)	Volume (KZT bln.)
ATM	17,4	185,7	169,2	5 694,8
share %	31,1%	22,6%	96,8%	85,2%
POS-terminal	29,7	570,1	5,6	986,5
share %	53,1%	69,3%	3,2%	14,8%
Internet	7,5	37,4	-	-
share %	13,4%	4,5%	-	-
mobile phone	0,2	0,2	-	-
share %	0,4%	0,03%	-	-
other[1]	1,2	29,4	-	-
share %	2,1%	3,6%	-	-
Total:	55,92	822 821,6	174 872,2	6 681,3

Source: NBRK

On the one hand, this is related to the fact that the network of outlets where payments can be made with payment cards in Kazakhstan are not enough developed, and, on the other hand, to an insufficient level of development in the culture of non-cash payments. So, despite the fact that in 2014 the number of POS-terminals installed by businesses increased by more than one third, the ratio between the country's population and the number of POS-terminals installed in the sales and service outlets remains low. In Belarus, there are 10 POS-terminals per 1000 inhabitants, in Russia – 8, and in Kazakhstan – 3. In developed countries, such ratios are a sequence higher: the UK and Italy – 26, Canada – 24, France – 21, Japan – 15⁹⁵.

At the same time, it should be noted that the load on POS-terminals in Kazakhstan

remains low, 2 transactions a day per one POS-terminal on average, whereas in developed countries it amounts to 8 transactions. Alongside with that, the load on ATMs remains low – 58 transactions a day per an ATM on average, 90% of which are cash withdrawals.

⁹⁵ <http://www.bis.org/cpmi/publ/d124.htm>.

In the structure of non-cash transactions with the use of payment cards, about 90% of their volumes fall on the payment for goods / intangible valuables, with the payments for services of mobile network operators account for 29.5% in terms of the number of transactions.

Table 3.3.2.4.

Electronic money issuers

№	System	Issuer
1	«e-kzt»	"Eximbank Kazakhstan" JSC and Subsidiary of "Bank Home Credit"
2	«Woopay»	"Eurasian Bank" JSC
3	«EPS KZM»	"Alliance Bank" JSC
4	«Visa Qiwi Wallet»	"AsiaCredit Bank" JSC
5	«Prsoanl Cash Department»	"Tsesnbank" JSC
6	«Tau - tenge»	"Eximbank Kazakhstan" JSC
7	«TV - Money»	"Eximbank Kazakhstan" JSC
8	«Paypoint»	"Eximbank Kazakhstan" JSC

Source: NBRK

January 1, 2015, electronic money worth KZT 18.7 bln. was issued, and electronic money in circulation amounted to KZT 949.8 mln. Electronic money is quite convenient for small amount on-line payments (payment for cellular service, cable TV, Internet), since the average amount of one payment with the use of electronic money was KZT 2 690. Electronic money is also popular in making “emotional payments” such as pay-in transactions in on-line Internet games (strategies), purchases of electronic gifts in social networks, etc. however, the use of electronic money in Kazakhstan is still a rare practice, which is utilized by about 10% of the country’s population (at January 1, 2015, the number of electronic money holders in Kazakhstan was 1 783 546 individuals, of which 295 935 individuals are active users).

Thus, the development of electronic money in Kazakhstan will promote a further popularization of non-cash retail services and will also allow increasing availability of financial services to the population.

3.4 Financial System Regulation and Risk Management

3.4.1 Improving Regulation of Financial Organizations

In 2014, the NBRK made an active effort to improve regulations which govern activities of financial organizations. The policy-making activity was focused on further development of the financial sector regulation, on safeguarding financial stability and increasing competitiveness of the financial system.

Given instability factors and risks to a sustainable development of the financial sector that were highlighted, among others, in the Financial Stability Report of Kazakhstan for 2013, the NBRK designed a detailed plan of top-priority actions to eliminate the identified threats and increase the financial sector’s soundness. In particular, the Plan of Arrangements for Rehabilitation of the Banking System and Further Financial Sector Development for 2014 as approved by the NBRK’s Board included conceptual areas associated with:

- solution of the problem of quality of banks’ loan portfolio;
- provision of liquidity and funding to the banking system;
- improvement of the financial sector regulation with a view to increase its soundness.

Banking Sector.

In 2014, the policy-making activities of the NBRK were focused on refinement of regulations governing activities of the banking sector that are aimed to:

- fine-tune requirements in respect of early response measures and the methods for determining the factors which cause deterioration in a bank’s financial position;

- formulate requirements to systems of risk management, internal control that provide effective control on the part of the board of directors, senior management of a bank over the bank's activities and its financial condition;

- introduce into Kazakhstan's bank regulation practice recent recommendations of the Basel Committee on Banking Supervision (Basel III) by setting new requirements to the calculation of capital adequacy ratio as well as ensuring flexibility of the process of transition to new standards (with regard to improvement in the composition of capital and its adequacy), adapting terms and concepts used to establish criteria for financial instruments to be included in capital that are approximated to the Basel III framework, to conform to requirements of the laws of the Republic of Kazakhstan;

- spur activity of financial organizations in the securities market that provides for inclusion of margins and guarantee fees into calculation of prudential ratios of banks, investment portfolio managers, the national postal operator and voluntary accumulation pension funds;

- mitigate risks of unsecured consumer lending by increasing the risk weight on consumer loans when calculating capital adequacy requirements (from 75% to 100%); introducing the debt load ratio in respect of unsecured loans at not more than 50%; establishing a limit for the rate of growth of the unsecured consumer loan portfolio at not more than 30% a year;

- regulate banking activity by providing an opportunity for banks to transfer the consumer loan portfolio to other banks within the established limits;

- change the calculation of the ratio for investing owners' equity into assets;

- ensure conformity of risks assumed by banks in the deposit-taking, opening and maintenance of bank accounts of individuals to the size of the bank's equity; change the approach to increasing the minimum size of owners' equity;

- regulate foreign exchange risk of a bank including through a regulatory relief on the currency position limit;

- determine the procedure for computation of factors that cause deterioration in financial condition of a bank based on creation of provisions (reserves) in accordance with IFRS;

- ensure a flexible transition to the calculation of prudential ratios in accordance with IFRS;

- increase banks' opportunities on transactions with financial instruments including extension of the list of financial instruments eligible to be transacted with by banks; provide an opportunity for purchase of securities by banks in the course of their initial offering in the unorganized market; update the list of financial instruments which banks are allowed to purchase in the secondary unorganized securities market.

