



NATIONAL BANK OF THE
REPUBLIC OF KAZAKHSTAN

FINANCIAL STABILITY REPORT OF KAZAKHSTAN

December, 2013

Foreword

Since 2006, the National Bank of the Republic of Kazakhstan (NBRK) has been preparing the Financial Stability Report of Kazakhstan on an annual basis.

In line with the Concept for the Financial Sector Development in the Republic of Kazakhstan approved in 2009, the government policy in the post-crisis period will aim to implement the system of macro-prudential regulation and, hence, to enhance the role of the NBRK as a central authority responsible for ensuring financial stability and implementing macroprudential regulation.

According to the Memorandum of Financial Stability made on November 10, 2007 between the Government of the Republic of Kazakhstan, the NBRK and the Agency of the Republic of Kazakhstan on Regulation and Supervision of the Financial Market and Financial Organizations now – CFS):

"financial stability shall be defined as the absence of disproportions in the economy that may result in the subsequent negative correction of financial markets, systemic crisis and inability of financial institutions to ensure an ongoing functioning of the financial system as well as to maintain business activity in the real sector of the economy".

As part of the Financial Stability Report of Kazakhstan representing one of the tools of the comprehensive systemic risk analysis, the following aspects determining financial stability are assessed:

- (1) how efficiently and timely financial resources are reallocated among those who save and invest money;
- (2) whether risks are adequately assessed and effectively managed;
- (3) whether financial shocks can be absorbed by the financial system without significant upsets.

The Financial Stability Report of Kazakhstan is aimed at the financial market participants as well as the audience interested in the financial stability topics. The NBRK sets the objective of disseminating the outcomes of the research and risk analysis as well as specialized studies in the area of financial stability.

The Financial Stability Report of Kazakhstan for 2013 is published based on the annual data and, following up upon this practice, the tentative timeline for its annual issue will be the months of April-May.

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List of Abbreviations:

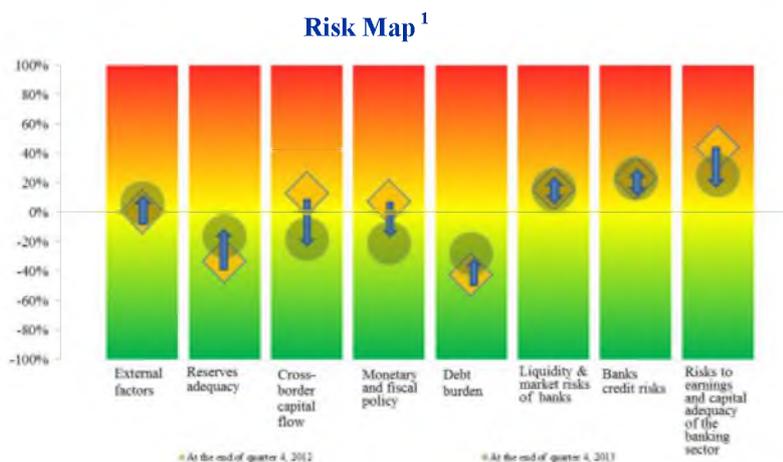
AMCs	asset management companies
APF	accumulation pension fund
APS	accumulation pension system
ASRK	the Agency of Statistics of the Republic of Kazakhstan
Bank	second-tier bank
the Basel Committee	the Basel Committee on Banking Supervision
CBRF	the Central Bank of the Russian Federation
CCI	composite coincident index
CFS	the Committee for Control and Supervision of the Financial Market and Financial Organizations of the National Bank of the Republic of Kazakhstan
CLI	composite leading indicator
CMIF	a closed-end mutual investment fund
CSLCO	civil liability insurance of car owners
CWAI	compulsory workers' accident insurance
DTI	Debt to Income
EU	the European Union
FC	foreign currency
FDIs	foreign direct investments
FDs	financial derivatives
FIAK	the Union of Legal Entities " Financial Institutions' Association of Kazakhstan"
FSC	the Council for Financial Stability and the Financial Market Development of the Republic of Kazakhstan
GDP	gross domestic product
GRP	gross regional product
GSs	Government securities
GSIB	Global Systemically Important Banks
HLA	highly liquid assets
IBNR	claims incurred but not reported reserve
ICS	Interbank Clearing System
IFOs	international financial organizations
IFRS	International Financial Reporting Standards
IIGF	the Insurance Indemnity Guarantee Fund
IMF	the International Monetary Fund
ISMT	the Interbank System of Money Transfers

Is	individuals
JSC	joint-stock company
KASE	the Kazakhstan Stock Exchange
KDIF	the Kazakhstan Deposit Insurance Fund
KISC	the Kazakhstan Interbank Settlements Center
LEs	legal entities
LGD	Loss Given Default
LLP	limited liability partnership
LP	loan portfolio
LTD	Loan to Deposit
LTV	Loan to Value
M3	money supply
MCI	monthly calculation index
MEBP	the Ministry of Economy and Budget Planning of the Republic of Kazakhstan
MFRK	the Ministry of Finance of the Republic of Kazakhstan
MJRK	the Ministry of Justice of the Republic of Kazakhstan
MLR	money liquidity ratio
MLSPP	the Ministry of Labor and Social Protection of the Population of the Republic of Kazakhstan
MTR	money turnover ratio
NBRK	the National Bank of the Republic of Kazakhstan
NFOs	non-bank financial organizations
NFRK	the National Fund of the Republic of Kazakhstan
NGSs	non-government issue-grade securities
Non-performing loans (NPL)	loans where payments of interest an/or principal are past due by 90 days or more
PAMC	pension asset management companies
PD	Probability of Default
PLF	the Problem Loans Fund
RF	the Russian Federation
ROA	Return on Assets
ROAA	Return on Average Assets
ROE	Return on Equity
SAMC	a bank subsidiary purchasing doubtful and loss assets of its parent bank (Stress Assets Management Company)

SM	securities market
SME	small- and medium size business
UAPF	the Unified Accumulation Pension Fund
UOC	coefficient of uninterrupted operation (operability) of the payment systems
USA	the United States of America
VAT	value-added tax
KZT	the Kazakh Tenge
USD	dollar
bln.	billion
mln.	million
pp	percentage point
thous.	thousand
un.	unit

I. Executive Summary

The external environment as a financial stability factor is characterized by strengthened growth trend / risk mitigation with a view to recover economic activity in developed countries and by the slowdown in the dynamics in developing countries. A positive background from reduced probability of significant shocks in the global markets is accompanied by tightened financial conditions in developing countries caused, *inter alia*, by anticipated changes in monetary policies of key global economies. As a result, capital outflow and changes in currency preferences of economic agents put pressure on the value of currencies of developing countries. The economy of Russia, the largest trade partner of Kazakhstan, is not an exception – revaluation by investors of a relative value of assets amidst the domestic structural growth constraints causes increased volatility of the Ruble.



As for the domestic factors of financial stability, potential risk is created by the existing economic growth model, which to a large extent is based on consumption, a high import component of the domestic demand and investments. Alongside with that, an insufficient level of private savings, low efficiency of their use, in the environment when the government and banks build up net foreign assets, will put pressure on adequacy of the National Bank’s gold and foreign currency reserves.

The contributing factors are a low depth and efficiency of reallocation of resources in the foreign exchange segment and money market segment of the financial markets, which are vulnerable to the change in expectations among the market players; this requires a more active offsetting involvement of the NBRK in these markets in the periods of tension.

The economic environment in which the financial sector is functioning continues to be characterized by high credit risks of borrowers. The share of “non-performing” bank loans remains high. However, over two thirds of such loans were provided before 2009, in the period of highest lending activity and high “risk appetite” while the potential for recovery of value of these assets remains low.

Despite the government programs for support of small- and medium business, its input into the economic growth, investments, and export proceeds is still insignificant; the output production by SMEs is growing slower than the GDP as a whole (in 2012 – by 0.2%, in 2013 – 3.3%). At the same time, the number of good-quality borrowers is limited –almost 2/3 of the output in the SME sector as a whole is produced by 1% of medium-size enterprises.

Therefore, the demand for credit resources from large, medium and small business entities significantly exceeds their supply on the part of banks. Re-orientation of the credit policy by banks to more profitable retail lending, primarily consumer lending, and involvement of increasingly larger spectrum of banks in retail lending still represents a key current trend in the banking sector.

¹ The Risk Map is designed on the basis of 68 indicators. The growth or mitigation of risks is determined by assessing the dynamics and thresholds calculated on the basis of a percentile of statistical distribution of each indicator. The data on the banking sector that are used in the Risk Map are calculated excluding the BTA Bank, from Q1 2009 through Q4 2013. Please see the Financial Stability Report of Kazakhstan dated December 2007, for more details about the methodology.

Here the highest concern is not so much about the current debt burden and household credit in Kazakhstan, but about the growth rate of debts, first of all in the area of unsecured consumer lending.

A modest growth in the mortgage loan portfolio of banks to a great extent is determined by significant volumes of refinancing of existing borrowers as well as by a low demand on the part of potential borrowers, given the current tight pricing and non-pricing lending terms of banks. Given the current pricing trend and the potential growth in the household propensity to save, the real estate sector will acquire increasing investment attractiveness for the public.

Long-term funding is decreasing, which is largely caused by decreasing liabilities to non-residents due to a rather limited access to the external market. The domestic long-term funding (deposits with maturities over 5 years and securities) is increasing but its share remains insufficient to provide long-term credits (14%). The potential for significant increase in the extent to which long-term pension assets are used to provide funding to banks is however limited. Even now the volume of pension assets invested in banks reaches nearly 50% of the banks' total equity.

At the same time, funding of long-term assets with short-term liabilities is one of the basic functions of financial intermediation, which is typical not only for Kazakh banks. In the US, for instance, 1/3 of long-term assets are funded with liabilities with maturities less than 1 year; in Singapore, however, half of long-term assets are funded with short-term liabilities. In Kazakhstan, a similar ratio of long-term assets in Tenge is about 50%.

The structural analysis shows that in the mid- and long-term the competitiveness of a bank (return on its assets) increases with (1) the increase in the market share, (2) higher focus on specific lines of credit, (3) ability to maintain a low level of credit risk, (4) increased capitalization and funding in the domestic currency, (5) expansion of revenue sources, and (6) improved operating efficiency of the bank's management. The top priorities for the NBRK in ensuring financial stability are to provide conditions for increasing flexibility and competitiveness of the financial system and its participants.

Accordingly, in 2014 the NBRK will elaborate plan-agreements with each bank which has a large percentage of non-performing loans, providing for a consistent set of measures to improve the loan portfolio quality. Starting from 2016, a prudential ratio will be introduced to set a maximum limit of 10% for non-performing loans. Its violation could be followed by a forced change of the management, and bank license revocation. Proposals prepared by the NBRK jointly with the Government at the level of laws and by-laws and aimed to improve efficiency of the existing mechanisms of bank problem assets management, will create a comfortable environment for achieving the established target values.

In the environment of active expansion of consumer lending, inadequate risk management system and underwriting standards of banks, extension of the high-risk retail products line may become the key vulnerability factors. Therefore, measures have been taken to decrease the growth rates of consumer loans, minimize the risk of default and identify financially vulnerable borrowers, *inter alia* by:

- establishing additional capital requirements in consumer lending;
- establishing a direct limit of no more than 30% a year in respect of the growth rate of provided unsecured consumer loans;
- limiting debt burden on personal income when providing unsecured consumer loans (monthly loan payments should not exceed 50% of monthly income).

The ideology behind the new regulation model will be a gradual increase in the capital adequacy requirements, implementation of liquidity ratios and creation of counter-cyclical buffers in line with the international Basel III standards during 2014-2019. Such approach is justified by a significant volatility of the economic growth rates, high systemic and institutional risks pertinent to the functioning of financial institutions. High capitalization requirements will imply a high ability of the Kazakh financial sector to absorb arising risks; this can potentially reduce the risk premium and the cost of funding required by investors and creditors.

Further implementation of government programs aimed to finance and support of top-priority areas may serve as an instrument supporting the banking sector and increasing long-term funding of banks. In doing so, in the long run the main sources of funds to finance such programs should be the funds borrowed by the development institutes based on the market principles with a due control over their leverage, as well as resources reallocated based on optimization and increased efficiency of spending as part of the government programs.

As for the monetary regulation and provision of liquidity to banks, the NBRK considers the following:

- expanding capacities of banks to use the existing mechanisms;
- launching new instruments of liquidity provision (credit auctions);
- ensuring that provision of funding is determined by improved quality and structure of the banks' loan portfolio and by growing credit activity of the top-priority sectors.

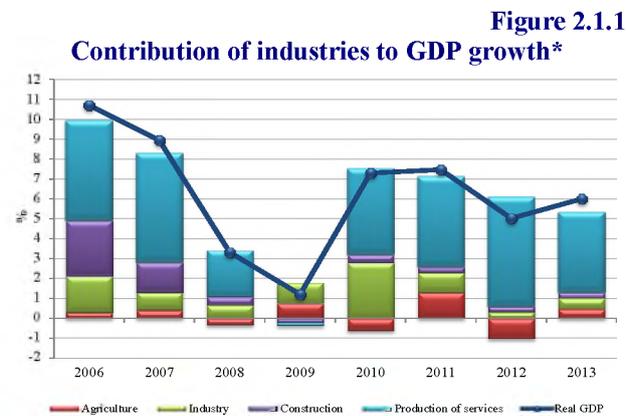
An additional volume of bank credits to the economy may potentially account for 5% of the existing loan portfolio only due to the increased presence of the NBRK in the money market on an ongoing basis, without assuming additional risk.

In the mid-term, conditions should be provided for the banking sector to generate internal funding sources, including by using the securitization of the bank loan portfolio. According to estimates, as part of securitization, the residential mortgage loans portfolio alone could ensure that an additional amount equivalent to 2% of the loan portfolio is attracted.

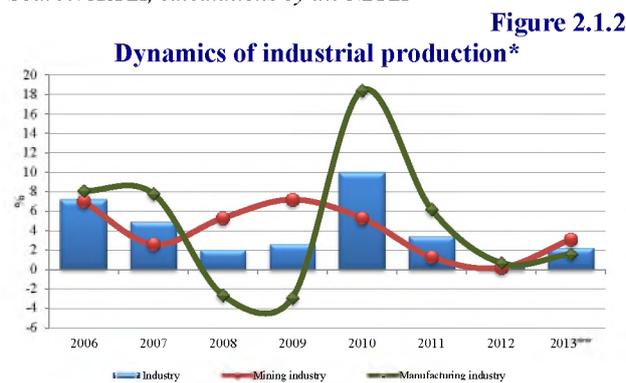
II. Macroeconomic and Financial Environment

2.1 Macroeconomic Environment and its Sustainability Factors

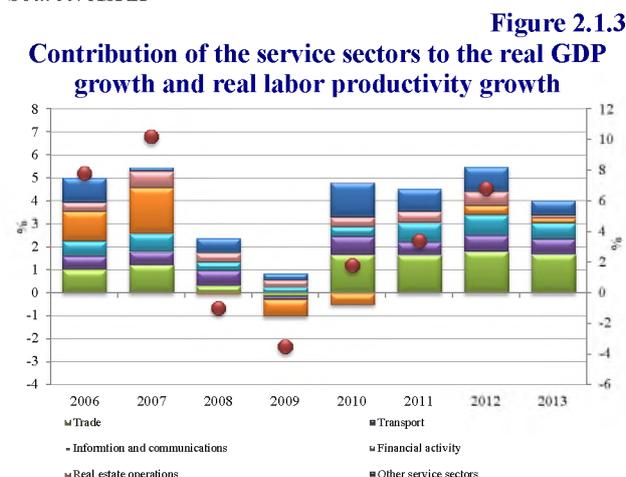
In 2013, the economic growth in Kazakhstan was concentrated mainly in the industries supported by the domestic demand. At the same time, declining world prices for certain goods resulted in slower growth in exports; this, coupled with the growth of imports amidst high consumer activity, put some pressure on the country's external sector performance. As a whole, the decreased input of the government sector into the economic growth, a high import component of the domestic demand and insufficient growth of investment activity require that the private and public sectors increase the efficient use of resources.



Note: *contribution to the growth in gross added value
Source: ASRK, calculations by the NBRK



Note: *real change, as % to the corresponding period of the prior year (year-to-year)
** January-December, 2013
Source: ASRK



Source: ASRK, calculations by the NBRK

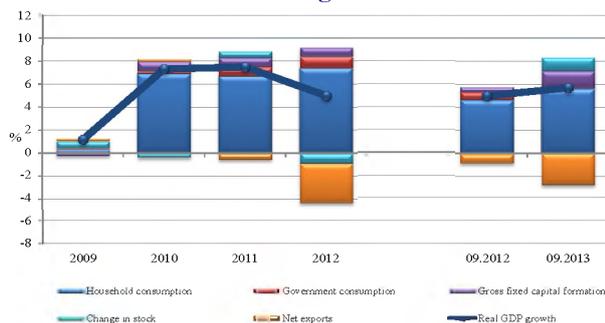
rates slowed and accounted for 7.4% in 2013 versus 10.4% in 2012; at the same time, the contribution to GDP dropped from 5.5% to 4%, respectively (Figure 2.1.3)

High rates of economic growth that were observed during the last four years do not contribute to a significant change in its structure. According to preliminary data the GDP growth accounted for 6.0% in 2013 versus 5.0% in 2012 (Figure 2.1.1). The services sector still represents the main driver for the economic growth in Kazakhstan, with its contribution to the GDP growth in 2013 account for 67%. The contribution by the industrial output and agriculture to the real GDP growth in 2013 increased slightly, making up only 14% of the GDP growth.

The increased rates of growth in the mining industry to 3.1% in 2013 represented the main factor which influenced on the growth of industrial output, primarily due to the growth of the volumes of oil extraction (3.2%), natural gas (3.7%) and metal ores extraction (6.8%) (Figure 2.1.2). A minor growth in the manufacturing industry in 2013 - 1.6% was secured by the growth in the production of foodstuffs and beverages (12.5%) and in the machinery-production industry (14.7%). At the same time, negative impact on the dynamics in the manufacturing industry resulted in the decrease growth rate of the steel industry caused by decreasing the demand from China and the EU as well as by declining prices for metals.

The growth in the production of services was ensured by information and communications, financial and insurance sector, transport, and trade sectors. Despite the fact that the service sector remains the main source of growth of the Kazakhstan's economy, its growth

Figure 2.1.4
Contribution of the aggregate demand components to GDP growth*



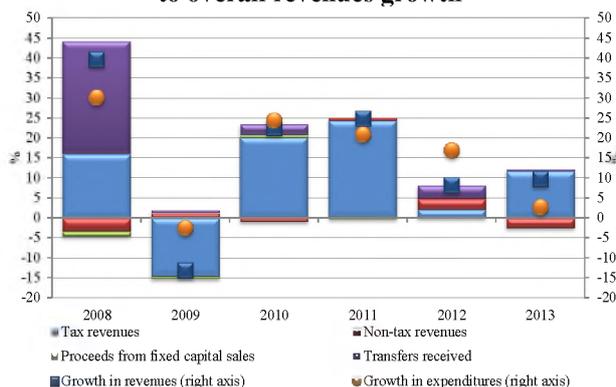
Note: *contribution to the growth in gross added value
Source: ASRK, calculations by the NBRK

Figure 2.1.5
Consumer demand indicators



Note: *real change, as % to the previous month of the current year. **real change, as % to the corresponding period of the prior year.
Source: ASRK, calculations by the NBRK

Figure 2.1.6
Contribution of tax and other state budget revenues to overall revenues growth



Source: MFRK, calculations by the NBRK

decrease dramatically.

At the end of 2013, the revenue growth rates slightly decreased to 9.8% in 2013 (8.2% in 2012) (Figure 2.1.6). The main contribution in revenues growth structure draws up the tax revenues (11.8%) that have been provided by the growth of VAT. Herewith the VAT growth was due to the decreased volumes of VAT refunds to enterprises for domestically produced goods versus the expected amount of refunds. The contribution of the corporate tax has remained negative

Despite steady real growth of fixed capital investments, which reached its highest level after the 2009 crisis, and was 6.5% in 2013 (7.9% during 9 months of 2013), their role in the economic growth is still insignificant (during 9 months of 2013, the contribution to the GDP growth accounted for 1.5% out of 5.7%) (Figure 2.1.4). In terms of funding sources, if in 2010-2012 the main contribution to nominal growth of investments was made by own funds of enterprises, in 2013 the main contribution was made by borrowed funds and it accounted for 10.2% out of 10.6% (1.5% out of 9.2% in 2012).

The contribution by the “change in stock” component to the real GDP growth accounted for 1.2% for 9 month of 2013, herewith its growth did not reflect significant structural changes in investment activity of the economy as a whole².

Decrease of net export had negative impact on the economic growth. Its contribution for 9 month 2013 had been at -2.7% (in the same period of the prior year it was -0.8%), thus completely offsetting the contribution of investments.

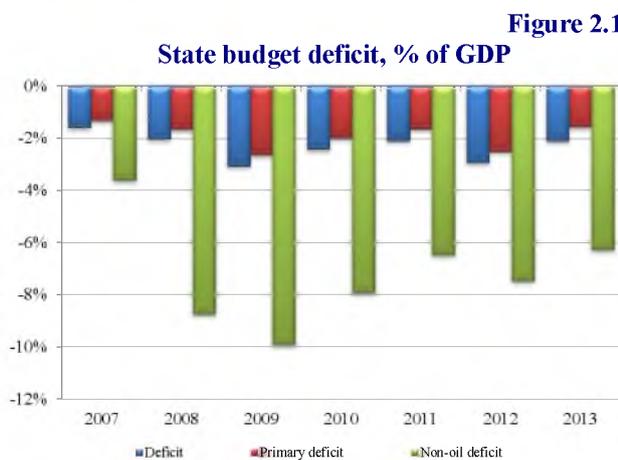
As a result, the growth of the households’ consumer demand supporting the growth in the services sector determined the GDP dynamics ensuring its growth by 5.6% out of 5.7%. At the same time, according to the results of a quarterly market research conducted by the ASRK, during 9 month of 2013 was indicated that households gradually re-oriented from consumer activity to savings including due to slowing real wages growth rates. However, in the 4th quarter of 2013, willingness to buy on the part of consumers increased; this is related to households’ expectations about improvement in their financial standing in the next 12 months (Figure 2.1.5).