Insurance Sector.

Amendment of the regulatory framework which governs the insurance sector activities was mainly aimed at a further development of certain aspects of the insurance sector regulation. Specifically, in 2014 the following changes were made to the insurance sector regulatory framework, that imply:

- improving regulation of activities of insurance organizations with regard to refinement of requirements to creation of insurance reserves and methods for their calculation and to their structure;

- establishing the parity of the tariff and reserve basis under the endowment insurance contracts and life insurance contracts concluded from January 1, 2015;

- reducing the minimum guarantee fund by 10% for insurance organizations which specialize in health insurance;

- setting up a list of reserves created from capital of insurance organizations;

- excluding requirements for creation of the stabilization reserve for voluntary personal insurance classes;

- excluding the reinsurer's share in insurance reserves when calculating prudential ratios in case of entering into a reinsurance contract under the compulsory motor civil liability insurance.

Securities Market.

With a view to stimulate the development of the securities market and increase activity of its major participants, in 2014 the NBRK made appropriate effort and necessary changes to the regulatory framework that imply:

- designing a system of accounting for contracts on transactions with derivatives in the organized and unorganized financial markets;
- simplifying the procedures for operation of international financial organizations rated at least AA under the international scale rating in the course of securities registration, submission of reports about the results of bond offering and redemption, disclosure of financial statements on the web-site of the securities depository and the stock exchange;
- ensuring the procedure for recognition of transactions made both in the organized and unorganized securities market as conducted for the manipulation purpose;
- promoting the initial stage of the “T+n” settlement system project implementation at the stock exchange with regard to the introduction of provisions allowing brokers/dealers to enter into deferred settlement transactions in the local organized securities market provided there is proper management of risks;
- determining the possibility of revision of listing requirements in respect of issuers and their securities with a view to increase the number of issuers of equity securities and debt securities;
- increasing the degree of independence of the stock exchange in setting requirements to issuers, net profit, selling volumes on the core activity (for non-financial organizations and leasing companies) of a listing company, availability of a market maker on securities, the number of shares in a float, and other requirements;
- fine-tuning qualification requirements to auditing firms for access of financial instruments to a special trading platform of the regional financial center of Almaty city;
- including non-bank brokerage organizations into the list of traders in government securities during their initial offering with a view to effective legalization of property by individuals through purchases of government securities;
- abolishing the discounting of the book value of assets i.e. inclusion of assets at their market value in accordance with IFRS while preserving the existing approach to determining the regulatory capital of financial organizations as the difference between assets and liabilities.

Other Aspects of the Financial Market Regulation.

During 2014, some legislative changes aimed to further improve the financial market regulation and increase effective functioning of financial organizations were considered and adopted. The list of changes adopted in 2014 ensures:

- approval of the Concept for management of assets of the Unified Accumulation Pension Fund as well as of the list of financial instruments eligible for investment;
- the procedure for transferring pension savings of contributors (beneficiaries) from the unified accumulation pension fund to a voluntary accumulation pension fund, from a voluntary accumulation pension fund to the unified accumulation pension fund as well as from one voluntary accumulation pension fund to another voluntary accumulation pension fund;
- the procedure for transferring pension savings to an insurance organization under a pension annuity contract;
- determining the procedure for setting discounting rates on illiquid securities of organizations-residents of Kazakhstan;
- fine-tuning the calculation of the cost of a conventional unit of pension assets of the unified accumulation pension fund or a voluntary accumulation pension fund;
- extending information about the investment portfolio structure of the unified accumulation pension fund built up from pension assets;
- determining the procedure of appointment, authorities and operation of a financial organization during the period of the provisional administration of a bank, an insurance (reinsurance) organization, for undertaking expenses by the provisional administration.

Concept for the Financial Sector Development of the Republic of Kazakhstan till 2030.

The key challenges for a sustainable and progressive development of the financial sector of Kazakhstan are currently determined by the following factors:

- persisting structural imbalances associated with the quality of bank assets, shortage of long-term funding, etc.;
- the need to increase efficiency of financial institutions due to increased requirements to their soundness, including within the framework of international regulatory initiatives;
- anticipated growth of the competitive pressure amidst active involvement of Kazakhstan in integration processes (the Eurasian Economic Union, WTO).

With a view to address problems that are faced by the financial system of Kazakhstan, the NBRK, at the instruction of the Head of the State and jointly with interested government authorities and the financial market participants drafted the Concept for the Financial Sector Development of the Republic of Kazakhstan till 2030.⁹⁶ (the Concept-2030). The paper was prepared based on a comprehensive analysis of existing and potential risks inherent in the Kazakh financial sector and described, among other, in the Financial Stability Reports of Kazakhstan for prior periods.

The main objective of the Concept-2030 is to build a competitive financial sector and increase its effectiveness in reallocation of resources in the economy on the basis of best international standards. The Concept-2030 defined the following top-priority areas:

- a further development and international integration on the principles of compliance with the best international standards (Basel III, Solvency II, IOSCO);
- consolidation of the banking sector, increase of its capitalization and growth of its financial capacities;
- the governmental financial support and intensity of the supervisory process should be determined by a scale of risks;
- increasing the funding base sustainability and effectiveness of the systemic liquidity management through diversification of funding by currencies, maturities, sources, permanent participation of the NBRK in the money market, by encouraging the interbank market development;
- risk-based approach in regulation and supervision of the financial market entities, implying the focus on the consistence of a financial organization's business strategy with its individual risk profile;
- establishing a system of incentives focused on a flexible introduction of new products, development of technologies with adequate level of safety and on effective capital management in financial organizations, and establishing the regulatory environment which enables not only to solve the existing problems but also provides conditions for prevention of reoccurrence of negative situations;
- an active role of the government in increasing the supply of financial instruments in the stock market;
- expanding the coverage of the population and economic entities with financial services and increasing financial literacy of financial services consumers;
- combination of a pragmatic regulatory protectionism in the securities market with liberalization of listing requirements and access procedures;
- expanding regulatory capacities for qualified investors in respect of investment operations and risk assumption along with increased requirements to their management and capital adequacy;
- limiting direct participation of the government in the financial system through development institutions which do not compete with private financial organizations;
- increasing self-sustainability and independence of the NBRK's institutional infrastructure in respect of the decision-making about regulation and supervision of the financial market and financial organizations;
- improving the market discipline;
- increasing investment attractiveness of the financial market for equity investments by domestic and foreign investors;
- preserving the financial system with domination of the domestic capital.

⁹⁶ Approved by the Government's Decree of the Republic of Kazakhstan dated August 27, 2014 No. 954.

In doing so, by adhering to top-priority goals designated by the Concept-2030, current problems of the financial sector will be solved as well as the architecture required to overcome long-term technology challenges will be designed and sustainable development of the financial sector in the environment of globalization and integration will be ensured, by 2020.

Concept for Functioning of the “Problem Loan Fund” JSC.

In order to improve the PLF’s performance, on May 27, 2014 the NBRK’s Board adopted the Concept for Operation of the PLF⁹⁷, which provides for expanding the mechanisms of the Fund’s cooperation with banks. The Concept, in addition to a “direct purchase” provides for a possibility of “fiduciary asset management” by banks as well as for the PLF’s provision of the tied financing to banks for improvement of asset quality (in the form of a deposit placed with a bank, a loan to a bank, securities purchase including via securitization framework with various conditions of their structuring).

New mechanisms of obtaining additional financing are aimed to extend the banks’ capacities in dealing with problem loans when making certain arrangements for restructuring, rehabilitation, etc. In conjunction with other instruments, such mechanisms will help making a maximum contribution to the strategy aimed to reduce the level of “non-performing” loans and ensure implementation of efficient policy of cleaning up the banks’ balance sheets to targeted thresholds pursuant to the mandate made by the Head of the State.

The new Concept also implies the broadening of the PLF’s mandate and powers; this determines the need to make relevant changes to the legislation which governs the PLF’s activities. The necessity of broadening PLF’s mandate was highlighted by the IMF experts based on the outcomes of Kazakhstan’s Financial Sector Assessment Program (2013-2014).

3.4.2 Activities of the Council for Financial Stability and the Financial Market Development of the Republic of Kazakhstan

In 2014, eight sessions of the Council for Financial Stability and the Financial Market Development of the Republic of Kazakhstan were conducted where current and perspective issues pertinent to the development of the banking, insurance, pension sectors and other segments of the financial system were discussed.

In particular, the Council Members and the financial market participants addressed the following issues related to the improvement of the banking sector regulation and made the following decisions:

- approval of the proposal about a stage-by-stage increase in the requirements to banks about investment of their capital funds which are currently placed outside the Republic Kazakhstan, within Republic Kazakhstan;
- support of the NBRK’s proposal about a stage-by-stage increase in the minimum capital requirements of banks till 2019 as well as establishing limits for deposit-taking from individuals in respect of those banks which do not conform to the minimum capital requirements;
- approval of the mechanism for provision of the Tenge liquidity to the second-tier banks against foreign currency as a security by conducting cross-currency interest rate swaps;
- decision was made to limit a foreign currency exposure on transactions with derivatives to 30% of owners’ equity;
- the development of an optimum mechanism for establishing the bank-wide processing center within the NBRK’s system by modernizing the payment card market infrastructure;
- the schedule for transition to the Basel III capital standards was updated, with endorsement of the transition to new capital requirements from 2015, which will increase stability and competitiveness of the banking sector in the regional and international market in the long run;

⁹⁷ The Concept for Operation of the “Problem Loan Fund” JSC was approved by the Board Resolution of the National Bank of the Republic of Kazakhstan No. 96 dated May 27, 2014.

- considering the outcomes from the set of measures undertaken in 2014 and aimed to limit risks associated with a fast growth of consumer lending as well as to address the problems of non-performing assets of banks.

The following issues were addressed at the Council's sessions in the course of discussions of the current state and trends in the development of the insurance sector:

- improving the system of compulsory accident insurance where proposals regarding the transition from the worker's insurance system to the worker's social protection system were considered;

- improving the insurance market infrastructure by determining focal areas in the development strategy of the Deposit Insurance Fund.

Additionally, as part of the decision-making on challenging issues in the financial market operation, special attention at the CFS sessions was paid to:

- addressing the issues related to problem mortgage borrowers including with regard to criteria which determine categories of mortgage borrowers in respect of which loan restructuring procedure can be applied;

- offsetting negative impact of sanctions imposed by a number of countries against the Russian Federation on the financial sector and the economy of Kazakhstan;

- improving the pension system of the Republic Kazakhstan, where a proposal to invest a part of resources of the "Unified Accumulation Pension Fund" JSC into financial instruments of banks was approved;

- discussing the conclusions from the Financial Stability Report of Kazakhstan for 2013 as well as proposals about changing the approach to its preparation with a view to increase effectiveness, scale and relevance of the performed analysis.

Based on such sessions, a number of working groups were established to elaborate a consolidated position of government authorities and representatives of the financial sector. The fact that stakeholders from the government authorities and representatives of the financial market participate in the Council's sessions allows creating necessary conditions for making the most weighted decisions regarding the financial sector development.

3.4.3 Macro-prudential Aspects of Regulation

1. Assessing Effectiveness of Measures for Limitation of Risks Associated with Excessive Growth of Unsecured Consumer Lending

In the 1st quarter of 2014, a set of measures⁹⁸ taken by the NBRK and aimed to limit the systemic risk and potential adverse effects associated with a quick growth in unsecured consumer lending came into force.

To analyze the effectiveness of taken measures, a counterfactual scenario was modeled which assumes that consumer lending in Kazakhstan functions without enforcement of regulatory restrictions. In particular, such approach allows forecasting consumer lending indicators that would be existing in Kazakhstan without implementation of the disincentive policy of the NBRK and comparing the resulting data with factual values in 2014. A similar analysis was performed by the Reserve Bank of New Zealand in order to assess the effect of the statutory loan-to-value ratio (LTV) introduced in 2013 to cool down the residential real estate lending⁹⁹.

The counterfactual scenario modeling, namely the assessment of loan volumes which were provided to the population for consumer purposes¹⁰⁰ in 2014, was performed with the use of multiple regressions by the least square method. The main assumption in the model is that the consumer lending pattern in 2014 was determined by a combination of factors including the regulatory measures taken, general economic environment and other factors where it is impossible to provide a clear distinction between individual effect of each of these factors.