Despite positive revenue growth rates and growth of the Government’s external debt, non-oil deficit of the state budget didn’t

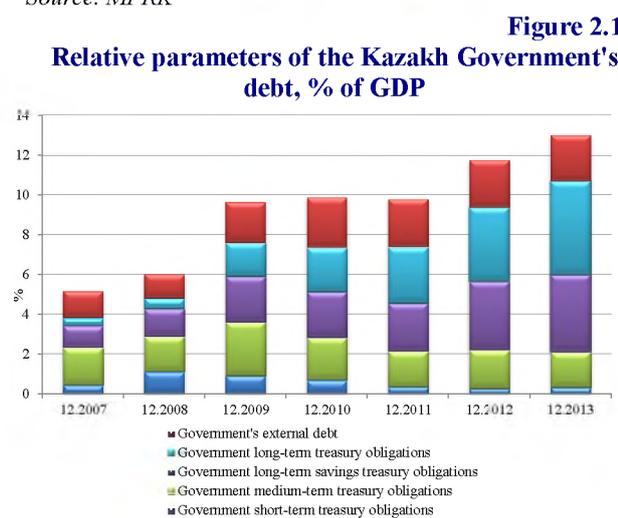
² A dramatic change in the “change in stock” item occurred because of the growth in stock in the 1st quarter of 2013 in the “Water supply” sector.
Financial Stability Report of Kazakhstan, December 2013

throughout two years (-0.1% in 2013, -0.2 in 2012). This is related to declining world prices for a number of key export commodities.

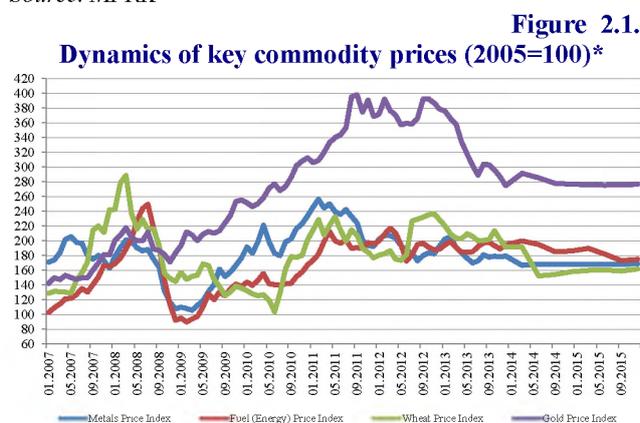
The expenditure side of the state budget (excluding the financing of deficit spending) slightly decreased from 22.4% of GDP in 2012 to 21.4% in 2013. Against the growth of budget current spending capital expenditures are going down, in its turn, reduce direct contribution of the government to the future growth of the economy as well as to budget credits and acquisition of financial assets.



Source: MFRK



Source: MFRK



Note: *the forecast period: 12.2013–12.2015

Source: IMF

Reducing the state budget expenditure, as a result of the legislative reduction of the national budget expenditure and the under-spending of budget resources allowed maintain the public finance sustainability. As a result, the levels of general deficit and non-oil deficit of the state budget in 2013 had been at -2.1% and -6.3%, respectively (Figure 2.1.7).

The non-oil deficit was financed with transfers from the NFRK and due to the increased domestic debt of the Kazakhstan Government (Figure 2.1.8). The domestic debt of the Kazakhstan Government on December 31, 2013 increased by 24.8%, versus the same period of the prior year. On the one hand, its increase allows covering the budget deficit; on the other hand, it raises requirements to public finance sustainability in the long term.

In prospect the capacity to financing the state budget deficit from the domestic sources will depend on a steady demand from investors. This is feasible by designing the yield curve adequate to the economic situation, with the growth in the cost of borrowing, rather than by artificially building the demand from certain existing or potential market participants, mainly with the government or quasi-government equity participation.

For the first time since 2009, the current account balance for 2013 had been negative. Negative trends in the dynamics of the global demand for the metallurgical industry output as well as world commodity prices decreasing during 2013, especially prices for metals (Figure 2.1.9), resulted in deteriorated balance of trade performance. The decrease in the value of exports occurred as the price factor so decrease physical volumes. Slight increase in the value of imports was accompanied by significant growth of physical volumes of imports of consumer and investment products.

A net inflow on the financial account was secured by the growth of foreign liabilities of the banking and non-banking sector; it was partially offset by the growth of foreign assets of the

National Fund of Kazakhstan as well as by the growth of financial assets of Kazakh banks (Figure 2.1.10).

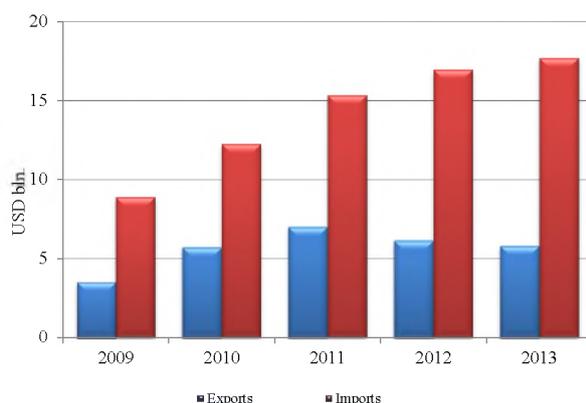
In general, the foreign assets growth of both banks and the population caused the decrease in coverage of the Kazakhstani import of goods and services by the NBRK's reserve assets to 4.8 months.

Figure 2.1.10
Dynamics of key parameters of the balance of payments, as % of GDP



Source: NBRK

Figure 2.1.11
Foreign trade with the Customs Union members, USD bln.



Source: ASRK

Table 2.1.1
Forecasts of growth of the Kazakh economy

Item	2014	2015
International Monetary Fund (<i>October 2013</i>)	5.0%	5.2%
Ministry of Economy and Budget Planning (<i>March 2014</i>)	6.0%	6.0%
World Bank (<i>January 2014</i>)	5.5%	5.7%
Eurasian Development Bank (<i>January 2014</i>)	5.3%	5.6%

Source: IMF, WB, MEBP, EADB

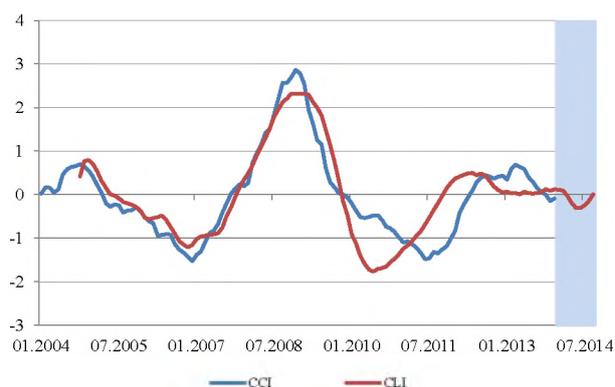
So far Kazakhstan has not enjoyed advantages in foreign trade as a result of establishment of the Customs Union. Commodity flows between the Republic of Kazakhstan and the members of the Customs Union are still characterized by domination of imports to Kazakhstan against significant lag in the volumes of exports from Kazakhstan (Figure 2.1.11).

Moreover, structural disproportions in the Kazakh economy where the share of the primary sector is still significant, affect the commodity structure of exports and imports with the Customs Union members. In particular, export flows from Kazakhstan to Russia in 2013 decreased by 5.4%; this was mainly associated with declining prices for mineral products accounting for 41% of Kazakhstan's exports to Russia. Import flows from Russia to Kazakhstan demonstrate a steady upward trend and they increased by 4.3% in 2013. Consumer imports from Russia are increasing at a considerable pace, especially owing to physical volumes of non-food products.

In the mid-term positive expectations about the development of the Kazakh economy will be offset by short-term risks for the country's external sustainability. In general, according to different forecasts, both domestic forecast and those of international organizations, the Kazakh economy is expected to retain its high growth rates in 2014 (Table 2.1.1).

This is proved by the NBRK's estimates in respect of a composite leading indicator, according to which the dynamics in 2014 will not differ much from that of 2013. At the same time, uncertainty about the development of external demand for Kazakhstani products will be balanced with expectations of economic agents regarding recovery of the domestic demand (Figure 2.1.12).

Figure 2.1.12
Leading and coincident indicators of Kazakhstan's economy³



Note: CLI is shifted to the right for 9 months to reflect its leading characteristic.

Source: NBRK

Also, the prospects of prices for metals are closely correlated with the economic situation in China, where rates of economic growth are slowing down. World prices for grain and gold will continue to go down. So, while remaining oil prices at the current level and uncertainties relating to the Kashagan's operation, the risks that sustainability of the balance of payments will decrease remain high (Box 1).

Box 1

A Scenario-Based Forecast of the Balance of Payments for 2014-2016 (as of April 2014)

Scenario-based forecasts of the balance of payments were based on the dynamics of world oil price, like in the prior years. Alongside with that, In the forecast period in production of oil was used forecast data of the Ministry of Oil and Gas of the Republic of Kazakhstan, and project future expansion of the Tengiz field has been used information from various sources.

In 2014, if the world oil price drops to USD 95 per barrel, the trade balance will decrease to 14.5% of GDP, which will not be offset by improved total balance on other items (services, primary income and secondary income). In result, in 2014 the current account deficit will expand to 0.3% of GDP. Given high growth rates of foreign assets of the National Fund of the Republic of Kazakhstan, net borrowing on direct investments and other long-term investments is expected to remain.

In 2015-2016, under the scenario where world oil prices will be falling to USD 80 per barrel, the positive trade balance is expected at the level of 10-11% of GDP. Due to the expected decrease revenues paid out to non-residents the current account deficit would not exceed 2% of GDP; in that case the trade balance would be about 10-11% of GDP. Net borrowing on direct investments and other long-term investments would be decreasing versus the level of 2014. However, if the receipts to the National Fund of the Republic of Kazakhstan decrease and approved volumes of the guaranteed and targeted transfers to the national budget are maintained, the decreased net lending on portfolio investments would be also observed in the reporting period.

If world oil prices go down to USD 90 per barrel, in 2015-2016 the surplus of the trade balance is expected to remain at 10-12% of GDP, accompanied by a minor growth of the balance of services deficit and decreased payouts of revenues to foreign investors versus 2014. As a result, the current account will show the deficit in the range of 1.25%-1.32% of GDP. High volumes of net borrowings on direct investments and other long-term investments would be offset by persistently significant growth rates of foreign assets of the National Fund of the Republic of Kazakhstan.

³ The composite leading indicator (CLI) is constructed on the basis of 4 quantitative indices: oil price index, composite index of business activity in the US, IFO World Economic Survey, money supply (M2) index and 3 qualitative indicators characterizing expectations about the growth in the industrial output, demand for final products and goods in stock, based on the corporate polls conducted by ASRK.

Composite coincident index (CCI) characterizing the dynamics of economic development is constructed on the basis of 4 indices: index of production, employment index, real wage index, and trade volume index (Source: NBRK).

Under the scenario where the world oil price around USD 110 per barrel, the balance of trade surplus during 2015-2016 would be within 13-16% of GDP. The growing exports of goods would be partially offset by the increased demand for imports and increased revenues paid out to non-residents. As a result, it is expected that the current account surplus in 2015-2016 will not exceed 1% of GDP. In the forecast period, net lending on portfolio investments is expected to expand, while the level of net borrowing on direct investments and other long-term investments will be maintained at the level of 2014.

Table 1

**Forecast of the Balance of Payments for 2014-2016, USD bln.
(as of April, 2014)**

	actual	baseline forecast	forecast at USD 80		forecast at USD 90		forecast at USD 110	
	2013	2014	2015	2016	2015	2016	2015	2016
A. Current account	-118	-728	-4 205	-4 334	-3 124	-3 343	1 974	1 632
<i>% to GDP</i>	<i>-0.1</i>	<i>-0.3</i>	<i>-1.9</i>	<i>-1.8</i>	<i>-1.32</i>	<i>-1.26</i>	<i>0.8</i>	<i>0.6</i>
Trade balance	33 691	31 232	24 363	24 662	28 134	28 237	37 751	38 012
Export (fob)	83 407	82 545	71 153	72 200	79 635	80 802	91 874	93 531
Import (fob)	49 715	51 313	46 790	47 538	51 501	52 566	54 122	55 519
Balance of services	-6 876	-6 746	-6 600	-6 637	-6 89	-6 952	-7 840	-7 855
Balance of primary and secondary income	-26 934	-25 214	-21 969	-22 158	-24 359	-24 62	-27 938	-28 525
B. Financial account (incl. capital account and errors and omissions)	2 294	1 136	-1 702	480	-1 403	1 226	2 850	5 299
Net direct investments	-7 790	-7 550	-7 280	-7 314	-7 696	-7 612	-7 969	-7 763
Net portfolio investments	5 962	7 730	4 436	7 004	5 480	8 073	8 805	11 326
Net medium- and long-term instruments)	-5 566	-3 582	-2 196	-2 343	-3 046	-3 023	-3 496	-3493
Short-term capital*	9 688	4 539	3 338	3 133	3 859	3 788	5 511	5 228
C. Total balance (B-A=C)	2 412	1 864	2 503	4 814	1 721	4 569	877	3 667
<i>% to GDP</i>	<i>1,1%</i>	<i>0,9%</i>	<i>1,1%</i>	<i>2,0%</i>	<i>0,7%</i>	<i>1,7%</i>	<i>0,4%</i>	<i>1,3%</i>
E. Financing	-2 412	-1 864	-2 503	-4 814	-1 721	-4 569	-877	-3 667
NBRK's reserve assets	-2412	-1864	-2503	-4814	-1721	-456	-877	-3667
Funding gap	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

In all reviewed scenarios, balance of payments operations put high pressure on reserve assets of the NBRK and their decrease below the level of 3-month imports already in the mid-term should not be excluded. In order to keep the reserves at the minimum adequate level, resources should be found to cover the arising deficit of the balance of payments financing and/or to adjust the objectives in respect of the economic growth and the NFRK.

Note: * including capital account and errors and omissions, and non-highlighted financial account components

2.2 Role of the Financial Sector and Concentration Risks

2.2.1 Main Trends in the Development of Financial Relations

In the current environment, institutes of financial intermediation don't play quite efficiently their role to satisfy the demand of economic agents for credit resources. Given the existing limitations for enhancing the role of financial institutions in financing and supporting the country's economic growth, banks need to be involved more actively in the government

programs for financing of the economy and in implementation of investment projects while adhering to the principle of proportional distribution of credit resources.

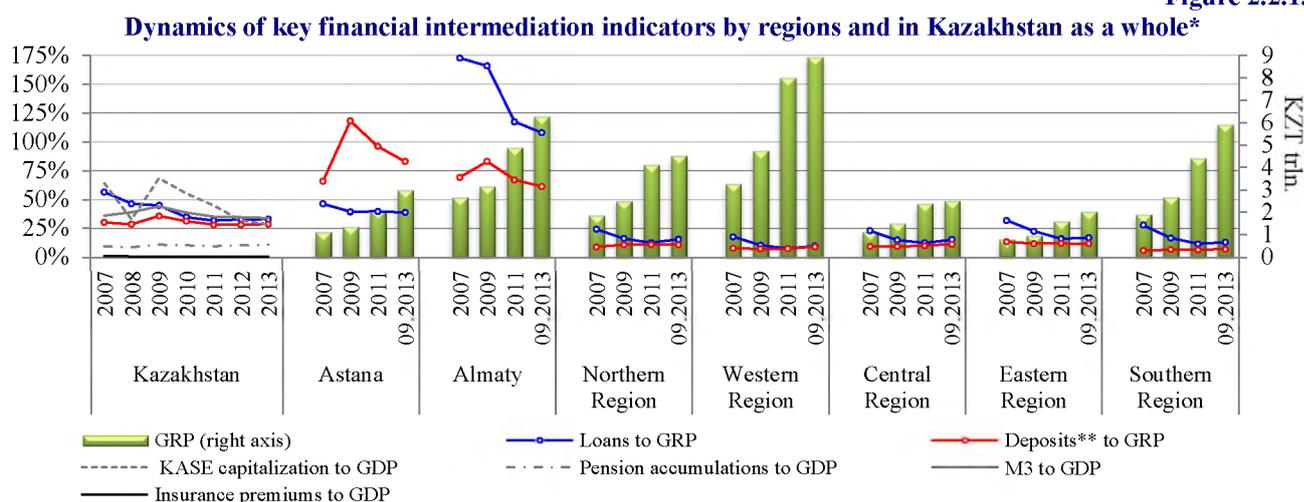
At the end of 2013, the levels of monetization of the economy, market capitalization, bank loans and deposits in Kazakhstan accounted for about one third of the GDP volume (Figure 2.2.1.1). For Kazakhstan, a slow recovery of the financial sector and financial intermediation performance in the post-crisis period appeared to be the main trend in the development of financial relations over the recent years. The domestic securities market happened to be mostly exposed to the impact of the financial crisis: the ratio of KASE’s capitalization on government securities to GDP decreased by more than half versus 2007. Given a low liquidity level in the stock market caused by insufficient number of issuers, investors and instruments, banking products are still the most popular and available means of both attracting funds for business development and for their savings.

Historically, the deposits/GDP ratio never exceeded 40% – its maximum value was recorded in 2009 – 35.7%; this was mainly caused by revaluation of total deposits as a result of the Tenge devaluation. In the regional breakdown, in Astana and Almaty (the cities where about 80.5% of corporate deposits and 62.2% of retailed deposits are accumulated in aggregate), the levels of this indicator significantly outrun the overall indicator for the country but at the same time show explicit negative dynamics.

However, if in Astana and the regions of the country the credit activity of banks is in proportion to the economic growth and the loans/GRP ratio remains virtually unchanged, in Almaty, where a significant portion of loans to non-bank legal entities (73.5%) and individuals (35.7%) is concentrated, such indicator of financial intermediation continues to fall: since 2007 – by 65 pp, and since 2009 – by 58 pp.

Regional concentration of credit risks and internal funding sources of banks were mainly determined by the extent of regional economic development, and availability of financial services. Largest cities of Kazakhstan – Almaty and Astana – are the leaders in terms of the volume of provided financial services including in relation to gross regional product: Almaty is way above other cities in terms of lending activity, Astana (and Almaty, which is slightly behind Astana) – in terms of the volume of attracted deposits.

Figure 2.2.1.1

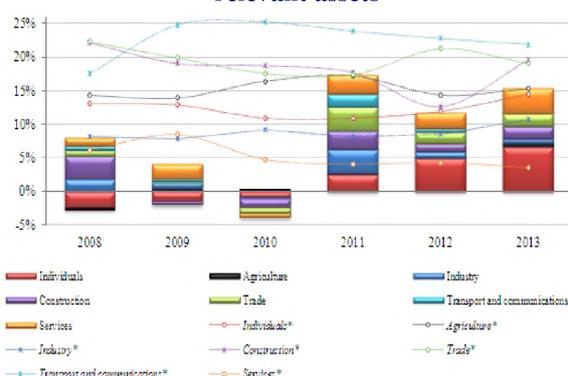


Note: *oblasts have been grouped into relevant regions as follows: Kostanai, Pavlodar and North-Kazakhstan oblasts - Northern Region, Aktobe, Atyrau, West-Kazakhstan and Mangistau oblasts - Western Region, Karaganda oblast - Central Region; South-Kazakhstan oblast - Eastern Region; Almaty, Zhambyl, Kzylorda and South-Kazakhstan oblasts - Southern Region

**accounts of non-residents were not included in the calculation of the deposit amount

Source: ASRK, NBRK, calculations by the NBRK

Figure 2.2.1.2
Dynamics of the change in total loans broken down by sectors over the period and debt of those sectors to relevant assets



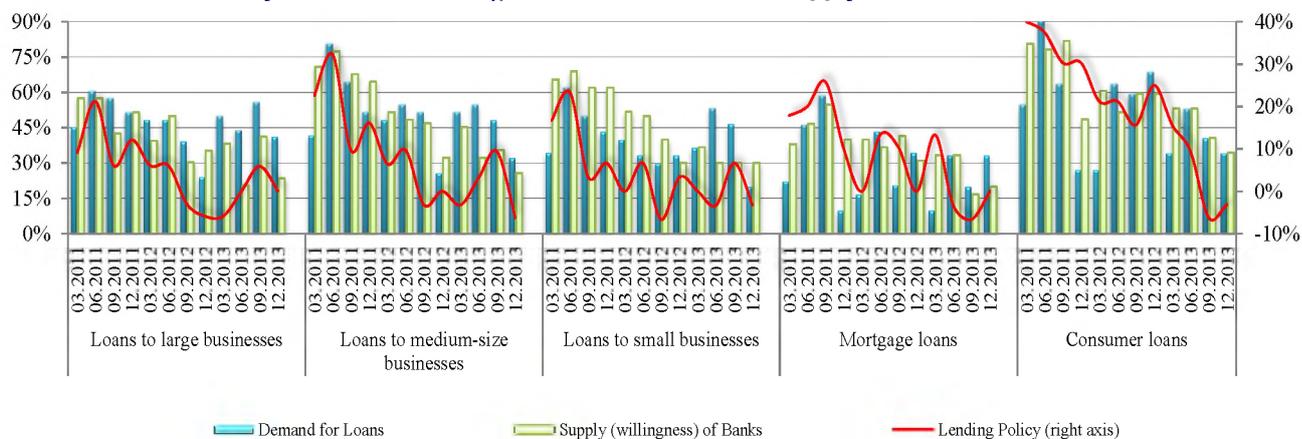
Note: *sector's debt to sector's assets, at period-end
 Source: ASRK, NBRK, calculations by the NBRK

The persisting extremely low ratio of loans to GDP as compared to the pre-crisis period (the peak in this indicator occurred in 2007 – 56.5%) is caused by poor involvement of banks in lending to the corporate sector; this was manifested in the most apparent way in 2012-2013 when retail lending was increasing (Figure 2.2.1.2). Overall, during 2013 the demand for credit resources from large, medium and small businesses was highly in excess of their supply by banks. This was driven by tightened credit policy of banks in the environment of persisting risks in the banking sector that involves tightened requirements to the financial standing of borrowers and to security for loans.

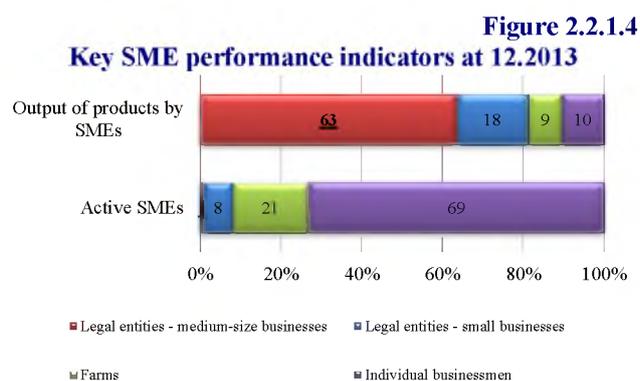
The highest deficiency in credit resources is suffered by large and medium-size businesses; however, at the year-end the supply of credit resources by banks to small businesses exceeded the respective demand on the part of small businesses (Box 2). To a great extent, limited lending is related to risk revaluation and unwillingness of banks to allocate a significant amount of resources required to finance requests for loans from corporate customers (Figure 2.2.1.3).

Figure 2.2.1.3

Dynamics of the change in the demand for and supply of credit resources*



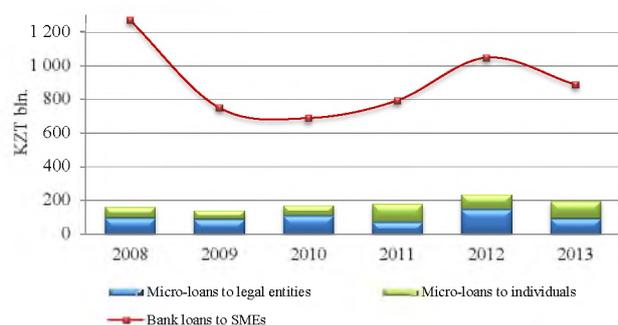
Note: *Results are presented as net percentage change, which is calculated as the difference between % of respondents that noted the increase/ easing in this or that parameter and % of respondents that noted the decrease/tightening of this or that parameter. In this case the diagram shows changes in the actual demand and willingness to lend
 Source: banks, calculations by NBRK



Source: ASRK

Figure 2.2.1.5

Micro-loans provided by micro-lending organizations and bank loans to SME over the period



Source: ASRK, NBRK

In general, a low existing level of debt burden (total household debt/GDP and total household debt/household assets account for 10.4% and 14.5%, respectively) retain a certain margin for further development of the banking business in this area.

Box 2

Indicator of imbalances between the demand for and supply of credit resources

Given a modest level of bank lending, the question arises whether there is an imbalance between the demand for and supply of credit resources. Therefore, with a view to analyze the existing difference between the required financing volume of corporate sector and households and the willingness of banks to provide credit resources, an indicator was designed based on the data from the questionnaire “State and forecast of the credit market parameters” (the “Questionnaire”); it is covering the period from the 1st quarter of 2012 through the 4th quarter of 2013. To build the indicator of imbalance, two different approaches were used: building the diffusion index which allows assessing the change in the demand for financial resources over time, and using the principal component analysis¹, which allows identifying the sector with the highest demand for credit resources. It is worth mentioning here that both approaches include qualitative computation of gap between the change in the demand on the part of borrowers and the change in the supply of credit resources on the part of banks².

The first approach, diffusion index, is computed as the difference between the percentage of responding banks that during one period noted the increase in the demand and decrease in the supply of credit resources and the percentage of respondents that during one period noted the decrease in the demand and increase in the supply of credit resources (Figure 1).

Figure 1

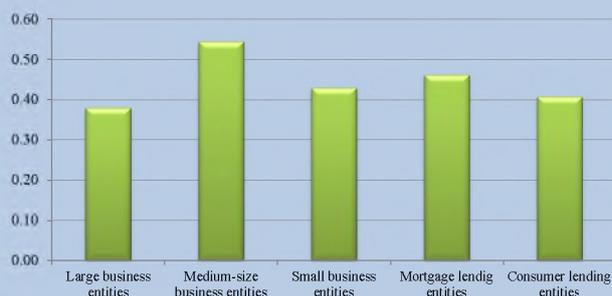


Source: NBRK

The diffusion index indicates the increased percentage of respondents that noted the increased demand for credit resources along with their limited supply in the corporate sector, starting from the 2nd quarter of 2013. In doing so, over 23% of respondents suggest that in the 1st quarter of 2014 the demand in this sector will continue to grow. The deficit of bank lending in the corporate sector of the economy is associated with a high percentage of non-performing loans in the segment and, consequently, with the bank policy re-oriented mainly to the consumer lending since the beginning of 2013.

Figure 2

Eigenvectors of the first principal component, by types of borrowers



Source: NBRK

To identify a sector with the highest level of gap between the demand and supply of credit resources based on the diffusion index data, the principal component analysis was used. This analysis allows identifying and analyzing eigenvectors (loadings) of the first principal component of the large, medium and small business sectors, as well as mortgage and consumer lending.

When assessing eigenvectors that indicate the type of borrower that is in need of funding above all others, one may conclude

Figure 3

Indicator of imbalance between the demand for and supply of credit resources



Source: NBRK

that the corporate sector, specifically medium-size business entities are in the highest shortage of credit resources (Figure 2).

With a view to analyze aggregate information on the existing imbalance between the demand and supply of credit resources on the part of banks, a time series of the first principal component was computed; it represents the indicator of imbalance between the demand and supply of credit resources (Figure 3). Thus, analyzing the dynamics of the indicator, one may point out that before the 1st quarter of 2013 there was no unrealized

demand for credit resources. However, later the upward trend in the demand for credit resources developed along with their limited supply on the part of banks. In addition, basing on the forecast data, banks expect that the gap between the demand and supply of credits will further increase.

In general, the results of the analysis showed that there is uncovered increased demand for credit resources on the part of borrowers, primarily corporate borrowers, both in terms of the

change in the dynamics of the indicator over time and in terms of breakdown by types of borrowers³. Moreover, a slowdown in the mortgage lending to a large extent also reflects a low demand for this banking product at the given pricing and non-pricing lending terms on the part of banks.

¹ Such analysis allows grouping and reducing dimensionality of basic values as well as identifying the most important factors that characterize variability of data. When using the analysis, all basic values have undergone a proper statistical manipulation (exclusion of trend and seasonality).

² In case of simultaneous increase in the demand for and decrease in the supply of credit resources of one and the same bank, the gap is indexed as “1”. In case of unchanged demand and supply, the gap is indexed as “0”. In case of simultaneous decrease in the demand and increase in the supply of credit resources of one and the same bank, the gap is indexed as “-1”.

³ It should be mentioned, however, that one of the weaknesses of the indicator is that it is focused only on qualitative parameters of the change in the demand and supply of credit resources and, thus, it doesn't assess the quantitative level of the shortfall in funding. Besides, the indicator was designed only on the basis of bank responses and doesn't take into account information on the part of borrowers regarding their need in credit resources, thus resulting in an imperfect assessment of the current situation in the lending market. Despite the comments above, the indicator allows evaluating the existing imbalance between the required and available level of funding.

2.2.2 Concentration Risks

The level of institutional concentration in the banking sector continues to go down: large banks cede their positions to medium and small banks, which are increasingly specializing in lending to small businesses and retail lending. In terms of financial performance, large banks with foreign equity, as compared to banks with the domestic equity, have pre-eminently better credit portfolio quality and a low cost of the funding base; in future this may lead to the increase in the share of such banks in the market.

The banking sector which has traditionally been a prevailing segment in the country's financial system consists of 38 second-tier banks and is characterized by domination of banks which are bank conglomerates (Table 2.2.2.1). So, the 9 banks that form a part of bank conglomerates (excluding BTA Bank) account for 74.3% of total assets of the banking sector.

Table 2.2.2.1

Classification of banks grouped according to their common characteristics*

Group	Characteristic	Share of the group's assets in the market	Affiliation with a bank conglomerate	Banks' names
Group 1	Large banks	43.0%	Yes	Kazcommertsbank, Halyk Savings Bank of Kazakhstan, ATF Bank
Group 2	Medium-size banks	25.6%	Yes ¹⁾	Kaspi Bank, Eurasian Bank, Alliance Bank, Tsesnabank, Temirbank, Nurbank
Group 3	Small banks	6.6%	No ²⁾	Other banks
Group A	Large banks with foreign equity	15.5%	Yes/No ³⁾	Bank CenterCredit, Subsidiary of Sberbank Russia
Group B	Subsidiaries of GSIB ⁴⁾	5.3%	No	CitiBank Kazakhstan, Subsidiary of HSBC Bank Kazakhstan, Subsidiary of Bank RBS (Kazakhstan), Subsidiary of the Bank of China in Kazakhstan, Trade an Industrial Bank of China in Almaty
Group C	Small banks with foreign equity	4.0%	No	Other banks with foreign equity

Note: *the following banks were not taken into account: BTA Bank, Housing Construction and Savings Bank of Kazakhstan, Islamic Bank "Al-Hilal".

1) excl. Temirbank, which is not a member of a bank conglomerate

2) excl. Bank "Kassa Nova", which is a part of a bank conglomerate

3) excl. Subsidiary of Sberbank Russia, which is not a member of a bank conglomerate

4) GSIB – subsidiaries of global systemically important banks

Source: NBRK

The structure of bank conglomerates includes 11 insurance organizations, 4 accumulation pension funds as well as 9 banks which do their business abroad, etc. The volume of transactions within bank conglomerates between the banks and other participants varies from 3.1% to 87.8% in the sum of banks' transactions with their related parties that on aggregate account for 15.8% of total

assets of those banks (Table 2.2.2.2). The nature and volumes of transactions between banks and other participants of bank conglomerates differ from each other significantly; one of the reasons is the difference in the structure of bank conglomerates due to the line of business of their participants. The loan portfolio of largest banks with the domestic equity within bank conglomerates by more than 70% consists of corporate loans; therefore, the nature of transactions performed by banks within bank conglomerates is focused on the securities market as well as on capital-raising. In their turn, in medium-size banks which are oriented at retail lending (51.4%), consumer lending specifically, transactions in the area of insurance, leasing, as well as investment activity are prevailing.

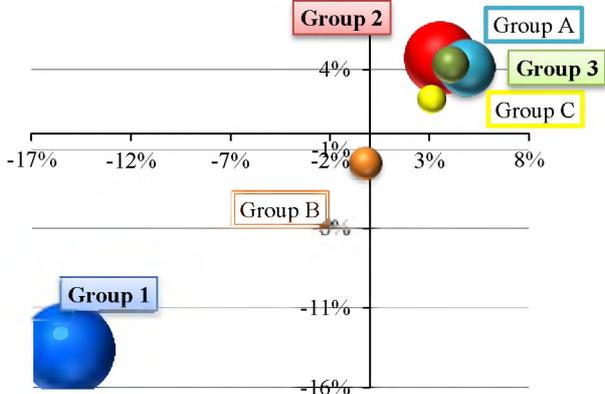
Table 2.2.2.2

Transaction structure of banks comprising bank conglomerates as of 30.09.13

	Total share	Ratios among conglomerates		
		median	maximum	minimum*
Share of portfolio on related party transactions, as % of the bank's assets	15.8%	5.0%	33.3%	0.04%
Share of transactions within bank conglomerates between banks and other participants in the portfolio of related party transactions	44.3%	47.2%	87.8%	3.1%
<i>Structure of bank transactions with other participants of a bank conglomerate, by lines of business:</i>	100.0%	100.0%	100.0%	100.0%
- banking business	14.1%	19.9%	91.1%	6.9%
- insurance business	11.9%	6.2%	96.6%	0.2%
- capital raising	38.7%	14.3%	65.7%	0.01%
- activity in the securities market	5.7%	1.0%	22.4%	0.2%
- leasing	2.9%	11.9%	95.9%	8.0%
- investment activity	9.1%	22.5%	68.7%	1.8%
- other	17.7%	5.9%	34.3%	1.2%

Note: *The minimum doesn't take into account the absence of certain lines of activities of bank conglomerate participants
Source: NBRK

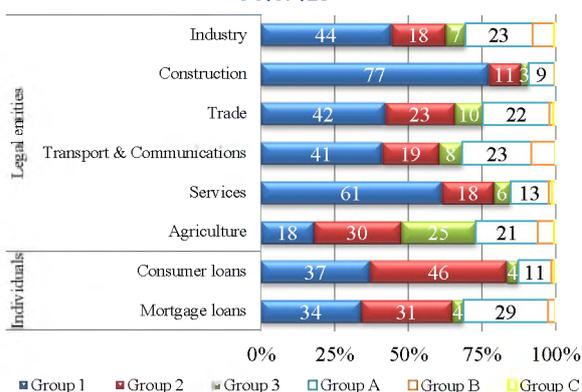
Figure 2.2.2.1
Change in the share of bank groups in total loans and deposits, from 31.12.08 to 30.09.13



Note: on a horizontal axis – the change in share in total loans, on a vertical axis – the change in share in total deposits; the diameter of circumference corresponds to the share of the sum of assets of a group
Source: NBRK

In general, the development of the banking sector in the post-crisis period led to the decreased influence of large banks with the domestic equity. As a result of redistribution of market positions during 5 years, the share of such banks in total deposits reduced from 56.2% to 42.6%, and in total loans – from 61.1% to 45.9% (Figure 2.2.2.1). The major “loss” fell on the consumer lending sector where medium banks with pre-eminently domestic equity which accounted for 46.3% of the segment have been the main competitors (Figure 2.2.2.2). The share of consumer loans of some banks in the group ranges within 40-80% in the total loan portfolio of banks. At the same time, the increasing inflow of deposits is also worth mentioning. This fact, given narrow concentration on one of the types of lending and limited nature of funding sources, may result in increased risks for business in future.

Figure 2.2.2.2
Loan portfolio by sectors of economic activity at 30.09.13



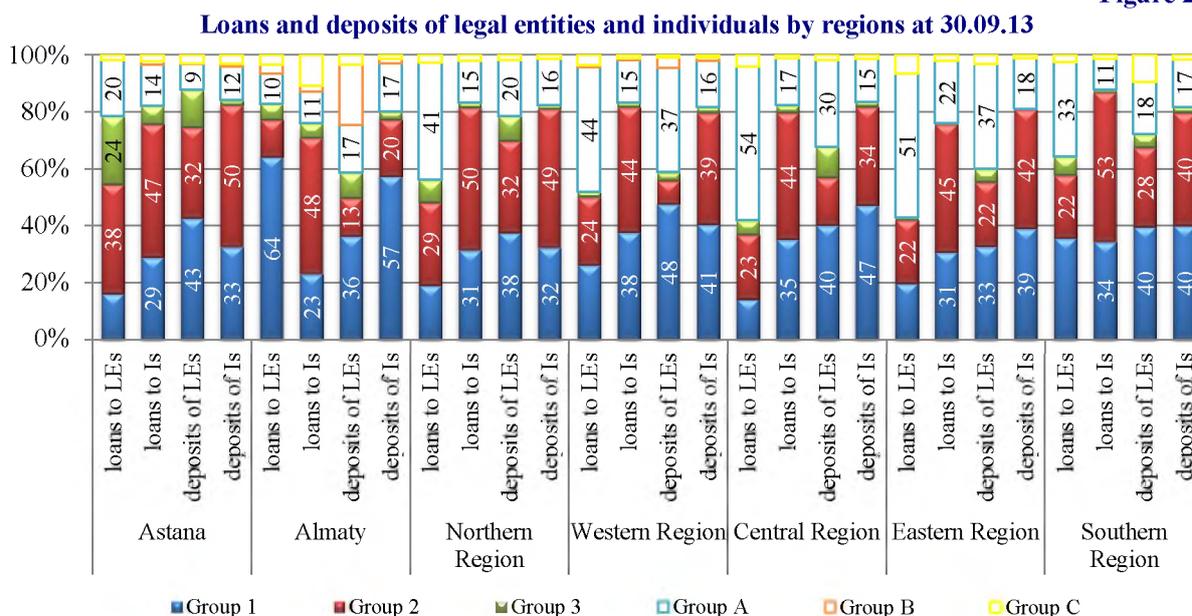
Source: NBRK

– by large banks with foreign equity. Retail loans are mainly provided by medium-size domestic banks. Subsidiaries of global systemically important banks are active in the corporate deposit market in Almaty, and large banks with foreign equity are active in the Central, Eastern and Western regions.

In addition to retail lending, this group of banks has one of the largest shares (35.9%) in the sector of small business lending. Given that lending to the large business is concentrated in Almaty, this fact also explains the excessive market share of medium-size banks over large banks with domestic equity in the city of Astana and in most of regions where the share in the sector of corporate loans occupied by medium-size banks ranges between 22-38% (Figure 2.2.2.3).

Loans to the corporate sector in Almaty are provided primarily by large domestic banks, in Astana – by medium-size domestic banks and in the regions (except the Southern region)

Figure 2.2.2.3



Source: NBRK

Meantime, in the regions (excluding the Southern region) medium-size banks with the domestic equity somewhat cede their positions in the sector of corporate lending to large banks with foreign equity. Due to selective credit activity, relative “youth” of the loan portfolio and a relatively low cost of funding sources, large banks with foreign equity contrary to banks with the domestic equity have some competitive advantage and flexibility (Table 2.2.2.3). The priority for these banks is to provide loans to enterprises from the industry and trade sectors: the shares of these sectors in the total loan portfolio of banks in the group account for 19.7% and 22.4%, respectively. However, in terms of concentration in loans to economic sectors, less one fourth (22.8%) of the portfolio of loans provided to the industry belongs to banks from this group. It would be fair to admit that credits to the industry generally represent the sector where the maximum share of participation of banks with foreign equity is concentrated – 30.7%.

Table 2.2.2.3

Key financial performance ratios of banks as of 30.09.2013*

	Group 1	Group 2	Group 3	Group A	Group B	Group C
Bank loans to total assets**	55.5%	63.2%	64.9%	69.7%	23.3%	68.7%
Customer deposits in total liabilities	75.7%	73.1%	86.0%	79.6%	87.6%	79.7%
Loans provided to deposits taken	127.9%	133.2%	153.5%	113.8%	34.5%	305.0%
ROA	1.8%	-0.8%	1.1%	1.1%	2.0%	3.1%
ROE	12.0%	4.3%	6.5%	1.1%	11.0%	9.7%
Interest income to gross income	32.9%	42.3%	50.4%	42.5%	46.8%	48.0%
Spread between reference rates on deposits and loans	5.0%	5.1%	8.6%	6.5%	7.5%	10.1%
Loans past due more than 90 days to total loans	29.3%	24.0%	4.3%	9.2%	1.3%	6.4%
Created provisions to loan portfolio	32.3%	22.6%	9.4%	12.4%	1.4%	3.9%

Note: *the average for a group

**Bank loans are calculated on a net basis

Source: NBRK

Subsidiaries of global systemically important banks (GSIB) operating in the domestic credit market are not actually regarded as competitors to banks with the domestic equity. Such banks mainly focus on servicing current operations of their large corporate customers. Moreover, bank loans account for more than 30% in the asset structure of banks in this group and the bulk of assets are represented by correspondent accounts (57.7%).

2.3 Markets of Real and Financial Assets

2.3.1 Factors Determining the State of the Real Estate Market

Economic recovery of Kazakhstan in the post-crisis period ensured growth in prices in the Kazakh real estate market. As a result, certain increase in attractiveness of this segment may become one of the factors promoting purchases of real estate by the population in future as an item of long-term investment.

Figure 2.3.1.1
Change of indicators of the real estate market, to corresponding period of the last year



Note: *According to 9 month data. According to data from ASRK, MJRK temporarily suspended providing information of number of sales transactions of housing of ASRK in order to avoid publication of inaccurate data for the period October-December 2012

Source: ASRK, calculations by NBRK

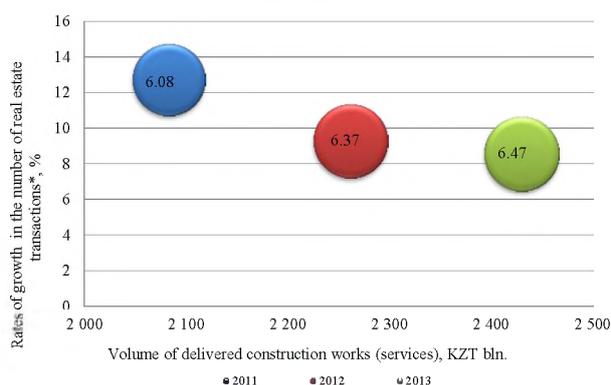
and 6.3%, respectively, and inflation – by 6.6% (Figure 2.3.1.1).

However, at present activity in the real estate market is constrained by a modest demand on the part of the population and by the decreasing role of mortgage lending. At the regional level, there is still a significant differentiation of activity. Despite some growth in prices, today there are no pre-requisites for a “bubble” to be created in the real estate market. At the same time, the shortage of housing doesn’t make it more affordable.

Restoration of economic capacities of consumers and their increased earnings, starting from 2010, were conducive to a positive growth of nominal housing prices and rental prices. Alongside with that, the average rates of price growth during 2010-2013 did not exceed the averaged level of inflation for the same period: prices⁴ for housing and rent increased by 6.4%

⁴ Housing prices are calculated as arithmetic mean for 4 market segments: new standard housing, housing without modern conveniences, housing with modern conveniences and elite housing. Rental prices are calculated as arithmetic mean for 2 rental market segments: housing without modern conveniences and housing with modern conveniences.

Figure 2.3.1.2
Dynamics of the activity indices of the real estate market

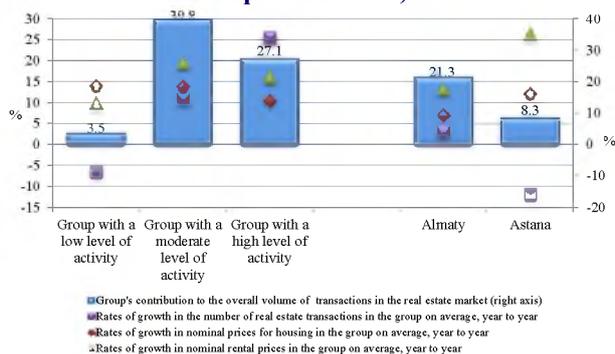


Note: The dot's size corresponds to the total area of new commissioned residential buildings, mln. sq.m

*According to 9 month data. According to data from ASRK, MJRK temporarily suspended providing information of number of sales transactions of housing of ASRK in order to avoid publication of inaccurate data for the period October-December 2012

Source: ASRK

Figure 2.3.1.3
Activity⁵ of the real estate market, by regions* (at September 2013)



Note: *changes to the corresponding period of the prior year. Transaction volume in the real estate market is calculated as the product of the number of real estate transactions and average housing prices in 4 segments of the market.

Source: ASRK, calculations by NBRK

At the end of 2013, the volumes of completed construction works and commissioned new housing generally increased in absolute terms, except for certain regional large construction sites of the country. At the end of 2013, the most significant reduction in the volumes of commissioned new housing was observed in Astana (by 14.2%). At the same time, the rates of commissioning of new housing were at a lower level, thus also contributing to the growth in housing prices and rental prices.