⁹⁸ Increasing capital adequacy requirements in respect of consumer lending, introducing a direct limit on the growth rate of the unsecured loan portfolio of not more than 30% a year, introducing the borrower debt load ratio on unsecured loan portfolio of not more than 50%.

⁹⁹ «How has the LVR restriction affected the housing market: a counterfactual analysis», Reserve Bank of New Zealand, May 2014.

¹⁰⁰ Flow indicator for the period.

The model used the following independent variables¹⁰¹:

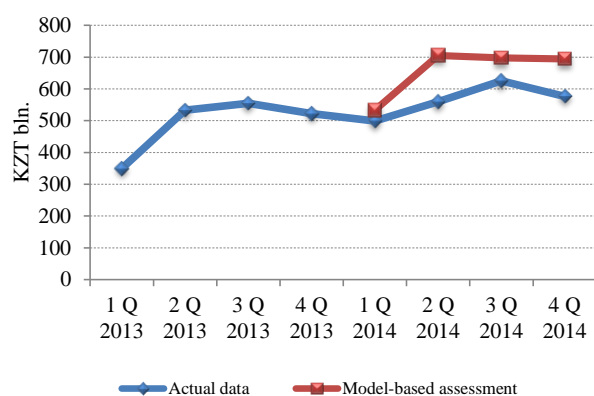
- retail deposits (DEP);
- short-term loans for consumer purposes of individuals, at end-period (CRSHPST);
- long-term loans for housing construction and purchase by individuals, at end-period (CRLBST);
- the volume of long-term loans for housing construction and purchase by individuals, provided during the period (CRLBSTURN);
- an average monthly wage in Kazakhstan (W);
- a factor of the seasonal reduction in the volume of consumer loan disbursements at the beginning of the year (SEASON).

Table 3.4.3.1
Results of the model-based assessment of provided consumer loans

	Specification	
	Coefficient	t-Statistic
DEP (-1)	0,056438	15.49735
CRSHPST(-1)	0,620337	8.415018
CRLBST(-1)	-0,063769	-9.050062
CRLBSTURN(-1)	1,360942	16.25387
W(-1)	-0,790859	-6.044725
SEASON	-19257,48	-4.378242
DUMMY 2013M4	40105,54	3.259659
DUMMY 2013M7	42321,93	3.414586
R²	0.942192	
Adjusted R²	0.938579	
DW statistic	1.596692	

Source: NBRK's assessment

Figure 3.4.3.1
Consumer lending volumes: actual data and model-based assessments (disbursements over the period)



Source: NBRK, NBRK's assessment

Apart from constructing the model, the NBRK performed the analysis of individual parameters of the collateral-free retail lending¹⁰³ on the basis of aggregated data of the group of largest banks¹⁰⁴ (Box 11).

Historical series for construction of models included variables in a monthly breakdown for the period from January 2004 to the time when regulatory measures became effective¹⁰² (to February 2014). In doing so, based on the capabilities of the NBRK's database, particularly, the length of statistical series, the data about the total volume of provided consumer loans, irrespective of whether they were secured or unsecured, was used as a dependent variable.

Thus, the estimate obtained based on the results of the model goes beyond the analysis of effectiveness of measures aimed to disincentivize unsecured retail lending, characterizing the trends in the consumer lending as a whole (Table 3.4.3.1).

The estimate of volumes of loans which were provided to the population for consumer purposes without the NBRK's adjusting policy, according to modeling results for the period from February through December 2014 significantly exceeds the actual values. So, the modeled volume of consumer loan disbursements exceeds the actual data by 17.5% (Figure 3.4.3.1).

Thus, in 2014 there were favorable changes in the consumer lending segment associated with the fact that signs of "overheating" weakened, also owing to the implemented set of regulatory measures.

¹⁰¹These variables are explanatory for a dependent indicator – the volume of consumer loans provided during the period – both in terms of financial capacities of the population and in terms of lending activity and availability of funding in banks.

¹⁰² Measures tightening capital adequacy requirements with regard to consumer lending as well as a limit on the maximum growth of the unsecured consumer loan portfolio came into effect in February 2014, whereas the borrower debt load ratio is effective from April 1, 2014.

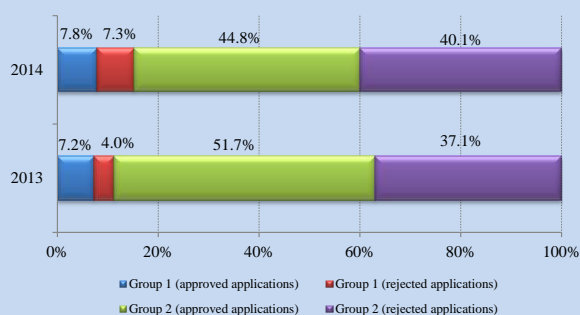
¹⁰³Looking at the loans which were provided to borrowers for buying goods, services and works not related to entrepreneurial activities, except loans secured with the real estate mortgage, loans where a purchased car serves as collateral, loans secured by cash placed with a bank under the bank deposit agreement and covering the amount of provided loan in full; loans provided as part of the education lending system.

Analysis of individual segments of collateral-free retail lending

For the purposes of analysis, borrowers that got loans from banks during 2013-2014 were divided into the following categories: group one – borrowers with a conditionally high income, and group two – borrowers with a conditionally low income¹. It is the second group of borrowers in respect of which the requirements for mandatory calculation of debt burden ratio before provision of a collateral-free loan (regulatory DTI) are in effect from April 1, 2014.

Figure 1

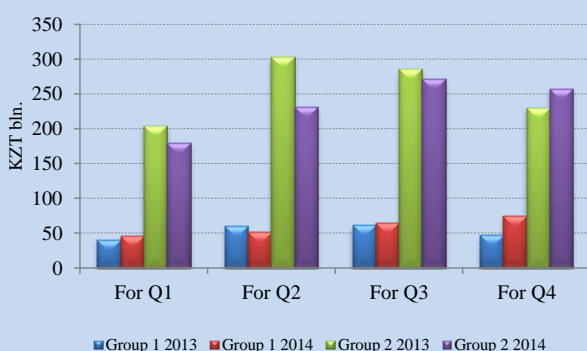
Ratio of approved and rejected loan applications in the total number of applications, by groups of borrowers



Source: NBRK's assessment on the basis of banks' sample data

Figure 2

Volumes of provided loans, by groups of borrowers



Source: NBRK's assessment on the basis of banks' sample data

given that the borrower debt burden is in inverse proportion to the level of his/her income, the regulatory DTI requirements were likely to serve as an additional incentive for lending to those borrowers who, due to higher income, could have a higher leverage level. As for the main parameters characterizing unsecured retail loans, in 2014 the average amount of a loan provided to both groups of borrowers decreased (Table 1). A more significant decrease is typical for long-term loans where maturity exceeds one year. So, if in 2013 the average amount of a long-term loan for borrowers from the first and the second group was KZT 941 000 and KZT 502 000, respectively, in 2014 banks provided loans for long-term needs amounting on average to KZT 707 500 for borrowers from the first group and KZT 457 400 – to borrowers from the second group. The reduction in the average loan amount as a whole helps distribute the borrower debt load in a more acceptable manner and reflects the overall expected effect from the implemented set of NBRK's measures.