As a whole, such factors as a low level of demand for home purchases, more actively growing housing prices in major cities, and slowing rates of growth of nominal wages speak for decreasing purchasing capacity of the population and can be the factors of more significant growth of rental prices. Moreover, in the long run the growth of rental prices may increase due to migration of population and owing to the initiatives of Kazakhstan for hosting international forums, particularly in Astana.

Amidst positive growth in prices, the Kazakh real estate market is characterized by the slowdown in activity: the rates of growth of the number of real estate transactions decreased from 16.7% at September 2010 to 8.6% at September 2013. The major factors that limit the activity in the real estate market are modest demand from the bulk of the population and the decreasing role of mortgage lending. Moreover, a slowdown in the rates of growth of construction works and commissioned new housing also indicates slowing business activity in the real estate market (Figure 2.3.1.2).

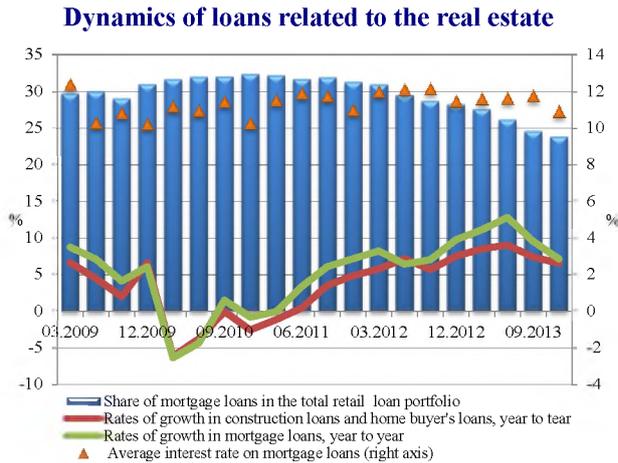
⁵ Activity is characterized by the following features:

- 1) input into the growth of the number of real estate transactions;
- 2) rates of growth of completed construction works;
- 3) rates of growth of new residential buildings commissioned.

Groups of regions with a high, moderate and low rate of activity (excl. Astana and Almaty) were formed based on different combination of activity ratios. **A group with a low activity rate:** two ratios as minimum have low values (less than 25 percentile). **A group with a moderate activity rate:** one ratio as minimum has a low value (less than 25 percentile). **A group with a high activity rate:** three ratios have high values (over 25 percentile).

A group of regions with a low activity rate: Atyrau and Kzylorda regions. **A group of regions with a moderate activity rate:** Akmola, Aktobe, Almaty, Western Kazakhstan, Zhambyl, Mangistau, Northern Kazakhstan, and Pavlodar regions. **A group of regions with a high activity rate:** Karaganda, Kostanai, Northern Kazakhstan and Eastern Kazakhstan regions.

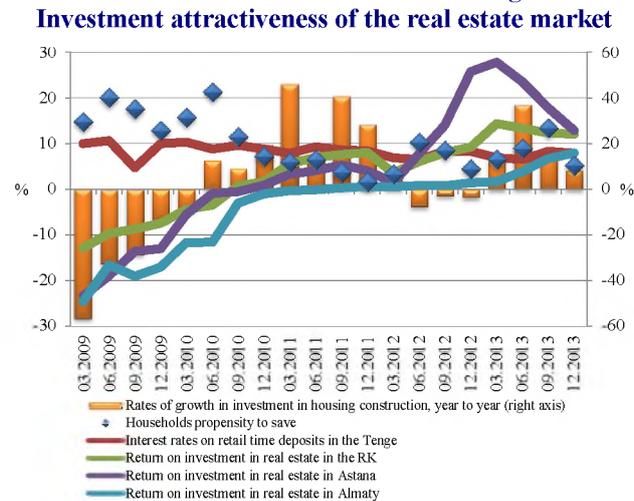
Figure 2.3.1.4



Source: NBRK

Regional real estate markets are rather differentiated (Figure 2.3.1.3). A group with a high activity is characterized by the highest rates of growth of the number of real estate transactions (25.5% as of September 2013), while the housing prices in the group on average are growing at lower pace as compared to other groups. Cities of Astana and Almaty are one of the key job offering centers as well as construction sites offering centers; in aggregate they maintain their share at 30% of the overall transaction volume in the real estate market.

Figure 2.3.1.5

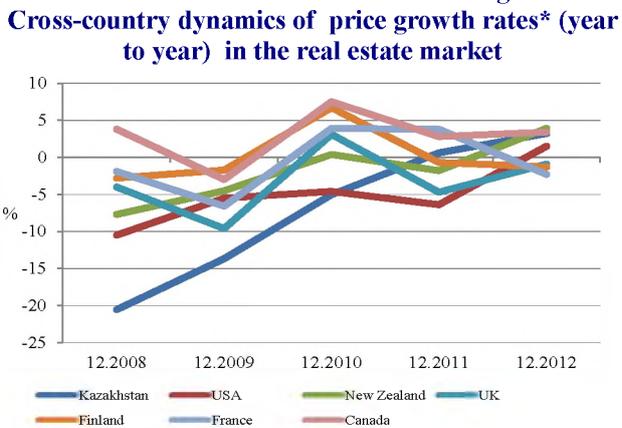


Notes: Return on investment in real estate is calculated as the sum of rental yield during a year and from a subsequent resale. Yield indices from rent and resale are determined as the yield from resale over one year of ownership or from rent during a year/ real estate value.

Source: ASRK, calculations by NBRK

Mortgage lending represents one of the factors that restrain buying activity in the real estate market of Kazakhstan. So, the share of mortgage loans in the total retail loans portfolio accounted 23.8% at December 31, 2013, whereas at December 31, 2012 it accounted for 28.2% (Figure 2.3.1.4). Conservative policy of banks does not promote further activation of the credit market. Increased risks in the segment, in terms of the loan portfolio quality, also do not help lowering the interest rates; this, in its turn, reflects on the dynamics of the real estate market development as a whole.

Figure 2.3.1.6



Note: *in real terms

Source: Thomson Reuters Datastream

In the long run, real property purchase may be regarded among the households as a means of reliable long-term savings. A generating trend of the growth in housing prices increases investment attractiveness of the market in the environment of increased propensity of households to save. So, starting from 2013, returns on investments in real estate in Kazakhstan as whole increased interest rates on time deposits by 5.6% on average, and in Astana - by 13%. (Figure 2.3.1.5).

Currently, the rates of real estate prices growth in real terms are commensurable with other countries, despite a more dramatic drop in prices in the real estate market of Kazakhstan in 2008 (Figure 2.3.1.6). On the other hand, the values of indicators that characterize the presence of the “bubble” in the housing market, suggest its absence at present. So, in 2013, the ratio of rental price to housing price cannot be interpreted as significantly underestimated/overestimated. At the same time, a huge gap between housing prices and

the cost of construction speaks for some systemic overstatement of the final cost of housing (Table 2.3.1.1).

Table 2.3.1.1

Indicators characterizing formation of a "bubble" in the housing market

Item	2008	2009	2010	2011	2012	2013
Total rental price for a year/price of housing*, sq.m, including:	6.5	7.0	7.1	7.0	6.8	6.9
<i>Astana</i>	9.4	10.8	11.0	11.9	10.2	10.2
<i>Almaty</i>	6.7	7.9	8.1	8.3	8.5	9.0
Price for housing/GDP per capita, %, including:	12.0	10.5	8.2	7.0	6.9	7.2
<i>Astana</i>	9.7	7.6	6.2	5.9	5.6	-
<i>Almaty</i>	13.9	10.6	8.1	6.7	5.9	-
Construction cost/prices for housing, %, including:	51.5	58.1	62.7	56.5	58.7	51.6
<i>Astana</i>	40.8	48.9	52.4	54.4	41.4	44.6
<i>Almaty</i>	41.5	47.6	52.3	44.1	67.6**	38.7

Note: *According to the Global Property Guide: value of the indicator: less than 3% is regarded as "overestimated" versus the real price for housing, from 4 to 10% - the price is "optimal", and over 15% - the real estate price is underestimated

**Spikes are associated with the commissioning of a structure in Almaty, which accounted for 10.5% of the total actual cost of construction of houses commissioned in Kazakhstan

Source: ASRK, calculations by NBRK

Despite the growth in the floor space of commissioned housing and gradual growth in the average housing per capita, the deficit⁶ in housing still amounts to 32 mln. sq.m. The rates of growth of the commissioning of new housing remain low, therefore housing prices are retained at a relatively high level versus the disposal income of the population, thus inducing a minor decrease in the affordability of housing, especially in the cities of Astana and Almaty (Table 2.3.1.2).

Table 2.3.1.2

Indicators of housing per capita

Item	2010	2011	2012	2013
Total area of residential buildings commissioned, mln. sq.m., including:	6.41	6.53	6.74	6.84
<i>Astana</i>	1.38	1.40	1.29	1.1
<i>Almaty</i>	1.06	0.77	0.79	0.83
Average housing per capita, sq.m per an individual	18.4	18.7	19.6	-
Price for housing/household disposable income, sq.m, including:	0.42	0.37	0.38	0.40
<i>Astana</i>	0.42	0.40	0.51	0.52
<i>Almaty</i>	0.54	0.47	0.47	0.50
Housing affordability index*, including:	3.25	3.03	2.95	3.05
<i>Astana</i>	3.41	2.92	3.34	3.47
<i>Almaty</i>	4.82	4.25	3.91	4.02

Note: *Affordable housing (below 3), moderately unaffordable housing (3.1-4), seriously unaffordable housing (4.1-5), significantly unaffordable housing (above 5.1). Housing affordability is assessed by using a special index which is calculated as an average price of 1 sq.m multiplied by 18 (standard of housing per capita) and divided by the sum of wages for one year (average monthly wage multiplied by 12 (number of months)).

Source: ASRK, calculations by NBRK

2.3.2 Financial Markets

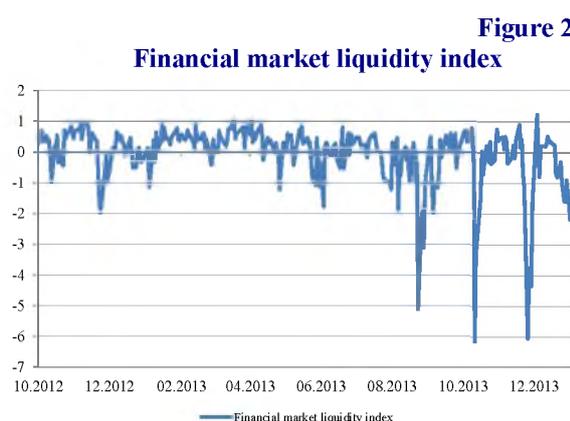
A changing environment in the global commodity and foreign exchange markets, recurring spikes in economic expectations of market participants and the population regarding the Tenge depreciation had been reflecting on the domestic currency exchange rate throughout the year 2013. Accordingly, as part of its foreign exchange policy implementation, the NBRK was conducting operations in the domestic foreign exchange market to keep volatility of the exchange

⁶ Calculated as the housing stock at the end of 2012, plus residential buildings commissioned during 9 months of 2013, minus the population size multiplied by the average housing per capita.

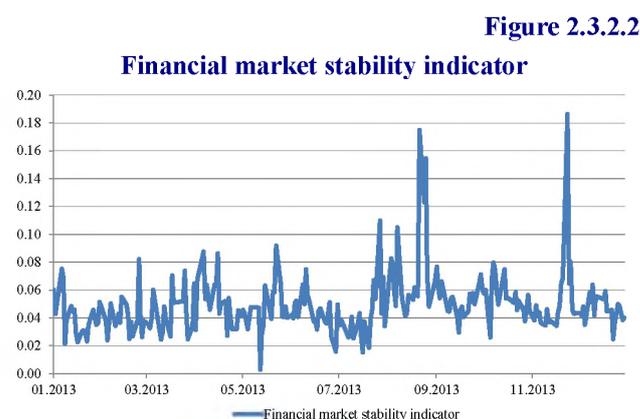
rate of Tenge within acceptable levels. The dynamics of interest rates in the money market was characterized by the same seasonal patterns as in the prior year, with the maximum values achieved in certain periods when payments of tax liabilities resulted in a systemic liquidity shortage.

If the beginning of 2013 was characterized by reduced volatility and improved liquidity position of the financial market versus the situation in the prior year, the uncertainty in the market has significantly increased since May⁷ (Figure 2.3.2.1).

The similar picture is demonstrated by the financial market stability index⁸, where a low level of intermediation in the market and the growth of operations with the NBRK in the environment of deficient liquidity was observed in certain periods of time (Figure 2.3.2.2).



Source: KASE, calculations by NBRK



Source: KASE, calculations by NBRK

The situation in the domestic foreign exchange market during 2013 was developing both under the impact of negative spurts in the state of global commodity markets and trends in the dynamics of foreign exchange rate of the trade partner countries. Despite their fluctuations during 2013, oil prices remained at a high level. Nonetheless, they couldn't extinguish negative expectations regarding the dynamics of the Tenge exchange rate caused by the depreciating trend of the Russian ruble and especially by the increased tension in the Russian foreign exchange market in July-August 2013 (Figure 2.3.2.3).

⁷ Financial market liquidity index was computed as an average between liquidity indices of the REPO market, for the USD stock-exchange spot-market and for the swap market with the USD/KZT pairs. Liquidity index for individual markets was calculated with the use of normalized values of spread between weighted average prices of demand and supply, the number of transactions, amount of an average transaction and the ratio of price differential between the first and the last transaction to the amount of the average transaction modulo. Series were normalized by dividing the difference between the actual value of the indicator and its average for the period from 01.10.2012 to 31.12.2013 by a standard deviation in a sample.

It should be noted that in the previous Reports only the Liquidity Index for the USD stock-exchange spot-market was computed.

⁸ Financial market stability index assesses the market ability to perform distribution functions of short-term cash flows among the market participants. The index was designed by weighting the following ratios:

Average market rate – average rate weighted based on the transaction volumes in the REPO market and the exchange rate of KZT/USD.

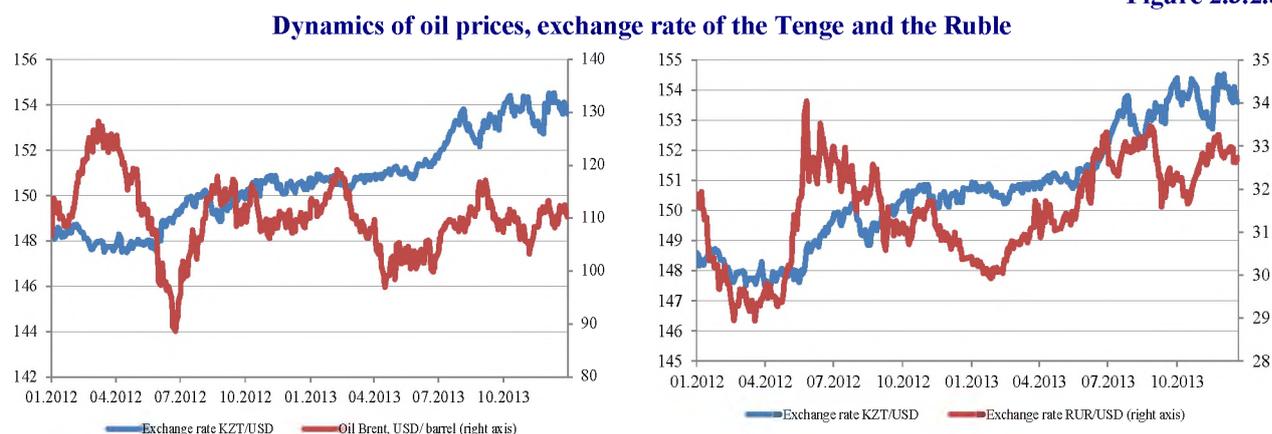
The operation volume with the NBRK – reflects the extent to which the demand for liquidity was satisfied.

Borrower concentration in the market – is calculated as the ratio of liability concentration.

Lender concentration in the market – is calculated as the ratio of assets concentration.

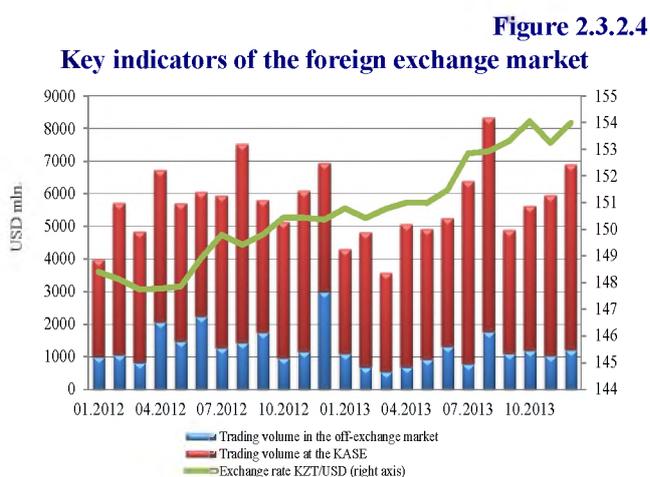
Level of intermediation in the market – is calculated as a share of market participants in the operations where cash is transferred from one participant to another.

Figure 2.3.2.3



Source: NBRK, Bloomberg, Central Bank of Russia

The operations volume in the domestic foreign exchange market remained virtually unchanged: the decrease accounted for 0.8% in aggregate as compared to the same period of the prior year both in the organized market (KASE) and in the off-exchange market. Participants' activity also hasn't changed dramatically. In the reporting period the dynamics of stock exchange turnovers in the key currency pairs (US Dollar in particular) shows the increased interest among market participants in operations in the stock exchange segment which retains its importance as the segment determining the exchange rate (Figure 2.3.2.4).



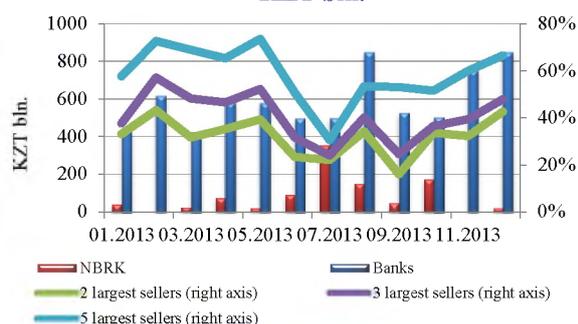
Source: KASE, calculations by NBRK

During 2013, the demand for foreign exchange (mainly, the US Dollar) in the organized market on the part of financial institutions and entities of the real sector of the economy exceeded its supply. Therefore, during the period the NBRK was implementing the exchange rate policy by acting mainly as the seller of foreign currency in order to maintain a relative balance between the demand and supply in the domestic foreign exchange market. In general, the volume of such transactions was insignificant but during certain periods (May, June and August 2013) when Tenge was depreciating, the NBRK had to increase the volume of foreign exchange sales.

The average daily number of players in the organized currency swap and spot market of the US Dollar was about 13 and 25 players, respectively (the maximum number of players was 33). The concentration of sellers and lenders for organized swap and spot markets was also high (about 60-80% for 5 largest players), except the concentration of buyers in the spot currency market where the share of 5 largest buyers was below 50% (Figure 2.3.2.5).

Figure 2.3.2.5

Concentration of sellers in the spot currency market, KZT bln.



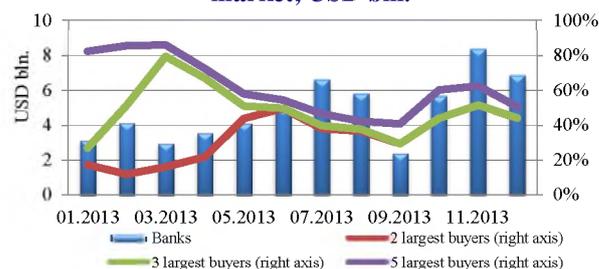
Concentration of buyers in the spot currency market, KZT bln.



Concentration of sellers in the swap currency market, USD bln.



Concentration of buyers in the swap currency market, USD bln.

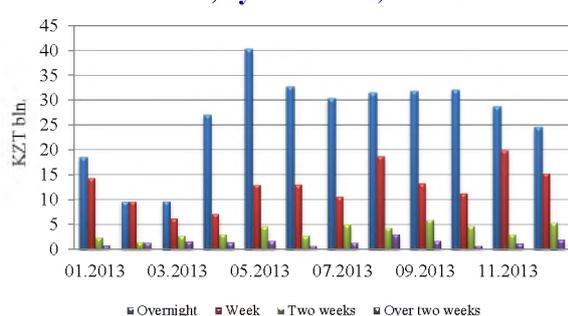


Source: KASE, calculations by NBRK

Contrary to the organized foreign exchange market, in the reporting period the money market was in a relative balance between the supply and demand due to the adjusting involvement of the NBRK. The automatic REPO operations with government securities with maturity of up to 7 days still represent the dominating segment in the money market (Figure 2.3.2.6). During 2013, the volumes of open positions and interest rates in this segment of the market were growing, being caused by the seasonal increase in the demand for liquidity at the end of the second month of each quarter associated with tax payments (tax periods) as well as a more active involvement of the NBRK in the market in general (Figure 2.3.2.7).

Figure 2.3.2.6

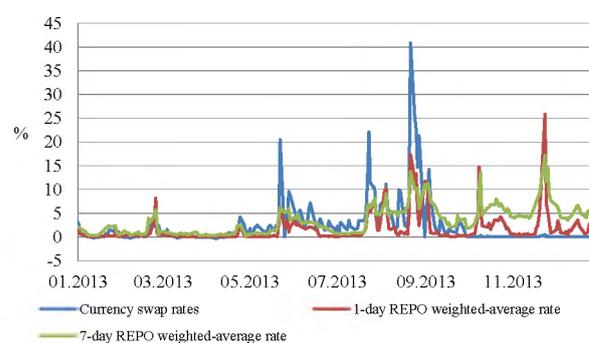
Volume of currency exposures the automatic REPO market, by maturities, KZT bln.



Source: KASE, calculations by NBRK

Figure 2.3.2.7

Interest rates in some segments of the foreign exchange market



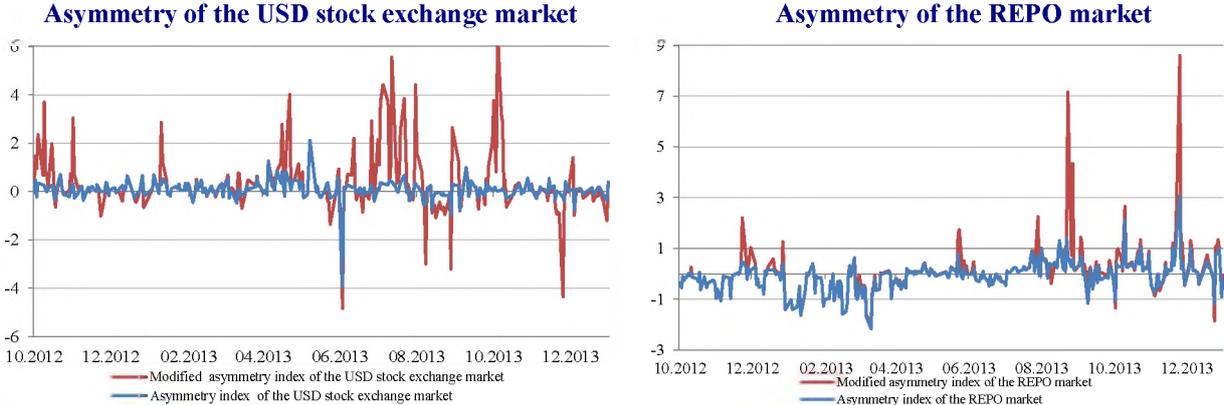
Source: KASE, calculations by NBRK

During the tax periods, REPO operations with the NBRK still served as the main instrument to cover the gap between the demand for liquidity and the level of its supply. Asymmetry indices⁹

⁹ Asymmetry index is calculated as the difference between aggregate volumes of bids for USD purchase and sale divided by the aggregate volume of transactions in the market during the period from 01.10.2012 to 30.09.2013. This index is used to estimate the pressure on the price by the market players and allows assessing possible changes in the trend. Positive values indicate the pressure

of the organized foreign exchange market and REPO market (Figure 2.3.2.8) indicate that the NBRK’s monetary policy still plays significant smoothing role in maintaining the markets in a balanced condition (Box 3).

Figure 2.3.2.8



Source: KASE, calculations by NBRK

Box 3

NBRK’s Monetary Policy in 2013

The main target of the government monetary policy for 2013 implemented by the NBRK was keeping the inflation within the band of 6-8%. At the end of 2013, the annual inflation fell below the lower boundary of the band and had been at 4.8%.

In 2013 the monetary policy was implemented against the spikes in negative expectation of the market participants and the population in respect of behavior of the Tenge exchange rate, as well as in the environment of limited supply of the Tenge liquidity.

Figure 1
Dynamics of the exchange rate of the Tenge and NBRK's operations in the on-exchange segment of the foreign exchange market



Source: NBRK

To ensure the balance between the increased demand for foreign exchange and its insufficient supply, the NBRK was intervening in the domestic foreign exchange market thus smoothing fluctuations in the exchange rate of the Tenge. At the end of 2013, the official exchange rate of Tenge depreciated by 2.2%, and the NBRK was acting as a net seller of foreign exchange in the amount of USD 1.8 bln. (Figure 1). The highest volume of transactions which was used to support the Tenge exchange rate and which determined the overall balance of the NBRK’s transactions in the domestic foreign exchange market, was recorded in July 2013 – the month of highest devaluation expectations and depreciation of the Tenge exchange rate (by 1%).

Since September 2, 2013, the NBRK has been publishing the value of a multi-currency basket composed of US Dollar (70%), Euro (20%) and the Russian ruble (10%) (Figure 2). A high percentage of the US Dollar in the basket pre-determined similar trends in the behavior of the currency basket and the exchange rate of Tenge versus the US Dollar.

on price by the demand and negative values – by the supply. Modified asymmetry index is computed similarly to asymmetry index but transactions and bids of the NBRK are not taken into account. The use of the two indices allows assessing the role of the NBRK’s interventions as the factor of shock absorptions.

Figure 2
Dynamics of the official exchange rate of the Tenge
(01.01.2013=100%)



Source: NBRK

Ministry of Finance of the Republic of Kazakhstan was an active borrower in the domestic market; thus, it also acted as a competitor to banks for the Tenge liquidity.

Figure 3
Compliance with minimum reserve requirements



Source: NBRK

2012, and banks' debt on refinancing loans provided by the NBRK increased by 21.1%.

Nonetheless, the volume of the NBRK's operations for provision of the Tenge liquidity did not ensure its replenishment associated with the sale of foreign exchange because of increased demand on the part of the banks themselves and their clients. The result of the NBRK's operations in the financial market was a net liquidity withdrawal.

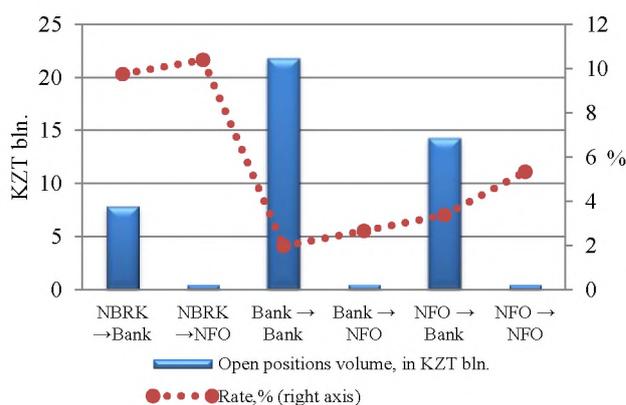
A limited supply of the domestic currency in the money market resulted in significant volatility of interest rates. During 2013, the interest rate in the sector of automatic REPO was fluctuating between 0.01% and 50.00%, while the NBRK was conducting the reverse REPO operations (for the liquidity provision) in the range from 5.50% to 30.00% (during 2013, the official refinancing rate remained unchanged at 5.50%).

In the 4th quarter of 2012, the mechanism of minimum reserve requirements had undergone certain changes; these changes related to the structure of bank liabilities used for the calculation of minimum reserve requirements, the structure of reserve assets and their ratios. So, cash and correspondent accounts in foreign currency were excluded from the structure of reserve assets and instead of two ratios four ratios were introduced: for domestic short-term liabilities (2.5%), for domestic long-term liabilities (0%), for foreign short-term liabilities (6.0%) and for foreign long-term liabilities (2.5%). Such structure of ratios and reserve assets is expected to allow the NBRK increase its capabilities to regulate the Tenge liquidity in the financial market and to respond to the change in the demand for the domestic currency in a more efficient way. At the end of 2013, the excess reserve decreased (Figure 3) as a result of regulatory changes whereas it's still early to speak about the efficient growth of the new mechanism.

A limited supply of the Tenge liquidity in the money market was caused by a number of factors. First, in 2013 foreign currency deposits with banks increased significantly (by 40.6% during 2013), whereas the volume of deposits in the domestic currency remained almost unchanged (the growth of 0.1%). Thus, in 2013 additional provision of the Tenge liquidity to banks from the non-bank sector was virtually non-existent. Alongside with that, credits to the economy were provided primarily in the domestic currency – a net growth of credits to the economy was by 2/3 secured by loans in the domestic currency. Second, the

The NBRK's operations in the money market were mainly focused on the provision of liquidity. During 2013, the volume of the NBRK's operations in the sector of automatic REPO at the KASE related to liquidity provision amounted to KZT 381.8 bln., which is 1.3 times more than during 2012. Moreover, the volume of the NBRK's short-term notes in circulation decreased from KZT 186.1 bln. to KZT 3.6 bln. in the end of year. Deposit balances of banks with the NBRK decreased by 39.9% in December 2013 versus December

Figure 2.3.2.9
REPO market performance, by parties to transactions



Source: KASE, calculations by NBRK

It should be specially mentioned that in the 1st quarter of 2013 the concentration among lenders was moderate: the share of five largest lenders was below 40%, and its growth to 50-70% was noted in the two subsequent quarters. There are 3 banks and 2 non-financial organizations among the five largest lenders. The concentration among borrowers was high; their share accounted for 50-70 % of the market during different periods.

Concentration of lenders in the REPO market

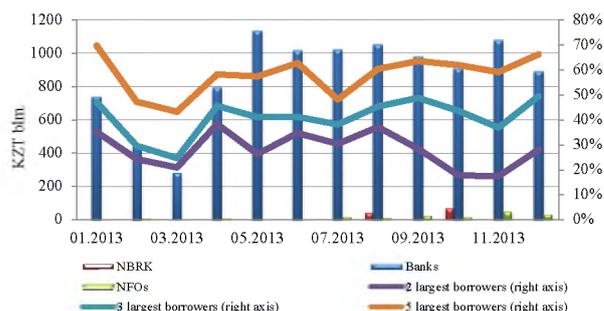


Source: KASE, calculations by NBRK

As for the volumes of positions and activity of participants in the market, they are still characterized by significant inhomogeneity: alongside with a few large participants with high transaction volumes, there is a significant number of smaller participants. The major portion of operations in the REPO market was conducted between banks. In particular, the share of lending banks in the REPO market accounted for 49% of the lending volume, and the share of borrowing banks accounted for 96% of borrowed funds (Figure 2.3.2.9-2.3.2.10). The average daily number of participants in the REPO market was about 21, where over 13 participants are banks.

Figure 2.3.2.10

Concentration of borrowers in the REPO market



The redistribution of liquidity in the REPO market is quite effective: the majority of market participants have access to the NBRK's resources or to primary lenders; therefore the risk of arbitrage is minimal. Distribution of liquidity in the REPO market by groups¹⁰ as determined by remoteness from primary lenders, during 2013 showed the prevalence of operations with participants from the 1st group. The major portion of transactions is made between groups 0 and 1, which are comprised by the largest banks. The average number of participants in group 0 was 14-15 (4 of which are banks), in group 1 – 20-21 (16 banks) and in group 2 – 3 (1-2 banks). Participants of group 1 on average accumulate 90% of the total volume of the REPO market (where the major portion of funds of group 0 as well as a part of funds borrowed from other groups is located), transferring part of funds to other market participants. Volumes of liquidity provided by the NBRK in the REPO market were increasing in the tax periods (May, August and October 2013),

¹⁰ This method is based on the *multi-layer analysis system of transmission of liquidity* as calculated by the Bank of Russia, which shows the distribution of liquidity among the groups of participants that are lined up based on their proximity to the primary liquidity sources (to primary lenders). Groups in the REPO market are consistently lined up depending on proximity of participants to primary lenders and to the NBRK's refinancing system. Group 0 includes the NBRK and those participants, which are lenders only, i.e. they were not involved in any transaction as borrowers (primary lenders). Group 1 includes those borrowers which make REPO transactions with participants from group 0. Therefore, the next group includes those participants (borrowers), which enter into the REPO transactions with lenders from the previous group. It should be noted that all participants except group 0 can be lenders and borrowers.

whereas in other periods there was an increase in the volumes of loans from banks and non-banking organizations – participants of group 0 (Table 2.3.2.1).

Table 2.3.2.1

Liquidity distribution in the 7-day REPO market (% of the overall market volume)

Period	NBRK → group 1	group 0 → group 1	group 1 → group 1	group 1 → group 2	group 2 → group 1	group 2 → group 2	group 2 → group 3	group 3 → group 1	group 3 → group 2
01.2013		64.48%	27.12%	0.47%	5.80%		0.00%	2.13%	
02.2013	3.78%	62.75%	26.98%	0.79%	5.69%				
03.2013		58.17%	32.61%	4.08%	5.14%				
04.2013		83.51%	16.49%						
05.2013	9.94%	26.30%	54.01%	0.15%	9.59%	0.02%			
06.2013	1.13%	56.72%	32.19%	2.40%	7.31%	0.25%			
07.2013	5.00%	46.99%	40.14%	0.15%	7.64%	0.07%	0.01%		
08.2013	11.26%	49.57%	35.32%	0.27%	1.46%		0.08%	2.02%	0.02%
09.2013	8.56%	76.45%	14.78%	0.01%	0.19%				
10.2013	10.29%	32.61%	54.93%	0.17%	2.00%				
11.2013	11.32%	55.62%	27.42%	0.06%	5.58%				
12.2013	2.52%	61.64%	35.84%						

Source: KASE, calculations by NBRK

Intermediation ratio¹¹ was taking high values (over 0.7), thus speaking for significant liquidity volume which is being accumulated in group 1. In September 2013, the weighted average intermediation ratio for banks in group 1 went up to 0.84; this indicates a better distribution of liquidity. Banks in group 2 were generally characterized by a new outflow of resources, except in March 2013 (Table 2.3.2.2).

Table 2.3.2.2

Average-weighted intermediation ratio for groups 1 and 2

Period	Group 1			Group 2	
	Group 1	Banks	NFOs	Banks	NFOs
01.2013	0.57	0.65	-0.80	-0.89	-0.84
02.2013	0.56	0.66	-0.48	-0.76	0.00
03.2013	0.45	0.57	-0.66	0.15	-0.91
04.2013	0.72	0.80	-0.52	-	-
05.2013	0.30	0.33	-0.94	-0.99	-0.49
06.2013	0.48	0.55	-0.85	-0.26	-0.97
07.2013	0.42	0.44	-0.07	-0.98	-0.87
08.2013	0.47	0.52	-0.64	-0.50	-0.93
09.2013	0.74	0.84	-0.40	-	-0.90
10.2013	0.45	0.34	-0.64	-0.84	-
11.2013	0.72	0.72	-0.43	-0.98	-
12.2013	0.64	0.61	-0.51	-	-

Source: KASE, calculations by NBRK

Same as in the REPO market, the distribution of liquidity by groups¹² in the organized currency swap market showed the prevalence of participants from group 1. About 91% of liquid funds of the whole market are accumulated in group 1. The key players in group 0 and group 1 virtually didn't change. The average number of participants in group 0 was 7, in group 1 – 11, and in group 2 – less than one participant on average. A relatively high level of intermediation

¹¹ Intermediation ratio is determined as the ratio of a differential between borrowed and placed funds of a group by the overall volume of a group's turnover: «-» - a net lender, «+» - a net borrower.

¹² Contrary to the methodology of liquidity distribution for the REPO market, in order to identify primary participants (group 0) in the organized currency swap market, a coefficient equal to the ratio of volumes of borrowed/placed funds of a participant is determined. Therefore, participants with a low value of the ratio $k \leq 0.05$ are included in group 0. To identify participants of group 1, the ratio is used which is equal to the ratio of the volume of borrowed funds for such participants from previous groups ($k_1 \leq 0.1$). The remaining participants are included in group 2.

characterized a high level of liquidity retention; therefore, allocation of funds to other groups was insignificant (Table 2.3.2.3).

Table 2.3.2.3

Liquidity distribution in the swap currency market (% of the market volume)

Period	group 0→ group 0	group 0→ group 1	group 0→ group 2	group 1→ group 0	group 1→ group 1	group 1→ group 2	group 2→ group 1
01.2013	0.03%	69%	-	0.3%	30.8%	-	-
02.2013	-	62%	-	0.7%	35.7%	1.0%	0.7%
03.2013	-	85%	0.2%	0.2%	13.2%	1.1%	-
04.2013	0.14%	34%	1.8%	-	45.3%	17.6%	0.7%
05.2013	-	66%	-	-	33.5%	-	-
06.2013	0.36%	87%	-	-	12.2%	-	-
07.2013	0.24%	62%	-	0.0%	37.6%	-	-
08.2013	0.48%	73%	-	0.4%	26.3%	-	-
09.2013	0.60%	76%	-	0.1%	23.5%	-	-
10.2013	1.17%	77%	-	0.05%	21.43%	-	-
11.2013	-	73%	-	0.07%	26.74%	-	-
12.2013	0.40%	77%	-	0.15%	22.91%	-	-

Source: KASE, calculations by NBRK

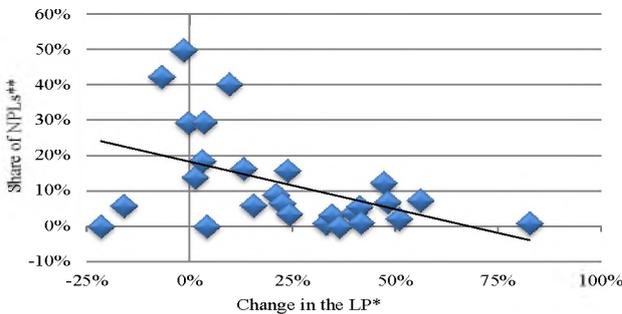
III Risk of Financial Intermediation Institutes and Infrastructure

3.1 Risks of the Banking Sector

3.1.1 Risk Profile¹³

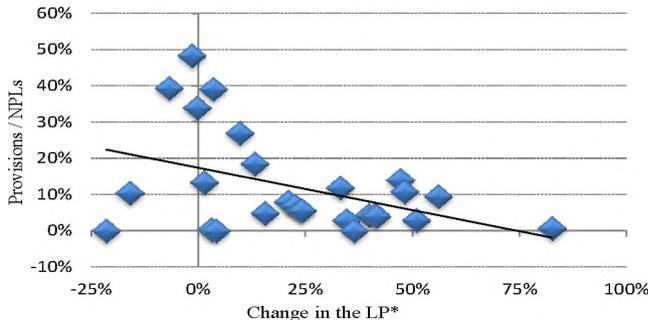
The analysis of the result of how banks’ business strategies were implemented in 2013, shows a certain dependence of the rates of growth of a bank’s loan portfolio upon the quality of assets and the level of their coverage with provisions as well as on the bank’s concentration on certain lines of the banking business or its funding sources. In terms of profitability, in the mid- and long-term, the best performance is demonstrated by banks with a better asset quality, and a low share of liquid assets, which specialize in a certain line of lending as well as by those banks which attract funding mainly in the domestic currency.

Figure 3.1.1.1
Dynamics of the loan portfolio¹⁴ and non-performing loans (NPL)¹⁵



Source: NBRK

Figure 3.1.1.2
Dynamics of the loan portfolio (LP)¹⁶ and ratio of provisions to non-performing loans



Source: NBRK

A high level of non-performing loans in the loan portfolio structure is predictably constraining the bank’s abilities to expand its credit activity (Figure 3.1.1.1). Banks are forced to create reserves (provisions) (Figure 3.1.1.2), spending resources on additional capitalization. Higher values of non-performing loans and, thus, low (and even negative) rates of the loan portfolio growth are demonstrated by banks with the “old” loan portfolio. Such banks accumulated their problems mainly before and during the crisis. Banks which are aggressive in terms of the loan portfolio growth either do not have non-performing loans due to relative youth of the portfolio or the percentage of such loans is low (is “diluted” by new loans).

There is a certain apparent correlation between profits generated by banks and the loan portfolio quality, since a high percentage of non-performing loans forces the bank to incur additional operating expenses (Figure 3.1.1.3).

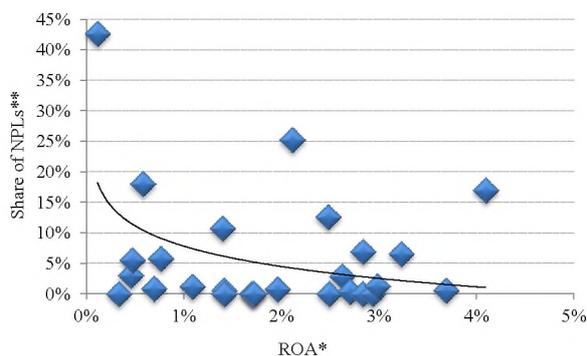
¹³ The analysis was performed during 2013 based on the data on 35 banks. The calculation didn't include BTA Bank, Housing Construction and Savings Bank of Kazakhstan and AlHilal Islamic Bank

¹⁴ Excluding banks of the first and tenth percentile in terms of behavior of the loan portfolio

¹⁵ Hereinafter in Section 3.1.1, the indicator “for the period” is marked with one asterisk («*») and the indicator “at period-end” is marked with two asterisks («**»)

¹⁶ Excluding the first and the tenth percentile

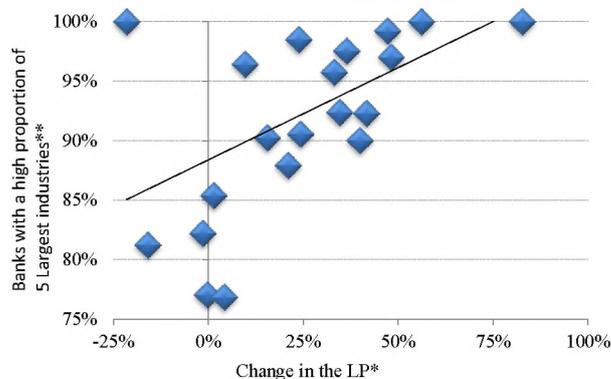
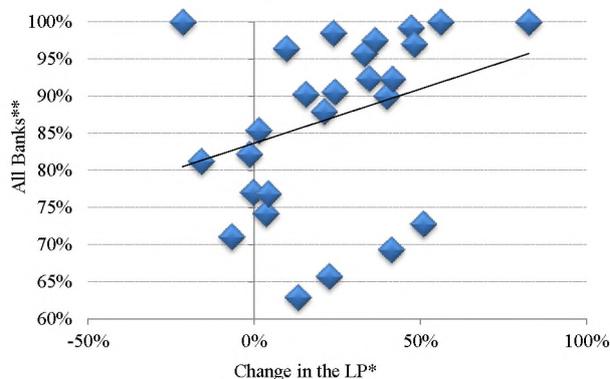
Figure 3.1.1.3
Bank's profitability and the share of non-performing loans in the structure of the bank's loan portfolio¹⁷



Source: NBRK

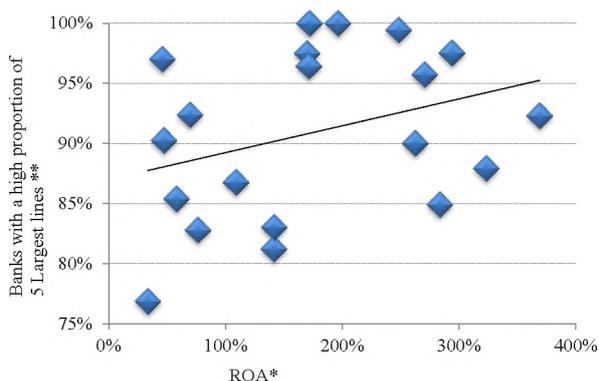
Moderate concentration of lending on a certain line also represents a factor that affects the loan portfolio behavior. Although the dependence on the change in the loan portfolio based on the share of five largest lines of lending¹⁸ is visible in the entire group of banks (Figure 3.1.1.4a) but is not statistically significant, when a group of banks with a high share of five largest sectors (over 3/4 of the loan portfolio) is singled out, positive correlation becomes more obvious and statistically significant (Figure 3.1.1.4b).

Figure 3.1.1.4
Dynamics of the loan portfolio (LP) and the share of five largest lines of lending¹⁹



Source: NBRK

Figure 3.1.1.5
Profitability and the share of five largest lines of lending²⁰



Source: NBRK

Also, moderate concentration of the loan portfolio provides certain advantages in terms of higher profitability; this also appears to be statistically significant for banks where the share of five largest lines of lending in the structure of their loan portfolio exceeds 3/4 (Figure 3.1.1.5).