Based on the analysis results, in general banks became more conservative in their selection of borrowers in 2014 versus the previous period. So, the share of rejected applications within total applications for collateral-free loans increased from 41.1% in 2013 to 47.4% in 2014 (Figure 1). According to the aggregated data, each tenth application among denied applications of the second group of borrowers during the 2nd - the 4th quarters of 2014, was rejected because of regulatory DTI requirements.

Another differing trend is that more loans are provided to the group of borrowers with a conditionally high income with a moderate reduction in loans to borrowers with a conditionally low income (Figure 2). So, the volume and the number of loans provided to borrowers from the first group during 2014 increased by 13.0% and 24.8%, respectively, versus the previous year.

At the same time, despite the existing demand for collateral-free loans on the part of borrowers from the second group, the volume and the number of loans provided to that group in 2014 decreased by 8.2% and 5.3%. Thus,

¹⁰⁴ The portfolio of unsecured consumer loans of these banks accounted for over 90% of the total unsecured loan portfolio of the banking sector at 01.01.2015.

Table 1

Parameters of unsecured consumer loans, broken down by groups of borrowers

Item	Borrowers from Group 1		Borrowers from Group 2	
	Loans with the tenor of less than 1 year	Loans with the tenor of over 1 year	Loans with the tenor of less than 1 year	Loans with the tenor of over 1 year
Average amount of one provided loan*, KZT thous.				
in 2013	180,3	941,0	116,2	502,0
in 2014	170,6	707,5	113,5	457,4
Average tenor of a provided loan, in months.				
in 2013	10	35,2	10,4	34,1
in 2014	9,9	35,6	0,5	33,7
Average value of DTI under scoring systems of bank sampling				
in 2013	29,1%	36,4%	31,9%	40 0%
in 2014	29,6%	31,1%	27,7%	34,7%

Note: *excl. credit cards

Source: NBRK's assessment on the basis of bank's sample data

Another important analytical parameter is the average level of DTI calculated on the basis of scoring systems of the group of banks for loans provided in 2014 and in 2013. Despite the fact that the obtained estimate of DTI is approximate because of differences in approaches applied by banks themselves in analyzing a borrower's creditworthiness as well as in respect of responsiveness of scoring models, the ratio allows determining an approximate range of debt burden of borrowers that obtain loans from banks. So, an average level of DTI among borrowers from the second group on short-term and long-term loans provided in 2014 accounted for 27.7% and 34.7%, respectively; at the same time, the same ratios among more conservative banks in the sample exceeded 40%. Therefore, based on the existing DTI ratios from scoring models, in the long run the NBRK has a certain range for tightening the regulatory DTI threshold, if necessary.

¹ The first group – borrowers whose income exceeds the double size of the average-monthly wage in the Republic of Kazakhstan as determined by the CS MNE RK; the second group – borrowers with a conditionally low income which does not exceed or equals the double size of the average-monthly wage in the Republic of Kazakhstan as determined by the CS MNE RK.

Since a more obvious effect from the introduction of regulatory DTI will develop over time, once the portfolio of provided loans “ages” and accumulates past due debt, the k10 prudential ratio allowed discouraging the “overheating” of the collateral-free retail lending segment. So, in 2014, a cumulative growth of the collateral-free loan portfolio in the banking sector to which the requirement for the k10 calculation applies accounted for 7.9%, whereas in 2013 the corresponding portfolio increased by more than 1.5 times, according to the NBRK's estimates. At the same time, despite its “immediate” nature, this instrument also has deficiencies caused, among others, by unequal “starting point” for different banks at the time of its introduction. For this reason, banks with an initially small portfolio volume and the willingness to do the retail business got an opportunity to increase their presence in the segment more actively by purchasing the portfolio from (larger) banks without violation of respective k10 requirements. As a result, during 2014 some banks from the second “ten” group in terms of the size of unsecured consumer loan portfolio were purchasing loan pools from larger banks.

2. Identification and Regulation of Systemically Important Banks

In 2014, the NBRK revised the methods for identification of systemically important banks based on recommendations from the Basel Committee on Banking Supervision (BCBS) in respect of domestic systemically important banks (DSIB), which become effective from 01.07.2015. In particular, according to the new methodology approved by the NBRK, systemically important banks are identified based on the following criteria: (i) size; (ii) interconnectedness of a bank with the financial market participants; (iii) substitutability and infrastructure (payment systems); (iv) complexity of the bank's operations.

The BCBS's recommendations in respect of DSIBs do not specify the ratios which characterize the above criteria as well as the relative share of each criterion. The BCBS

Financial Stability Report of Kazakhstan, December 2014

recommends to set for DSIB own indicators which characterize mentioned criteria or to apply indicators and weights recommended for global systemically important banks (GSIB). To that end, the NBRK determined the indicators which characterize the above criteria as well as a relative share of each indicator based on recommendations for GSIB, international experience of other regulators (Singapore, Canada, Russia, Switzerland, etc.) as well as taking into account the specifics of the domestic financial sector. Indicators for identification of systemically important banks by the NBRK as well as main differences between the methods for identification of systemically important banks (GSIB, DSIB) of the BCBS and the methods used by the NBRK are given in Table 3.4.3.2.

The relative share of each indicator was determined by the NBRK based on the recommendations made by the BCBS for GSIBs as well as taking into account absolute significance (size) of a ratio in the criteria in the banking sector of Kazakhstan.