It is worth mentioning that a higher level of the loan portfolio concentration on certain lines of lending (over 75% of one or three lines of lending) demonstrates worse results, both in terms of the loan portfolio growth and in terms of a bank's profitability.

Theoretically, the presence of a high portion of highly-liquid assets goes with the limitation of banks in their credit activity.

However, based on the actual data from such banks for the reviewed period, such correlation is traced but is not quite significant (Figure 3.1.1.6). On the other hand, the existence of significant liquidity volume, as a rule, brings a low, zero or negative real income. This negatively affects the bank's profits and especially its interest rate margin (Figure 3.1.1.7).

¹⁷ In Figure 3.1.1.3 the data on interest rate margin is presented excluding the first and the tenth percentile.

¹⁸ A line of lending means consumer lending, residential mortgage lending, SME lending as well as loans to large business, broken down by economic sectors.

¹⁹ Excluding the first and the tenth percentiles.

²⁰ Excluding the first and the tenth percentiles.

Figure 3.1.1.6
Dynamics of the loan portfolio (LP)²¹ and the share of highly liquid assets (HLA) in the structure of bank assets

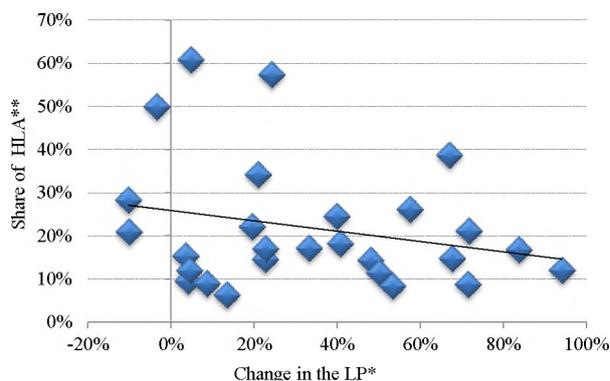
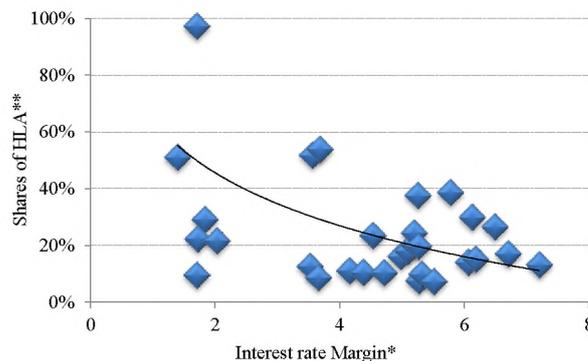


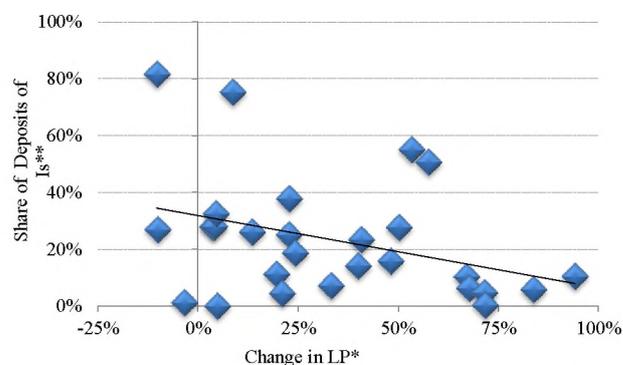
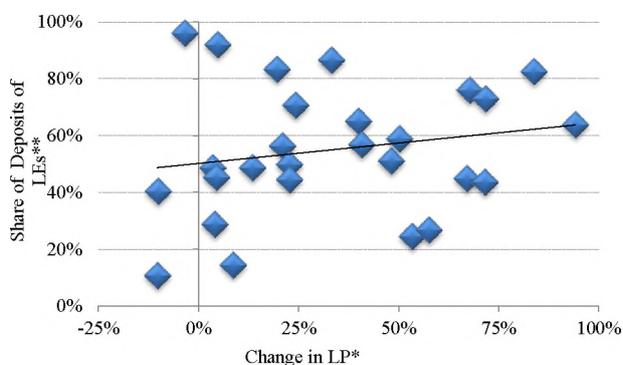
Figure 3.1.1.7
Profitability²² and the share of highly liquid assets (HLA) in the structure of bank assets



Source: NBRK

Customer deposits still represent the main source of the bank funding. Their share in the structure of bank liabilities ranges from 48.5% to 97.7%. However, no correlation is traced between credit activity and the share of deposits. On the other hand, when taking out deposits of legal entities from the deposit structure and comparing their share with the loan portfolio growth, quite a steady positive dependence is observed whereas the correlation between the behavior of the loan portfolio and retail deposits is negative (Figure 3.1.1.8). Most likely, when banks offer a package of banking services to legal entities, thereby they increase sustainability of their funding; whereas individuals are more sensitive to changes in pricing parameters of services provided by banks, which makes this type of funding more volatile.

Figure 3.1.1.8
Dynamics of the loan portfolio (LP)²³ and the share of deposits of legal entities (LEs) and individuals (Is) in the structure of bank liabilities



Source: NBRK

Banks with a high share of deposits of legal entities are characterized by a better quality of their loan portfolio whereas the situation with individuals is the opposite (Figure 3.1.1.9). The existence of insurance scheme for deposits of individuals enables the public to pay less attention to the quality features of the bank's performance including such feature as a percentage of non-performing loans. For legal entities, a bank's financial position and, therefore, the prospects of recovery of placed funds play one of the key roles in selecting a bank.

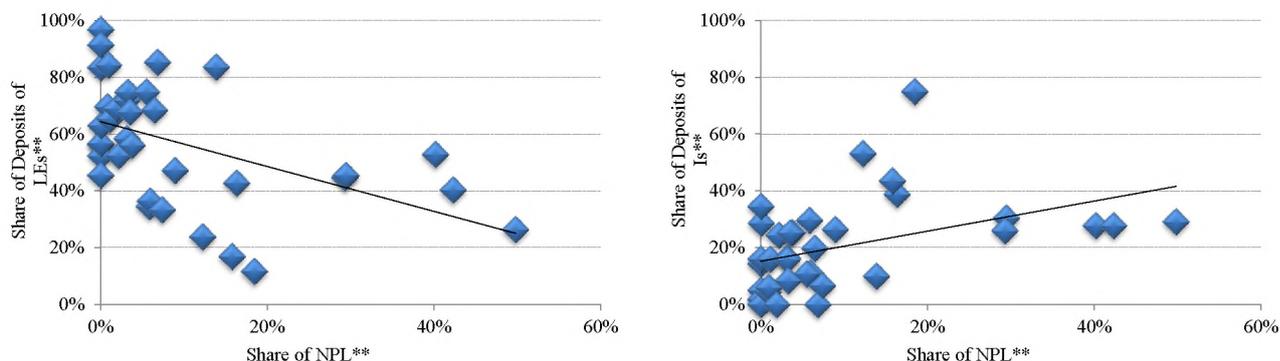
²¹ Excluding the first and the tenth percentile.

²² Excluding the tenth percentile.

²³ Excluding the first and the tenth percentile.

Figure 3.1.1.9

Share of non-performing loans (NPL) in the structure of the loan portfolio and the share of deposits of legal entities (LEs) and individuals (Is) in the structure of bank liabilities



Source: NBRK

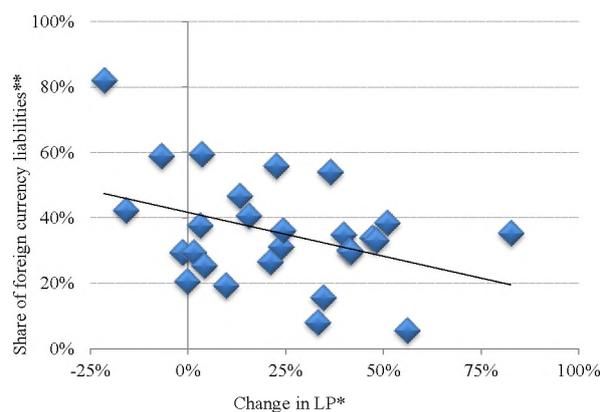
Currency structure of liabilities is an important factor influencing the dynamics of the loan portfolio of banks. Banks which borrow in the domestic currency demonstrate higher credit activity (Figure 3.1.1.10). The legal constraint of opportunities to share foreign exchange risks with a borrower limits the banks in providing foreign currency loans.

Moreover, banks which are concentrating on borrowing in foreign currency demonstrate lower profitability ratios (Figure 3.1.1.11), although this correlation is not quite significant. To some extent, this negative correlation is explained by the need for banks to hedge arising foreign exchange risks thereby reducing the attractiveness of borrowing in foreign currency.

Such analysis shows the impact of individual characteristics of the banks business strategies on their efficiency including their profitability over a short period of time. The structural analysis of profitability factors (Box 4) generally confirms basic conclusions and emphasizes the importance of institutional changes in the system in order to increase the sector's competitiveness in the long term.

Figure 3.1.1.10

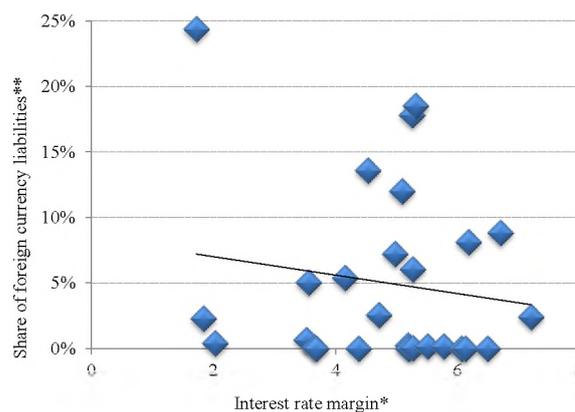
Dynamics of the loan portfolio (LP)²⁴ and the share of foreign currency liabilities in the structure of bank liabilities



Source: NBRK

Figure 3.1.1.11

Profitability²⁵ and the share of foreign currency liabilities in the structure of bank liabilities



Source: NBRK

²⁴ Excluding the first and the tenth percentile

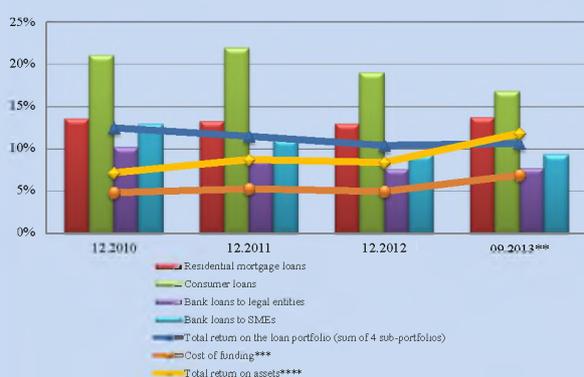
²⁵ Excluding the first and the tenth percentile

Assessment of profitability factors of the second-tier banks

Bank's profitability is the source to support its solvency and promote its further growth amidst rapidly changing economic conditions. Moreover, stability of the banking system secured by sustainable profitability ratios has a direct impact on the economic development as a whole. Thus, the purpose of this analysis is to identify the key factors that will promote a further growth of profitability of Kazakh banks.

At the end of 2013, net income of the banking sector excluding the group of banks that had undergone restructuring of their liabilities amounted to KZT 235 bln., which exceeds the result accumulated at the same date of the prior year by 25.4%. As of January 1, 2014, net interest income amounted to KZT 609.4 bln., however, this result is partially offset by net non-interest loss of KZT 323.4 bln.

Figure 1
Returns on bank loans, by lines of lending *



Note: *analysis was performed on the basis of the bank data provided by the NBRK's request, where the total share of assets as of 01.10.2013 accounted for over 50%;

** data is annualized based on approximation of the results of 9 months as of the 4th quarter of 2013;

Source: banks

The analysis of the *income structure* by lines of lending shows that the bulk of interest income is generated by portfolios of loans provided to large corporate borrowers as well as by retail lending. Among other things, earnings generated from such lines of lending account for over 70% in the total interest income structure. Along with active development of the retail lending segment there is a sustainable growth of the share of earnings generated from the consumer loan portfolio. The attractiveness of the segment is secured by high returns which account for about 17% of the respective loan portfolio as compared to return on other loans that on average varies between 7.8% and 13.7%, respectively (Figure 1).

At the same time, given a minor decrease in the total return on the loan portfolio from the beginning of 2011 and to October 1, 2013, and increased cost of funding²⁶ (by 2.09 pp), the outstripping growth of the total return on assets²⁷ (by 4.7 pp) ensured the increase in the interest rate margin of banks from 2.4% to 4.9%.

Evaluation of *a set of macro-, individual and structural parameters*¹ shows significant impact on the increase in the level of bank profitability in the long run by (1) increasing rates of growth in the market share, (2) growing concentration of the loan portfolio, (3) a low level of credit risk, (4) a high percentage of equity versus debt liabilities, (5) expansion of revenue sources, (6) increasing the efficiency of the bank's management, as well as by (7) the overall growth of monetization of the economy.

The model was designed using the least squares regression analysis with cross-section fixed effects on the basis of unbalanced panel data. The maximum time series covers the period from the 1st quarter of 2005 through the 2nd quarter of 2013². The return on average assets (ROAA) is used as a dependent variable. Independent variables used in the model as well as the results are shown in Table 1.

Among others, one of the important factors affecting the increase in the bank's profitability is the growth in its market share (MARKET SHARE). At the same time, it was found out that the rate of growth in a bank's size (SIZE) doesn't have significant influence. This fact serves as an argument in favor of *the growth in the potential and the share of the block of medium-size*

²⁶ Cost of funding determined as interest expense to interest-bearing liabilities

²⁷ Total return on assets determined as interest income to gross earning assets

banks, which will help increasing profitability of the banking system in general, thereby strengthening its soundness.

Specialization of a bank in credits to a certain sector of the economy / line of business (HERFINDAHL) positively affects profitability in general. However, since decreased diversification of a bank's loan portfolio may result in increased idiosyncratic risks, an additional analysis was performed which showed that at present the correlation between concentration of a loan portfolio and the level of credit risk remains low. Therefore, other things being equal, **it is the specialization and not diversification of bank's assets that determines its profitability.**

The impact of the share of household loans (HOUSEHOLD LOANS) in the loan portfolio of banks increased in the post-crisis period³, which is explained by the attractiveness of the segment. It should be noted that this type of lending is exposed to credit risk to the largest extent. In this connection, the model results showed negative influence of the credit risk (CREDIT RISK) factor on profitability of banks. Thus, uncontrolled growth in **the share of household loans in the loan portfolio of banks** may result in "overheating" of the segment followed by the increase in non-performing loans; this, accordingly, **will negatively affect the system in the mid-term.**

In respect of funding sources for banks it was found out that the growth of the percentage of owners' equity to debt obligations of a bank (LEVERAGE) in general influences the profitability of banks in a positive way. This result shows that **regulatory requirements for increasing the bank capital have a positive effect on profitability** of the Kazakh banks, whereas excessive leverage is conducive to the assumption of additional risks that are not offset by the growth in profitability in the mid-term.

Table 1

Results of the bank profitability assessment model

	Specification I		Specification II		Specification III	
	<i>coefficient</i>	<i>t-stat</i>	<i>coefficient</i>	<i>t-stat</i>	<i>coefficient</i>	<i>t-stat</i>
Constant	0.0102	1.9530	0.0183***	4.3793	0.0138***	4.2383
Size	0.0027	1.3084	0.0030	1.2932	0.0022	1.0651
Market Share (Lag 1)	0.0016***	8.1880	0.0016***	8.3668	0.0017***	9.8225
Herfindahl	0.0169***	2.6344	0.0169***	2.6784	0.0158***	2.8135
Credit Risk	- 0.0771***	- 3.8708	- 0.0776***	- 3.9239	- 0.0684***	- 3.4224
Household Loans	0.0005	1.1658	0.0006	1.5485		
Liquidity	0.0038	0.8210	0.0071	1.4984	0.0001	0.0141
Leverage	0.0012**	2.1900	0.0011**	1.9986	0.0014***	2.9100
Deposit Financing	0.0088**	2.3295				
Foreign Liabilities			- 0.0079*	- 1.9219		
Diversification	0.0002***	3.4745	0.0002***	3.0678	0.0002**	2.3161
Effectiveness	- 0.0339***	- 4.0282	- 0.0331***	- 3.9199	- 0.0279***	- 3.4854
GDP growth					0.1613**	2.5483
Inflation					- 0.0022	- 0.5187
R ²	24.39%		24.21%		20.26%	
Adjusted R ²	19.70%		19.52%		16.42%	
Log likelihood	1 822		1 822		2 271	
F-statistic	5.2063		5.1575		5.2746	
DW statistic	2.0135		2.0157		2.0384	
Panel observations	721		721		915	
Cross-sections	33		33		33	
Periods	25		25		32	

Note: *** - significance at 1% confidence level; ** - significance at 5% confidence level; * - significance at 10% confidence level.

Source: NBRK

Deposit financing (DEPOSIT FINANCING) has a positive effect on the profitability of banks. However, the model results showed that the fact of presence of foreign currency liabilities (FOREIGN LIABILITIES) negatively affects the return on assets. This may be explained by the increasing exposure of banks to foreign exchange risk. Moreover, it was found out that the volatility of the exchange rate of Tenge versus the US Dollar also has a negative impact on the profitability of banks⁴. Therefore, this result indicates **the necessity of more active measures on**

dedollarization of liabilities.

The bank's policy is important not only in respect of assets diversification but also in respect of diversification of income sources. According to the model results, the increase in the percentage of income from non-core activities in the form of commission income, income from dealing operations and income from operations with financial derivatives (DIVERSIFICATION) significantly affects the banks' profits. Thus, ***the expansion of income sources has a positive effect on soundness of banks.***

It should be noted that effectiveness of the bank management⁵ (EFFECTIVENESS) is one of the key factors determining its profitability. Therefore, ***a more close attention on optimization of bank operating expenses is required.***

Alongside with individual factors typical of each bank, macroeconomic indicators of the economy's growth rate (GDP GROWTH) and the change in the loans to GDP⁶ ratio also have a positive and significant effect on the profitability. This indicates that ***the growth in monetization of the economy through enhanced role of lending with adequate risk control increases effectiveness of banks.***

A separate analysis was performed for profitability factors for a sample of large banks⁷. In this specification, the factors of the credit risk level, the factor of the ratio of equity/liabilities as well as the factor of effectiveness of the bank management retained a steady influence on this specification. However, contrary to the results obtained from the previous sample, the factors of the loan portfolio concentration and diversification of income sources lost their significance. The decreasing significance is also observed in respect of macro-economic indicators; this speaks for a greater sustainability of large financial institutions to macroeconomic changes.

The presented factor analysis indicates the areas which will promote a further increase in profitability and soundness of the banking system. However, when pursuing the goal to increase the profits, the need in maintaining the balance between profits and relevant risks assumed by a bank also needs to be taken into account.

¹ The analysis is based on the quarterly data of a sample, which includes 33 second-tier banks. The sample includes all second-tier banks that were operating as of June 30, 2013, except for the banks, which have a specific area of business (Housing Construction and Savings Bank of Kazakhstan, "AlHilal" Islamic Bank) and banks that had undergone the restructuring process (BTA Bank, Alliance Bank, and Temirbank).

² The number of periods may vary depending on the length of a time series for each of the variables used in a given model specification.

³ Table 1 does not include the results of specifications covering the post-crisis period.

⁴ The model specification which includes the factor of the exchange rate volatility is not reflected in table 1. It was not feasible to include this factor into Specification 3 due to a high cross-correlation of this factor with the factor of GDP growth.

⁵ The factor of management effectiveness is approximated via the ratio of operating expenses and income of a bank and, respectively, suggests negative dependence from the banks' profits.

⁶ The model specification which includes the factor of the change in the loans to GDP ratio is not reflected in Table 1. It was not feasible to include this factor into Specification 3 due to a high cross-correlation of this factor with the factor of GDP growth.

⁷ This sample includes the second-tier banks the total assets of which accounted for at least 3% of total assets of the entire banking system of Kazakhstan as of June 30, 2013. Thus, the sample includes the following banks: Kazkommertsbank, Halyk Bank Kazakhstan, Bank CenterCredit, ATF Bank, KaspiBank, Eurasian Bank, Tsesnabank, and Subsidiary of Sberbank.

Categorization of banks by groups based on generic features will allow identify common patterns in the development of the banking system in 2013, and present the profile of risks assumed by banks with similar characteristics²⁸.

The group of banks – "leaders" which is characterized by a high ROA and a low number of non-performing loans demonstrates significant but not the highest rates of asset growth. Their loan

²⁸ The following three pairs of criteria were used in the analysis:

- returns (ROA) and the loan portfolio quality (a share of non-performing loans);
- returns (ROA) and credit activity (growth of the loan portfolio);
- credit activity (growth of the loan portfolio) and the loan portfolio quality (a share of non-performing loans).

Banks were attributed to different groups depending on whether their individual ratios exceed the median level ("a high level") or are equal to or are below the median ("a low level"). As a result, based on each pair of criteria, 4 groups of banks were identified – "leaders", "challengers", "aggressors" and "outsiders".

The ratios for a group were computed by finding a weighted average value; in doing so, individual characteristics of banks comprising one group may differ significantly.

portfolio is growing faster than in other groups of banks, and their concentration on five largest lines of lending is one of the highest. Owing to good asset quality, this group of banks has the lowest ratio of provisions to the loan portfolio as well as it builds up surplus capital in excess of established minimum capital adequacy requirements to the least extent. Banks – “leaders” finance asset-related operations to the greatest extent due to attraction of deposits (deposits to assets ratio of such banks exceeds 70%, whereas among the remaining three groups it is less than 70%).

The group of banks-“outsiders” is focused on maintaining the existing level of activity; therefore, the growth in assets and the loan portfolio is virtually non-observed. Because of a low asset quality, this group of banks has to maintain the highest ratio of provisions to the loan portfolio. In addition, this factor might play an important negative role in attractiveness for depositors; therefore, in this group of banks the ratio of deposits both to liabilities and to assets (less than 65%) is minimal.

Two interim groups of banks, “challengers” and “aggressors”, have the largest capital surplus above the required minimum values; however, other performance indicators of these groups differ significantly. The group of banks – “aggressors” is characterized by the highest asset growth, which, contrary to other groups of banks, outruns the loan portfolio growth and at the same time retains the potential for further growth due to a significant share of highly-liquid assets. Despite the fact that the loan portfolio growth is not the highest in this group, the share of five largest lines of lending is the highest as compared to other groups of banks; in addition, this group has the largest share of deposits in the structure of its liabilities.