Table 3.4.3.2

Main differences between the BCBS's methodology for identification of systemically important banks (GSIB, DSIB) and that of the NBRK

Ratios and percentages (%) according to the BCBS's methodology	Ratios and percentages (%) according to the NBRK's methodology
Criterion: International Activities	
International assets (10%) International liabilities (10%)	Not applicable to domestic systemically important banks (DSIB).
Criterion: Size	
Total exposures calculated for leverage under the Basel III recommendations (20%)	Assets size (20%)*; Liabilities size (20%)*.
Criterion: Interconnectedness	
Intra-financial system assets (10%) Intra-financial system liabilities (10%)	Intra-financial system assets, incl.interbank assets and investments in subsidiaries (5%); Intra-financial system liabilities, incl. interbank liabilities as well as the UAPF's investments in bank deposits and securities issued by a bank (5%); Interconnectedness with the KDIF: amount of deposits subject to insurance by KDIF (10%).
Criterion: Substitutability and infrastructure/payment systems	
Assets under custody (6.67%); Payment systems & clearing (6.67%); Underwriting activities (6.67%).	Assets under custody (3%); Payment systems & clearing (10%); Loan portfolio (7%).
Criterion: Complexity	
Notional amount of over-the-counter (OTC) derivatives (6.67%) The amount of securities recorded by the bank at fair value through profit or loss and available for sale securities (6.67%); Level 3 assets, i.e. illiquid assets whose fair value cannot be measured through the market value and market-based models (6.67%).	Bank's contingent/notional claims on derivatives and foreign currency (5%); Bank's contingent/notional liabilities on derivatives and foreign currency (5%); The amount of securities recorded by the bank at fair value through profit or loss and available for sale securities (10%).

Source: BCBS, NBRK

A bank's generalized indicator (GI) is computed under the formula:

$$GI = \sum_{j=1}^{11} B_{\Pi_j} \frac{\sum_{i=1}^4 \Pi_{ij}}{4},$$

where:

B_{Π} – a relative share of the indicator;

Π_{ij} – a share of the bank's indicator in the banking sector for the quarter.

A bank is recognized as systemically important if its generalized indicator accounts for 10% or more. If the GI ranges between 5% and 10%, the bank is included into the “watch list”, i.e. the list of potential banks which can be recognized as systemically important based on the results of a regular assessment (Table 3.4.3.3).

Table 3.4.3.3

Values of generalizing indicator of a bank (GI)

GI value	Interpretation of GI value	Number of banks
-----------------	-----------------------------------	------------------------

$10\% \leq GI$	Systemically important banks	2
$5\% \leq GI < 10\%$	A potential bank which may be recognized as a systemically important bank based on the results of regular assessment and included in the 'watch list'	5
$GI < 5\%$	Other banks	31

Source: calculation by NBRK

It should be noted that the GI characterizes not the degree of risk of a bank but the degree of losses for the financial sector as a whole in case of the bank's failure ("loss given default" principle).

In order to minimize the occurrence of systemic risks, in 2014 changes were made to the NBRK's regulations that provide for increased regulatory requirements in respect of systemically important banks. Specifically, more tight requirements were set in respect of capital adequacy as part of the beginning of the transition to the Basel III standards, including: (i) introduction of the systemic buffer of 1% (to be introduced from 01.01.2016); (ii) fast-track introduction of requirements to the counter-cyclical capital buffer as compared to other banks.

Apart from that, the existing legislation provides for increased triggers in respect of systemically important banks within the framework of early response measures if there are signs of deteriorating financial position and prudential ratios of a bank (versus other banks), as well as separate stress-scenarios and recommendations on stress-testing (Bottom-Up). In 2015, the NBRK is planning to prescribe separate stress-scenarios and recommendations for stress-testing (Bottom-Up) within the framework of early response measures also in relation to potential banks which could be recognized as systemically important based on the results of a regular assessment and which are included in the "watch list" by the NBRK. Additionally, with a view to further address the "too-big-to-fail" problem, in 2015 the NBRK is planning to consider various approaches for regulation of systemically important banks, including taking into account the international experience and outlined trends (Box 12).

Box 12

International experience in regulation of systemically important banks

The overview of international experience in regulation of domestic systemically important banks showed that reforming this activity at the national level implies implementation of a set of measures, specifically: developing the methods for identification of systemically important banks and establishing additional requirements for loss absorption, strengthening supervision and increasing effectiveness of insolvent banks' resolution. At present, many developing countries are at the stage of designing specific approaches for domestic systemically important banks. At the same time, a number of developed countries have already introduced certain (special) measures for regulation of domestic systemically important banks. So, apart from establishing the systemic buffer for loss absorption implemented in Kazakhstan for systemically important banks, the following arrangements in the regulation of systemically important banks are implemented in the international practice.

1. Establishing higher triggers in case of capital reduction with regard to limiting payments of bonuses, dividends, and coupons on hybrid convertible instruments as well as when using the regime of resolution and crisis management. For example, in Denmark, when capital adequacy ratios go down to a certain level, triggers are activated regarding prohibition of payment of bonuses to the top management, payments of dividends and coupons on hybrid convertible instruments as well as triggers used during resolution and crisis management regime. In doing so, higher levels of triggers are established in respect of systemically important banks versus other banks (Figure 1).

Triggers for applying the above measures in relation to systemically important banks are activated according to the following time line:

(i) *when requirements to the conservation buffer are violated*, limits are set in respect of payment of dividends on instruments of the tier-one capital, and on bonuses to the top-management. In addition, a bank is required to submit a plan on the conservation capital to the competent authority;

(ii) *when requirements to the systemic buffer are violated*, a bank is required to submit a recovery plan to the competent authority, prepared by the bank itself;