The group of banks – “challengers” has the smallest share of highly liquid assets; this fact allows making assertions about a higher degree of “utilization” of funds mobilized by such banks as compared to other groups of banks. At the same time, this group is actively funding asset-related operations by borrowing in foreign currency (Table 3.1.1.1).

Table 3.1.1.1

Characteristics of bank groups depending on profitability ratios and quality of their loan portfolio

		ROA			
		High level	Low level		
NPL	High level	<i>“Challengers”</i>	<i>“Outsiders”</i>		
		Assets growth	7.8%	Assets growth	0.4%
		Loan portfolio growth	13.1%	Loan portfolio growth	0.6%
		Five largest lines of lending	74.7%	Five largest lines of lending	77.9%
		Provisions/loan portfolio	25.9%	Provisions/loan portfolio	32.5%
	Share of highly-liquid assets	14.8%	Share of highly-liquid assets	15.9%	
	Deposits to liabilities	77.7%	Deposits to liabilities	71.9%	
	Foreign currency liabilities	48.6%	Foreign currency liabilities	34.5%	
	Capital surplus	0.439	Capital surplus	0.364	
			<i>7 banks with a share of assets of 49.3% of total assets of the banking system</i>	<i>10 banks with a share of assets of 24.5% of total assets of the banking system</i>	
Low level	<i>“Leaders”</i>	<i>“Aggressors”</i>			
	Assets growth	38.0%	Assets growth	47.7%	
	Loan portfolio growth	38.8%	Loan portfolio growth	32.0%	
	Five largest lines of lending	81.4%	Five largest lines of lending	85.4%	
	Provisions/loan portfolio	3.9%	Provisions/loan portfolio	6.9%	
Share of highly-liquid assets	18.8%	Share of highly-liquid assets	39.6%		
Deposits to liabilities	81.0%	Deposits to liabilities	82.2%		
Foreign currency liabilities	38.1%	Foreign currency liabilities	32.1%		
Capital surplus	0.342	Capital surplus	0.511		
		<i>10 banks with a share of assets of 21.6% of total assets of the banking system</i>	<i>8 banks with a share of assets of 5.1% of total assets of the banking system</i>		

Source: NBRK

The group of banks – “leaders”, which has a high ROA and a high rate of the loan portfolio growth is not the best in terms of other performance indicators, except lowest values in terms of the share of highly liquid assets and the volume of surplus capital. This group has one of the highest concentrations on five largest lines of lending as well as quite a low percentage of non-performing loans and a low ratio of provisions to the loan portfolio.

Low ROA and the loan portfolio growth ratios in the group of banks – “outsiders” are determined by a high percentage of non-performing loans, and, respectively, a high ratio of provisions to the loan portfolio (they are outsiders also in terms of their loan portfolio quality). Moreover, this group of banks had negative asset dynamics during 2013. Also, the group of banks – “outsiders” is characterized by low shares of foreign currency liabilities and deposits in the structure of liabilities (Table 3.1.1.2).

Table 3.1.1.2

Characteristics of bank groups depending on profitability ratios and growth in the loan portfolio

		ROA			
		High level	Low level		
Loan portfolio growth	Low level	<i>"Challengers"</i>	<i>"Outsiders"</i>		
		Assets growth	3.3%	Assets growth	-0.3%
		NPLs	28.1%	NPLs	32.4%
		Five largest lines of lending	70.9%	Five largest lines of lending	77.8%
		Provisions/loan portfolio	27.3%	Provisions/loan portfolio	32.7%
	Share of highly-liquid assets	17.1%	Share of highly-liquid assets	19.6%	
	Deposits to liabilities	79.5%	Deposits to liabilities	72.0%	
	Foreign currency liabilities	50.2%	Foreign currency liabilities	35.1%	
	Capital surplus	0.453	Capital surplus	0.393	
			<i>6 banks with a share of assets of 44.6% of total assets of the banking system</i>	<i>12 banks with a share of assets of 25.7% of total assets of the banking system</i>	
High level	<i>"Leaders"</i>	<i>"Aggressors"</i>			
	Assets growth	44.4%	Assets growth	87.4%	
	NPLs	5.2%	NPLs	3.7%	
	Five largest lines of lending	86.4%	Five largest lines of lending	86.7%	
	Provisions/loan portfolio	6.9%	Provisions/loan portfolio	4.0%	
	Share of highly-liquid assets	13.9%	Share of highly-liquid assets	22.2%	
	Deposits to liabilities	77.3%	Deposits to liabilities	84.2%	
	Foreign currency liabilities	36.8%	Foreign currency liabilities	35.3%	
	Capital surplus	0.330	Capital surplus	0.535	
		<i>11 banks with a share of assets of 25.8% of total assets of the banking system</i>	<i>6 banks with a share of assets of 3.9% of total assets of the banking system</i>		

Source: NBRK

The most interesting, in terms of the loan portfolio behavior and the percentage of non-performing loans, are banks in the two interim groups – “aggressors” and “challengers”, since their ratios are extremely high or low (Table 3.1.1.3).

Table 3.1.1.3

Characteristics of bank groups depending on the growth in the loan portfolio and its quality

		Loan portfolio growth			
		High level	Low level		
NPL	High level	<i>"Aggressors"</i>	<i>"Outsiders"</i>		
		Assets growth	44.3%	Assets growth	1.9%
		Five largest lines of lending	98.4%	Five largest lines of lending	73.1%
		Provisions/loan portfolio	13.2%	Provisions/loan portfolio	29.8%
		Share of highly-liquid assets	14.3%	Share of highly-liquid assets	15.2%
	Deposits to liabilities	77.1%	Deposits to liabilities	76.1%	
	Foreign currency liabilities	28.4%	Foreign currency liabilities	46.5%	
	ROA	6.26%	ROA	1.66%	
	Capital surplus	0.483	Capital surplus	0.380	
			<i>4 banks with a share of assets of 7.8% of total assets of the banking system</i>	<i>13 banks with a share of assets of 66.0% of total assets of the banking system</i>	
Low level	<i>"Leaders"</i>	<i>"Challengers"</i>			
	Assets growth	50.6%	Assets growth	2.7%	
	Five largest lines of lending	81.7%	Five largest lines of lending	85.8%	
	Provisions/loan portfolio	3.9%	Provisions/loan portfolio	9.0%	
	Share of highly-liquid assets	15.3%	Share of highly-liquid assets	61.2%	
	Deposits to liabilities	82.3%	Deposits to liabilities	93.3%	
	Foreign currency liabilities	29.1%	Foreign currency liabilities	49.5%	
	ROA	2.63%	ROA	2.23%	
Capital surplus	0.341	Capital surplus	0.624		
		<i>13 banks with a share of assets of 21.9% of total assets of the banking system</i>	<i>5 banks with a share of assets of 4.3% of total assets of the banking system</i>		

Source: NBRK

The group of banks – “aggressors” has virtually a fully concentrated loan portfolio, it maintains the percentage of its highly liquid assets at a minimal level. It borrows to the least extent and uses the sources of funding alternative to deposits to a greater extent. All of these in aggregate help maintaining the highest ROA, which by many times exceeds the similar ratios of other group of banks.

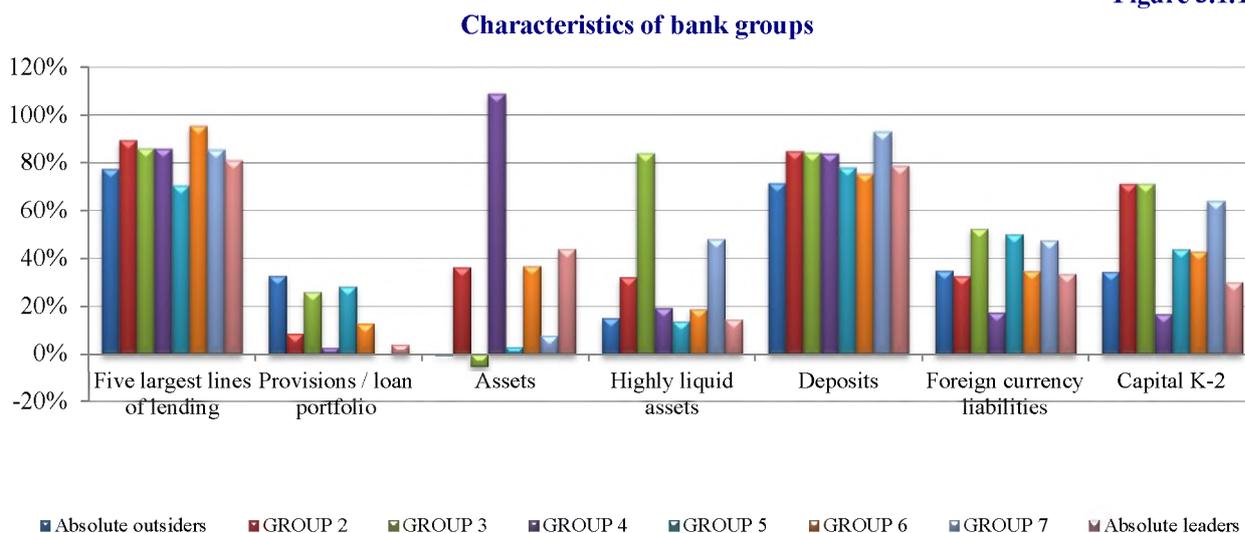
The group of banks – “challengers” virtually does not engage in lending activity since nearly 2/3 of its assets are invested in highly liquid financial instruments and attracted deposits are virtually the only source of funding of their business (banks – treasurers).

The group of banks – “challengers” is the only group which demonstrates negative rates of asset growth. At the same time, half of its assets are invested in highly liquid financial instruments and attracted deposits are virtually the only source of funding of their business (banks – treasurers).

In addition to that, the groups of banks – “absolute leaders” and “absolute outsiders” – were identified, respectively, with the best and worst performance in three ratios at a time – profitability (interest rate margin), credit activity (the loan portfolio growth) and the loan portfolio quality (the percentage of non-performing loans). The remaining groups of banks were formed based on different combinations of these factors (Figure 3.1.1.12).

Banks – “absolute leaders” are not the best in terms of all ratios, and the achievement of maximum results does not necessarily imply their high efficiency. A similar assertion is also typical for the banks – “absolute outsiders”, except that this group of banks has the highest ratio of provisions to the loan portfolio as a result of low asset quality and the lowest share of deposits in the structure of liabilities.

Figure 3.1.1.12



Note:

Absolute outsiders are banks with a low (below the median) interest rate margin and low loan portfolio growth and a high level (above the median) of non-performing loans. The group includes 8 banks with the asset share of 23.8% in total assets of the banking system.

Group 2 – banks with a low interest rate margin and high rates of the loan portfolio growth and of non-performing loans (3 banks with the asset share of 0.8%).

Group 3 – banks with a low interest rate margin, low loan portfolio growth and a low share of non-performing loans (3 banks with the asset share of 1.6%).

Group 4 – banks with a low interest rate margin and a low share of non-performing loans and of the loan portfolio growth (3 banks with the asset share of 3.1%).

Group 5 – banks with a high interest rate margin and a high share of non-performing loans and low rates of the loan portfolio growth (4 banks with the asset share of 40.8%).

Group 6 – banks with a high interest rate margin, a high share of non-performing loans and of the loan portfolio growth (3 banks with the asset share of 8.5%).

Group 7 – banks with a high interest rate margin and a low share of non-performing loans and the loan portfolio growth (2 banks with the asset share of 2.8%).

Absolute leaders are the banks with a high interest rate margin and high loan portfolio growth and a low share of non-performing loans (9 banks with the asset share of 18.7%).

Source: NBRK

3.1.2 Credit Risk

The growth rate of non-performing loans increased in all lines of lending, however, as a result of active disbursement of consumer loans the share of non-performing loans in the structure of the loan portfolio remained virtually unchanged.

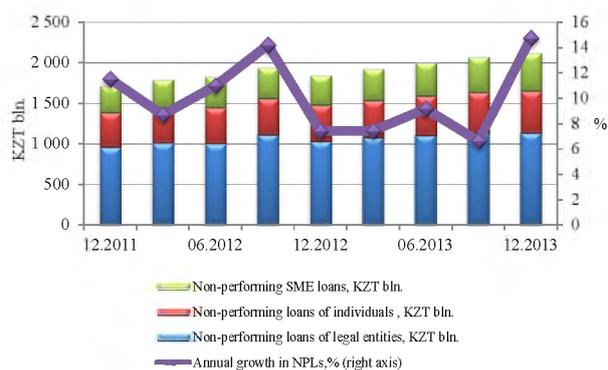
Figure 3.1.2.1
Dynamics of NPLs and the total bank loan portfolio, broken down institutionally



Note: excl. BTA Bank
Source: NBRK

Despite increased growth of non-performing loans from 7.4% in 2012 to 14.8% in 2013, the level of their concentration in the structure of the total loan portfolio of banks almost hasn't changed: 19.4% - in 2012, 19.5% - in 2013 (excluding BTA Bank) (Figure 3.1.2.1). This was mainly due to high lending activity of banks in the consumer lending segment: the growth of consumer loans accounted for 55.0% during 2013, whereas the growth of loans provided to entities from other sectors of the economy was equal to 10.1%.

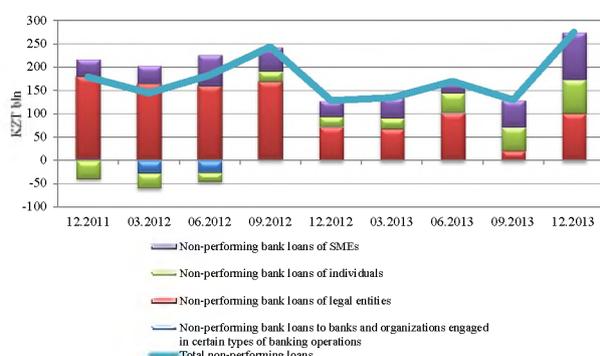
Figure 3.1.2.2
Dynamics of non-performing loans



Note: excluding BTA Bank
Source: NBRK

Increased growth of non-performing loans was noted in all lines of lending (Figure 3.1.2.2-3.1.2.3). However, if the increase in retail lending and SME lending offset the growth of non-performing loans in these sectors (Figure 3.1.2.4), the increase in the growth of non-performing loans in the corporate loan portfolio from 7.5% to 9.8% occurred amidst slowing lending activity of banks in the corporate business sector from 7.9% to 1.9%. Alongside with that, a historically accumulated level of non-performing loans that were provided to the corporate sector in foreign currency during the period of 2006 – 2008 (Box 5), remains as the key factor which constrains the improvement of the risk structure of the banks' total loan portfolio.

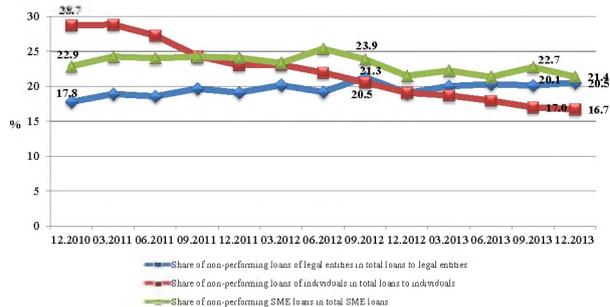
Figure 3.1.2.3
Changes of volumes of non-performing loans during the period (year-to-date)



Note: excluding BTA Bank
Source: NBRK

Some improvement in the structure of the loan portfolio is observed in respect of the SME portfolio (Figure 3.1.2.5). The buildup of the SME lending helped decreasing the share of past due loans and reducing the credit risk concentration in the SME portfolio. However, the increased rates of growth of non-performing loans of SMEs from 10.3% in 2012 to 27.5% in 2013 prove the structural weakness of the sector.

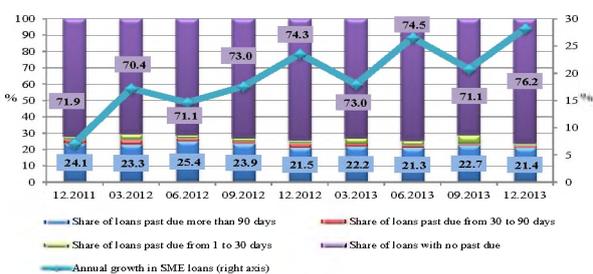
Figure 3.1.2.4
Share of non-performing loans in total loans, by lines of lending



Note: excluding BTA Bank
Source: NBRK

Figure 3.1.2.5

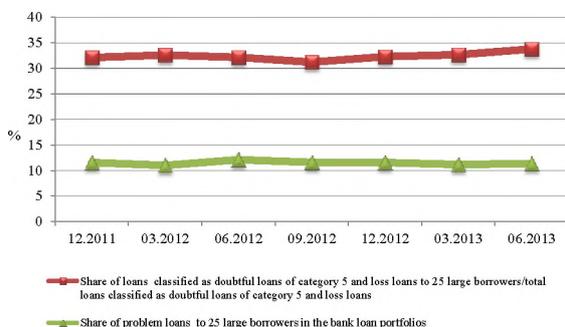
Structure of the SME portfolio quality



Note: excluding BTA Bank
Source: NBRK

Figure 3.1.2.6

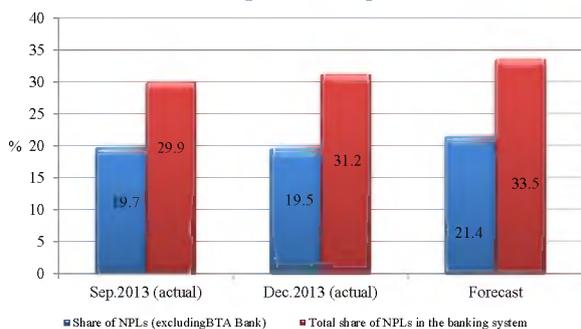
Loans to 25 large borrowers



Note: Loans information are loans in the doubtful category 5 and loss loans according to classification rules that were in force until July 1, 2013
Source: NBRK

Figure 3.1.2.7

Assessment of effect of regulatory changes on the level of non-performing loans



Source: banks, calculations by NBRK

Concentration risks associated with large loans slightly decreased: the percentage of loans provided to 25 largest borrowers decreased from 36% at July 1, 2012 to 33.9% at July 1, 2013. (Figure 3.1.2.6). However, in terms of credit risk, 1/3 of problem loans (that were previously classified as doubtful of category 5 and loss loans) still on the category of large borrowers, and the quality of such loans is not improving.

Also, based on the performance in 2013, some increase in the share of non-performing loans in the total credit portfolio is anticipated in connection with introduction of the regulatory measure to exclude account No. 7130 “Debts written off as a loss” with a view to comply with IFRS, from December 1, 2013. According to IFRS, financial instruments can be written off the balance sheet only in case of their inconsistency with the asset recognition criteria. Such measure, when implemented, will allow evaluating the entire volume of non-performing loans, which were previously not taken into account when assessing the actual size of risk. Prior to this measure, the planned amount of loans to be recovered on the balance sheet is estimated at 6.1% of the banks’ total loan portfolio, according to their estimates at September 1, 2013. Therefore, given a possible effect from recovery on the balance sheet of those loans which were earlier written off by banks, the percentage of non-performing loans was expected to increase to 33.5% (excluding BTA Bank – 21.4%) (Figure 3.1.2.7) Based on performance in 2013, the volumes of recoveries in the system, excluding BTA Bank, turned out to be insignificant and the expected deterioration in the loan portfolio structure didn’t happen. At the same time, the rest of banks, because of a number of objective reasons, carried those loans which were previously recorded on the off-balance sheet account 7130 “Debts written off as a loss” to ad hoc records.

First of all, this is related to the fair valuation of banks; under such valuation, they do not expect any future cash inflows from financial assets, including from the sale of collateral.

On the other hand, tax legislation hinders more active write-offs; it requires to recognize revenue from the decrease in the

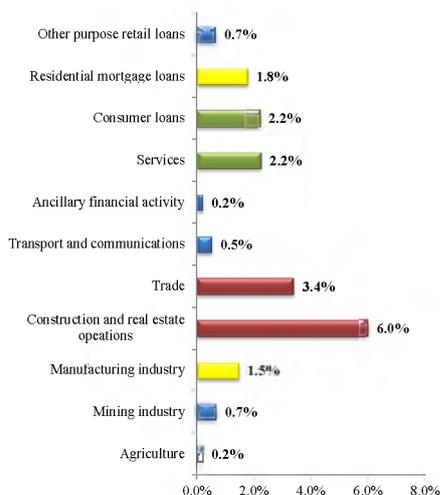
amount of created provisions in the course of write off (remission) or a sale to the third parties, discourages the use of the existing mechanisms of “cleaning up” the banks’ balance sheets from non-performing loans, which are generally in compliance with the best international practice (Box 6).

In terms of concentration of credit risk broken down by sectoral structure of the loan portfolio, a high share of non-performing loans is still observed in the construction sector, trade, and manufacturing industry.

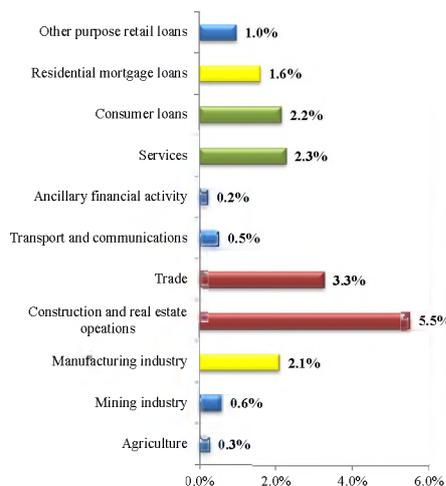
As of December 31, 2013, the contribution of the construction sector and trade to the portfolio of non-performing loans slightly decreased; the contribution to non-performing loans by the manufacturing industry increased; also, the contribution of the sector of services to the non-performing portfolio somewhat increased (Figure 3.1.2.8).