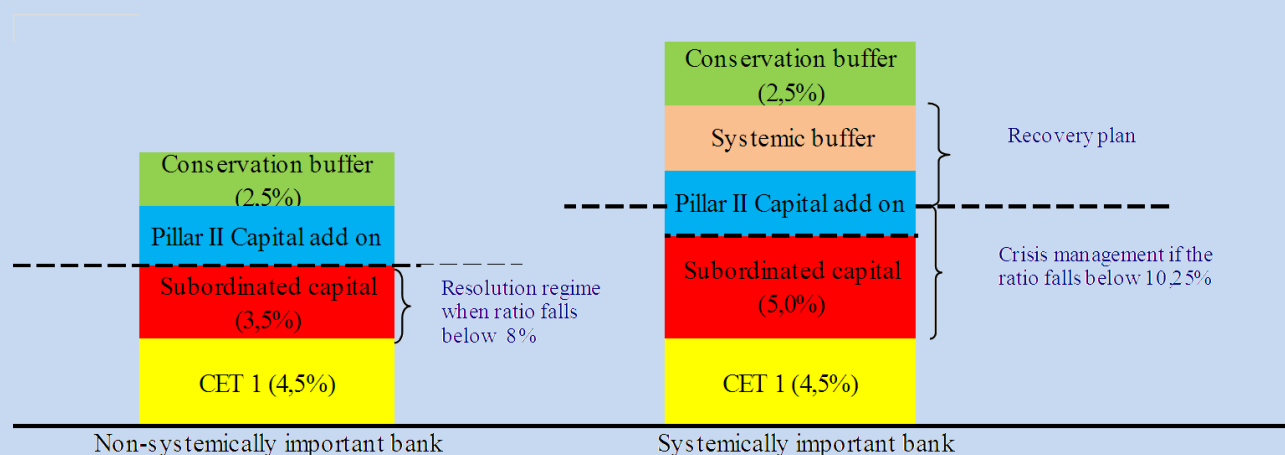
(iii) *when capital charge for the Pillar II is violated*, the competent authority may limit interest payments on tier-two capital instruments, summon a general shareholders meeting as well as replace the top management and the Board members of a systemically important bank;

(iv) *when capital goes down below 10.25%*, the regime of crisis-management is initiated where measures provided for in the crisis management plan are implemented. It should be noted that the competent authority in charge of crisis management in advance prepares the crisis management plan for all systemically important banks, which indicates which of the existing resolution mechanisms (bridge bank, purchase and

assumption (P&A), bail-in, stabilization fund) are most suitable for each systemically important bank. In case of the crisis management regime, the management of a bank is carried out by the competent authority in charge of crisis management or by a receiver until a new membership of the Board is elected.

Figure 1

Triggers for enforcing the resolution or crisis management regimes in respect of systemically important and non-systemically important banks in case of reducing the capital adequacy ratio in Denmark



Source: Committee on Systemically Important Financial Institutions of Denmark

The following resolution mechanisms of troubled systemically important banks are used in case of crisis management:

- *establishing a bridge bank*, to which assets with a normal risk profile and unimpaired assets as well as corresponding liabilities are transferred. At the same time, subordinated liabilities and own funds remain at the bank which is subject to liquidation. During the next few years, the bridge bank or its part is sold under normal market terms and conditions;

- *Purchase and Assumption (P&A)*: transfer of assets and liabilities of a problem bank to another bank;

- *liabilities' conversion or write-off (bail-in)*. When the regime of crisis management is initiated, there is an option to convert subordinated liabilities into shares with a view to capitalize a bank. The management of a bank is carried out by the competent authority in charge of crisis management or by a receiver until a new membership of the Board is elected. In practice, uninsured liabilities of the bank are written off together with the establishment of a bridge bank. In this case the bridge bank is capitalized with the written off liabilities;

- *establishing a stabilization fund for crisis management* at the expense of fees contributed by systemically important banks. The stabilization fund is used together with other crisis management instruments and may be used to provide liquidity or a loan to the bank in the period of crisis management as well as to buy assets or for capitalization of the bridge bank. The stabilization fund is established as a self-regulated entity where the competent authority in charge of crisis management determines the allocation of resources. The fund is built up from annual fees of systemically important banks on the basis of the size (a share) of risk-weighted assets of a systemically important bank for the previous period.

2. Setting higher requirements for the liquidity coverage ratio (LCR) according to the Basel III standards or a fast-track introduction of this ratio for systemically important banks versus other banks (EU countries, Russia, etc.). Specifically, under the EU Directive, there is a plan to finalize the LCR implementation by 2018. At the same time, some of the EU countries are planning a fast-track implementation of the LCR requirements in respect of systemically important banks. In Russia, the CBRF also contemplates a fast-track implementation of the liquidity coverage ratio according to the Basel III standards as a prudential ratio for systemically important banks (from 01.07.2015).

3. Establishing a stricter regulatory approach versus other banks, which implies:

- (i) more thorough and intensive inspections and off-site supervision;
- (ii) an in-depth focus on corporate governance and risk management, including:
 - a focus on the review of the minutes of quarterly board meetings, certain reports of the internal management, meetings of internal committees, and internal compliance reports;
 - a regular examination of procedures established in respect of the bank's risk officers with a view to

strengthen risk management;

- an in-depth analysis of the bank's models and asset investments;
- higher requirements to intra-group risks by setting lower maximum limits with financial institutions which are a part of the group with systemically important banks, with the view to limit the risk of intra-group contagion in case of financial problems;
- information disclosure about the bank in accordance with the Pillar III requirements of the Basel Committee;
- applying the fit & proper requirements not only to the Board members and top management of a systemically important bank but also to senior risk managers, managers in charge of audit and reporting;
- establishing specific requirements in respect of the organizational structure and the staffing of the risk management department, since a bank must have its risk management function at a level corresponding to the best risk management practice of international systemically important banks;
- specific requirements in respect of IT systems, particularly, apart from the IT disaster recovery plan, IT systems must ensure effective and safe risk management.

¹ The Committee on Systemically Important Financial Institutions in Denmark. Systemically important financial institutions in Denmark: identification, requirements and crisis management. Copenhagen 11. March 2013.

3. Key Priorities in Macro-prudential Regulation for 2015-2016

Taking account of conclusions made on the basis of assessment of the financial stability of Kazakhstan, including identified vulnerabilities of the banking sector, in 2015-2016 the NBRK will continue to strengthen the financial stability potential of the banking sector and to prevent systemic risks and threats for the financial sector as a whole.

Table 3.4.3.4

NBRK's analytical priorities in the area of macro prudential regulation for 2015-2016

Ensuring balanced development of the consumer lending segment
1. Monitoring the situation in the consumer lending segment, calibrating and optimizing enforced corrective actions
Strengthening approaches to liquidity risk management
2. Designing core provisions for implementation of the Basel III standards in the regulatory practice in Kazakhstan in relation to the Liquidity coverage ratio
Creating conditions for a stable and uninterrupted operation of systemic banks
3. Continuing the establishment of the system of systemic banks' regulation
Providing systemic liquidity to the banking sector
4. Extending the list of collateral accepted by the NBRK in implementing its monetary policy operations
Creating conditions for development of the interbank lending market
5. Designing mechanisms that help mitigate risks in the area of interbank lending
Using the results of stress-testing of banks' capital in implementation of the Basel II second component (Pillar II)
6. Designing approaches to the treatment of the results of stress-testing within the framework of supervisory process for assessment of capital adequacy in accordance with the individual risk profile of a bank (Pillar II capital)

Source: NBRK

4. Key Recommendations as Part of the Financial Sector Assessment Program of Kazakhstan (FSAP) 2014

In 2014, as part of its Financial Sector Assessment Program (FSAP), the IMF performed a comprehensive assessment of Kazakhstan's financial system stability and the practice of the financial market supervision. The results of the assessment were presented in the IMF Report "The Financial System Stability Assessment on the Republic of Kazakhstan" (FSSA), which was published by the IMF together with the results of the IMF report as part of consultations on Article in August 2014¹⁰⁵

The main FSAP mission was conducted in the following areas: (i) assessing risks in the banking sector; (ii) financial safety net, systemic liquidity management and crisis management; (iii) resolving the problem of non-performing loans (NPL); (iv) assessing the financial sector's regulation and supervision.

Assessing risks in the banking sector. In the first instance, members of the IMF mission assessed the source and possible consequences of main risks to macro-financial stability in Kazakhstan in the nearest future. Risk assessment of the Kazakh banking sector included the stress-testing of credit risk, market risk, liquidity risk and contagion risk; its results were summarized in the FSSA Report. The NBRK and the IMF

¹⁰⁵ The FSSA Kazakhstan Report (2014) is available on: <http://www.imf.org/external/pubs/ft/scr/2014/cr14258.pdf>.

mission members performed separate tests for credit risk by using a similar database but different methods. Also, the direct modeling of interbank risk and cross-border contagion risk was performed.

Based on stress-tests, a relatively weak position of the banking sector was identified that does not allow absorbing new risks to the full extent. So, loan losses are the major factor affecting profitability of banks and they are caused by deteriorating quality of the loan portfolio. The IMF identified a high level of indirect credit risk associated with the change in the domestic currency exchange rate. According to the IMF's opinion, if the macro-financial environment deteriorates significantly, the banking system will encounter a significant shortage of capital. At the same time, the IMF pointed out that: (i) sovereign and market risks are relatively low and direct foreign exchange risk is under control; (ii) the banking system can cope with a massive liquidity stress; (iii) domestic and cross-border contagion risks are limited.

When performing the *assessment of the financial safety net, systemic liquidity management and crisis management*, the IMF experts highlighted the following factors that reduce the effectiveness of systemic liquidity management in Kazakhstan: (i) limited liquidity management instruments and a limited use of refinancing loans and credit auctions that results in the increased volatility in the money market; (ii) poor development and segmentation of the interbank market including the lack of confidence among bank on a long-term basis; (iii) the growth in the use of the foreign currency swaps market for allocation of the Tenge liquidity among banks increases a speculative pressure and complicates the NBRK's objective of systemic liquidity and exchange rate management; (iv) a poor internal Tenge liquidity management at the bank level, since, despite a seasonal nature of the demand for Tenge in quarterly tax periods a number of banks do not create sufficient Tenge reserves thus causing a spillover effect in the financial market. The IMF also noted that during the crisis the problem bank resolution framework was updated, with the introduction of such measures as restructuring, purchase and assumption (P&A) as well as the use of a bridge bank. At the same time, the P&A and bridge bank tools were not used in practice and require legislative improvements since they do not comply with the best practice.

The assessment of the financial sector's regulation and supervisory practice in Kazakhstan was performed in respect of the banking, insurance and pension sectors as well as the securities market and the financial market infrastructure. The regulatory base on regulation and the supervisory practice were assessed on the basis of analysis of the financial sector's compliance with international standards and principles (ROSCs) in the following areas: (i) a full-scale assessment of the banking supervision compliance with the Basel's Principles for Effective Banking Supervision (the September 2012 edition) with ratings being assigned; (ii) a targeted assessment of compliance by the insurance sector, securities market, financial market infrastructure and payment systems with international standards and principles of regulation and supervision (unrated).

Based on the results of the FSAP and ROSCs, the IMF presented its key recommendations as well as recommended time frames for their implementation (Table 3.4.3.5).

Table 3.4.3.5

Financial Sector Assessment Program Key Recommendations

Financial stability and banking oversight	Time⁽¹⁾
Closely monitor quality of foreign currency-denominated loans	I
Closely monitor banks' concentrated large exposures	I
Rebalance the emphasis of supervision towards a more risk-based approach	III
Support the supervisor's capacity to challenge banks' decisions on provisioning	I
Intensify the supervision of the cross-border operations of Kazakh banks and signing Memorandums of Understanding	II
Analyze regularly indirect credit risk and market risk, including foreign exchange rate risk	I
Monitor the impact of the adopted Macro-prudential measures and conduct assessments of effectiveness	III
Financial Safety Net, resolution of NPLs and Systemic Liquidity Management	
Revise purchase and assumption and bridge bank resolution options to exclude a requirement for depositor and creditor approval	III
Limit emergency liquidity assistance (ELA) to institutions that are solvent and financially capable of paying a penalty rate of interest	II
Develop procedures for documenting financial stability analysis in cases of provision of state support to the financial sector	II
Implement a multi-track approach for resolving the overhang of non-performing loans	II
Reduce procedural costs of enforcement obstacles arising from non-registered or junior pledge holders in foreclosures	II
Revise the insolvency law to strengthen protection for legal rights of secured creditors by giving them a higher priority in creditors' ranking	II

Incentivize out-of-court restructuring by providing tax incentives at creditor's and debtor's level for debt write-offs, partial forgiveness, bad debt and collateral sales	II
Operationalize the PLF by providing for its broad mandate in NPLs resolution, including bundling of NPLs and adequate financial and staffing resources	II
Facilitate NPLs transfers into SPVs including by revising bank secrecy rules and property rights registration of the debt assignments and collateral transfers	II
Public Pensions, Insurance, and Securities Market Oversight	
Include in UAPF's Charter a clear mandate for UAPF to maximize the retirement income for it's members	I
Adjust the mandatory worker's compensation to avoid collapse of the insurance sector	I

*Note: *I – within 1 year; II – within 1-3 years; III - within 3-5 years*

Source: IMF