Figure 3.1.2.8

Contribution of non-performing loans, by sectors of the economy at 31.12.2012



Contribution of non-performing loans, by sectors of the economy at 31.12.2013



Note: excluding BTA Bank, the structure of the share of NPLs based on the weight of each sector in the total loan portfolio is calculated under the following formula:

$$\text{Contribution}_{i-\text{sector}} = \frac{\text{non-performing loans}_{i-\text{sector}}}{\text{loan_portfolio}_{i-\text{sector}}} \cdot \frac{\text{loan_portfolio}_{i-\text{sector}}}{\text{Total_loan_portfolio}}$$

* Data on consumer loans provided with closing data, while for nonperforming consumer loans information is presented excluding non-performing loans on credit cards, due to changes in regulatory reporting

Source: NBRK

Box 5

Structure and vintage distribution of bank problem loans

Figure 1
Structure of problem loans in the banks' total loan portfolio at end-2012, by date of disbursement



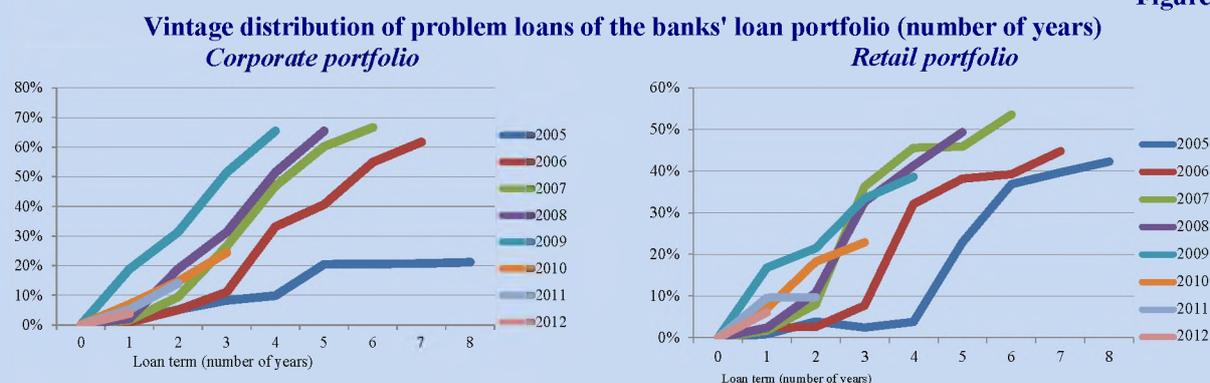
Source: NBRK

When analyzing the structure of bank problem loans as of the end of 2012 (Figure 1), one may note that a non-performing part of the credit portfolio by 68% consists of loans provided during 2006 - 2008 (hereinafter – “old problem loans”). The share of *problem loans* in the structure of loans provided during the period from 2006 to 2008 accounts for more than 62%, whereas the share of *problem loans* provided during the period from 2009 to 2012 was equal to 12.5% only (hereinafter – “new problem loans”). Based on that, a high currently accumulated level of problem loans

results from the absence of significant improvement and adequate write offs of their old loans by banks. In total, “old problem loans” by 77% consist of corporate loans where the major sectoral

contribution falls on such sectors as construction and trade, with their share accounting for about 54%. Moreover, “old problem loans” by 58% consist of foreign currency loans, where the corporate sector loans account for about 62.5%. Among “new problem loans” provided in foreign currency, 48% of loans were nominated, of which over 97% fall on the corporate sector. It was a high share of foreign currency loans provided before 2009 that became one of the factors for a dramatic growth of problem loans; this is obvious from the Figures showing the vintage distribution of problem loans in the loan portfolio of banks (Figure 2).

Figure 2



Source: NBRK

The vintage analysis of the banks' loan portfolio showed that within the structure of loans provided before 2009, deterioration in their quality falls on 2009; this is associated with the Tenge devaluation implemented at the beginning of that year. This is evidenced by equal speed at which problem loans were increasing.

Starting from 2010, certain tightening of the banks' policies as well as relative improvement in the financial condition of borrowers had an overall positive effect on the quality of new loans. So, a share of problem loans in the corporate portfolio that were provided in 2009 accounted for 9.3% during the first year of their life, whereas the share of problem loans provided already in 2012 made up 3.7% only; 45% of those loans are represented by loans to the sector of trade. The share of problem loans in the retail portfolio that were provided in 2012 accounted for 6.1% by the year-end.

In addition, it is worth highlighting the most problematic part of the banks' retail portfolio – mortgage lending. Despite their relatively small share in the retail portfolio of banks, the average percentage of problem loans among mortgage loans varies between 18 and 22% during the first year of their life starting from 2010; whereas average values of problem loans among consumer loans varied between 1.7% and 7% during the first year of their life.

Note:

- 1) Calculations are made on the basis of the credit register and do not include loans on card accounts and loans made by BTA Bank.
- 2) Problem loans are loans in the doubtful category 5 and loss loans according to classification rules that were in force until July 1, 2013.
- 3) The analysis included only the portfolio of existing bank exposures.

Box 6

Strategy for non-performing loans management

At present, the development and the use of effective measures for cleaning up the banks' balance sheets from non-performing assets represents one of the most pressing problems in ensuring a stable functioning of the financial system, both globally and within a sovereign state.

The study of international experience in addressing the problem of non-performing assets showed that in most cases countries take approaches related to establishment of asset management companies (AMCs) with public ownership. The experience of such countries as Indonesia, Malaysia, Korea and Thailand can serve as an example of the use of a centralized approach in

addressing the problems with the quality of the banking system's loan portfolio. They established state-owned AMC's after the Asian financial crisis of 1997-1998 which had ridden those countries.

Korean experience. The Korean government, after the crisis that had ridden the country's economy in 1997-1998, played a leading role in restructuring of both the financial and corporate sector by strengthening the regulatory framework, increasing the role of the government financing as well as by establishing a new institution in charge of the crisis management – Korea Asset Management Corporation (KAMCO). An innovation initiated by KAMCO in addressing the problem of non-performing assets in Korea was the issue of asset-backed securities (ABS); this, in its turn, promoted the development of the problem loans market and stirred up interest among large international investors in the Korean market of problem assets. Active participation of foreign investors helped involve domestic investors in investing into the Korean market of problem assets.

Experience of Switzerland. Another popular model used to settle the problem with the quality of the banking system's loan portfolio is the establishment of a decentralized asset manager with public ownership for one bank or a group of banks. The most vivid example of such approach is the experience of the Swiss Stabilization Fund¹, which was established to purchase and manage assets of the UBS Bank. The transfer of assets worth USD 38.7 bln. was carried out in three tranches with the loan provided by the Swiss National Bank (90%) and the UBS Bank (10%). Independent valuation agencies from the USA, Europe and Japan were hired to perform asset valuation. The original value of transferred assets was announced to be USD 60 bln., at the same time, based on the concluded transaction assets were transferred at the price of USD 38.7 bln. For the Swiss Stabilization Fund, the main objective of asset management was to repay the loan provided by the Swiss National Bank and at the same time to increase the portfolio proceeds. As a result, in August 2013, the Swiss Stabilization Fund repaid the provided loan in full.

Experience of the Russian Federation. In Russia, three main mechanisms to handle non-performing loans may be mentioned: the transfer to collection agencies, direct sale to the third parties and transfer to the CMIF of banks. The banking legislation provides for the banking secrecy requirements to have the consent of a borrower for the transfer of his/her information to the third parties.

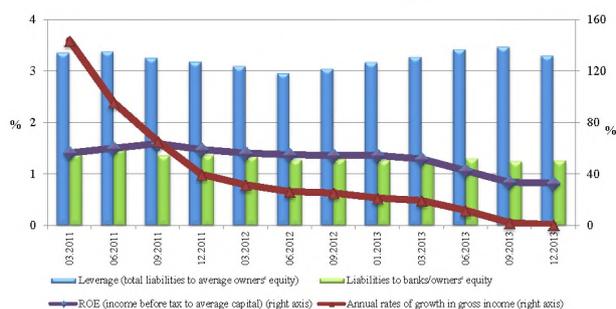
Under the laws of the Russian Federation, banks may establish CMIF and transfer non-performing loans to two types of investment funds: mortgage funds (mortgage backed loans) and credit funds (for loans secured by other property, surety agreement or a bank guarantee). Unsecured loans and loans secured by the subsequent pledge (mortgage) cannot be transferred to an investment fund. In order to be transferred to an investment fund, a loan should meet the following requirements: (1) it should be secured by mortgage on residential real estate; (2) a loan principal amount should not exceed 90% of the market value of the mortgaged property; (3) the mortgaged property must be within the territory of the Russian Federation.

The advantages of the transfer of problem loans to CMIF are as follows:

- a non-performing loan is not recorded on the bank's balance sheet;
- purchased participation units do not "over-press" the bank's capital since no reserves are created for participation units and participation units are not included in the calculation of market risks;
- participation units of a bank are not subject to VAT when sold.

¹ Stabilization Fund established by the Swiss Central Bank in 2008.

Figure 3.1.2.9
Financial independence of the corporate sector (large and medium-size enterprises)



Note: includes enterprises with the percentage of debt to banks in total liabilities exceeding the median value
Source: ASRK, calculations by NBRK

A high level of non-performing loans of large and medium-size enterprises is explained by instability of their financial performance. A group of enterprises²⁹, which are the major borrowers, demonstrate heavy reliance on borrowed funds amidst slowing business activity and decreasing growth rates of the generated gross revenue (Figure 3.1.2.9). This negative trend potentially reduces their ability to serve their debt obligations and limits the possibility of recovery the quality of a bad debt. According to the performance at the end of 2013, the share of liabilities to banks in total liabilities of those enterprises accounted for 38.2%; the liabilities to equity ratio was 3.2 and ROE decreased by 21.5 pp versus the same period of the previous year and accounted for 32.8%.

Figure 3.1.2.10
Financial soundness risks of the corporate sector (large and medium-size enterprises)



Note: 1) calculated based on low Liquidity and ROE ratios comprising the group below 25 percentile and a high leverage comprising the group above 75 percentile; 2) includes enterprises with the percentage of debt to banks in total liabilities above the median value
Source: ASRK, calculations by NBRK

Among enterprises with debts, 2.6% of enterprises have the maximum risk level. The share of organizations with a high and moderate risk level³⁰ accounts for 56.8% in total. Unstable financial position of borrowing enterprises aggravates potential vulnerability of the banking sector (Figure 3.1.2.10), affecting the parameters of the probability of default and losses given default, among other things (Box 7).

The concentration of risks on enterprises in certain sectors should be pointed out.

Table 3.1.2.1

Financial soundness indicators of the corporate sector (large and medium-size enterprises), by sectors, as of 31.12.2013

	ROE, %	ROA, %	Liquidity	Leverage	Ratio of debt to banks/owners' equity
Agriculture	-5.4	-0.9	1.3	4.5	2.6
Mining industry	49.4	18.5	0.8	1.6	0.9
Manufacturing industry	20.4	4.2	1.1	4.0	2.4
Construction	7.9	0.8	1.0	10.7	3.7
Trade	45.5	6.0	1.1	5.9	3.3
Transport and communications	35.9	5.0	1.4	6.0	5.0
Financial activity	-1.9	-0.8	4.6	0.8	1.0
Real estate operations	38.0	8.1	1.2	4.5	4.2
Services	17.4	6.5	1.5	1.8	1.5
TOTAL	41.9	7.7	1.1	3.3	2.2

Note: The calculation includes enterprises with the percentage of debt to banks in total liabilities above the median value
Source: ASRK, calculations by NBRK

²⁹ Enterprises where the share of debt to banks in total liabilities is higher than the median (the median was 36.1%).

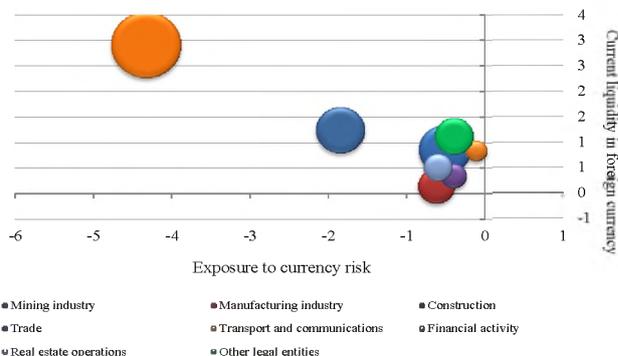
³⁰ Group of enterprises with a maximum level of default risk (Liquidity+ROE+Leverage) – the area of elevated default risk which includes enterprises with low liquidity, low return on equity and high level of debt.

Group of enterprises with a high level of default risk (Liquidity+ROE)+(ROE+Leverage)+(Liquidity+Leverage) - combination of two ratios with the worst values, for example - Liquidity+ROE, represents an indicator of a two-factor risk i.e. an enterprise has a combination of low Liquidity ratio and at the same time low return on equity.

Group of enterprises with a moderate level of default risk (either Liquidity, or ROE, or Leverage) – the worst value of one of the ratios.

A heavy reliance on credits as funding sources is demonstrated by enterprises in the sectors of transport and communications, and real estate operations (Table 3.1.2.1). If enterprises in the mining industry had the best financial standing, enterprises in the construction sector and agriculture were in the most difficult situation.

Figure 3.1.2.11
Foreign exchange risk assessment, by economic sectors, as of 31.12.2013



Notes: 1) Exposure to currency risk – the ratio of net FX position to owners' equity in the sector;
2) Current ratio in foreign currency - current assets in foreign currency to current liabilities.
3) The circumference diameter corresponds to the share of foreign currency liabilities in total liabilities;
4) The figure doesn't include the agricultural sector. Foreign exchange risk there is minor.
Source: ASRK, calculations by NBRK
currency exposure (Figure 3.1.2.11).

Enterprises from the non-oil sector demonstrate the heaviest reliance on borrowed funds. The standing of enterprises in the agriculture sector that were included in the sample is the most unstable because of their negative equity and a significant debt burden.

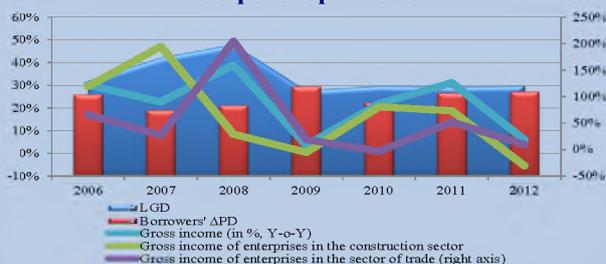
In addition to slowing business activity and decreasing growth rates of the generated gross revenue by enterprises in the non-oil sectors of the economy, the level of currency exposure also represents one of vulnerability factors; such exposure, coupled with the increasing risk of insolvency of enterprises, can give rise to realization of potential shocks and destabilize the banking sector. A high level of foreign currency exposure among such economic sectors as transport and communications and the construction sector should be pointed out; at the same time the agricultural sector has the lowest foreign

Box 7

Assessing ΔPD and LGD of the banks' corporate portfolio

The probability of default among corporate sector borrowers still remains quite high, accounting for about 28%, as a result of unstable financial position of borrowers (Figure 1). So, for borrowers the ΔPD parameter during 2012 accounted for 27.3%. The structure of this parameter in a

Figure 1
Borrowers' ΔPD and LGD ratios of the banks' corporate portfolio



Source: NBRK

sectoral breakdown shows that the main pressure on the parameter is put by such sectors as construction, trade and manufacturing industry, where ΔPD accounted for 37.9%, 25.4% and 20.7%, respectively. In total, problem loans in the share of the above mentioned sectors account for about 60%. In terms of collateral for such loans, in the event of default by the borrowers, minimal banks' losses may reach about 30%. When analyzing this ratio by sectors, one may note that the highest minimal losses for banks may be expected from enterprises in the agricultural, construction sector and the mining industry. LGD for the above sectors accounts for 43.5%, 39.3% and 33.3%, respectively. Meantime, the amount of losses given default could be underestimated to the full extent because of the risk of possible revaluation of collateral values.

Note:

- 1) Calculations are made on the basis of the credit register and do not include loans on card accounts and loans made by BTA Bank.
- 2) The analysis included only the portfolio of existing bank exposures.
- 3) The ΔPD parameter (probability of borrowers' default) is calculated based on the migration matrix; the calculation uses only the data about those borrowers which were transferred to the problem loans category during 1 year, excluding borrowers that had problem loans during the prior periods.
- 4) Problem loans mean loans in the doubtful loans of category 5 and loss loans category according to the classification rules that were in effect until July 1, 2013.
- 5) The LGD parameter (losses given borrowers' default) is calculated as the average of LGD for all loans under the following formula: $LGD = 1 - (\text{collateral value} / (\text{outstanding principal} + \text{outstanding accrued interest}))$.

Amidst low credit activity of banks in the corporate sector, the increasing concentration of credit risk in the segment of consumer loans, primarily unsecured loans, is observed.

The leading position in the structure of total loans to individuals is taken up by consumer loans. They account for over 60% of all loans to individuals (Table 3.1.2.2).

Table 3.1.2.2

Structure of loan portfolio of individuals (KZT bln.)

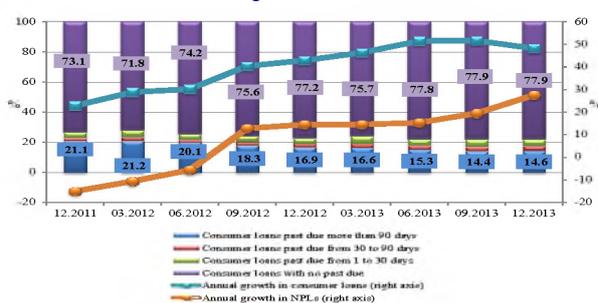
Item	12.2011	12.2012	12.2013	Share in loan portfolio of individuals at 31.12.2013, %
Total retail loan portfolio, including:	2 018.5	2 530.5	3 297,1	100
in the domestic currency	1 455.3	2 047.6	2 859.8	87
Consumer loans	814.1	1 274.3	2 054.3	62
Residential mortgage loans	489.8	607.4	702.3	21
Other loans	151.5	166.0	103.2	3
in foreign currency	563.2	482.8	437.3	13
Consumer loans	198.0	172.0	186.8	6
Residential mortgage loans	267.9	225.3	189.5	6
Other loans	97.2	85.5	61.0	2
<i>For reference:</i>				
Non-performing loans, including:	479.8	506.3	588.3	18
Consumer loans	213.5	244.6	275.6	8
Residential mortgage loans	196.8	190.9	196.3	6
Other loans	69.5	70.8	116.3	4

Note: * the data on consumer loans include closing turnovers; information on NPLs excludes non-performing loans on credit cards. Due to the change in regulatory reports, credit cards are included in the composition of loans provided for other purposes and it is not feasible to provide a separate set of information about the volume of NPLs on credit cards

Source: NBRK

Figure 3.1.2.12

Structure and annual growth in the consumer loan portfolio

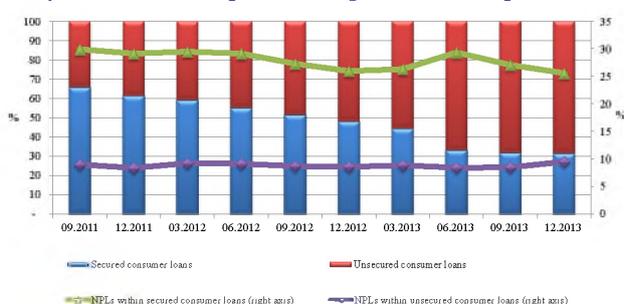


Note: the structure of the consumer loan portfolio is presented as of December 31, 2013 and does not include closing turnovers, due to the change in regulatory reports.

Source: NBRK

Figure 3.1.2.13

Structure of the consumer loan portfolio and dynamics of non-performing loans in the portfolio



Note: the structure of the consumer loan portfolio is presented as of December 31, 2013 and does not include closing turnovers, due to the change in regulatory reports.

Source: NBRK

The share of loans provided in foreign currency is still by 6.5 times lower than the share of loans in the domestic currency and accounts for 13% of total loans as of December 31, 2013. The quality of the retail loan portfolio is to a greater extent affected by loans provided for consumer purposes. Out of the total share of non-performing loans in the retail loan portfolio (18%), the share of non-performing loans provided for consumer purposes makes almost a half (8%).

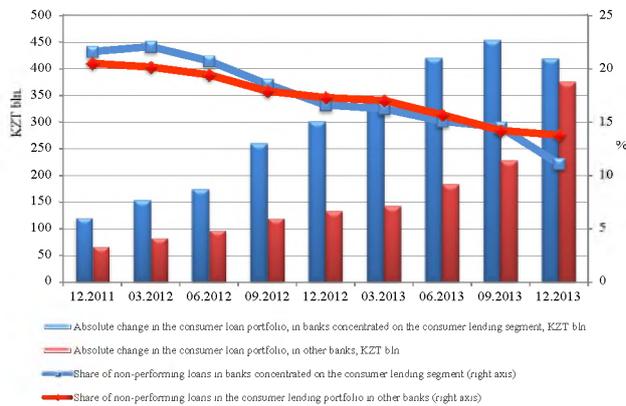
Loans without past due dominate in the consumer loan portfolio, with their share constantly increasing in 2013 year (Figure 3.1.2.12). Such trends are caused by active provision of new loans by banks, with their quality being generally better than in the pre-crisis period, in the environment when the consumer loan portfolio is building up (Box 8).

The highest share in the consumer lending market is represented by unsecured loans which accounted for 68.6% of total consumer loans as of December 31, 2013 (Figure 3.1.2.13). Despite their growth, which significantly outstrips the growth in other groups of consumer loans, their quality remains virtually unchanged – over the last two years the share of non-performing loans had been within 8.4-9.5% of the total amount of

unsecured consumer loans.

Figure 3.1.2.14

Absolute changes in loans provided for consumer purposes



Note: The group of banks which specialize in consumer lending includes the banks where the share of consumer loans within total loans exceeds 35%

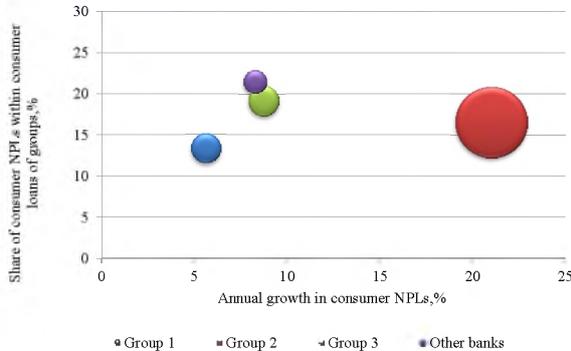
Source: NBRK

At the year-end, a slowdown in the growth of the consumer loan portfolio is noted among banks which specialize in the segment, on the one hand, and the rest of banks significantly built up their consumer loan portfolios, on the other hand (Figure 3.1.2.14), including large banks which also increased their share in the consumer lending market. Such dynamics is explained by the response on the part of banks to intended tightening of regulatory requirements, which are aimed to limit the growth of consumer loans in their loan portfolios³¹. However, in terms of the lending scale, the leadership is taken by the group of banks, which specialize in consumer lending. They are the key players in the consumer lending market being active in retail lending. Alongside with medium-size and small banks, large banks also increase their share in the consumer lending segment.

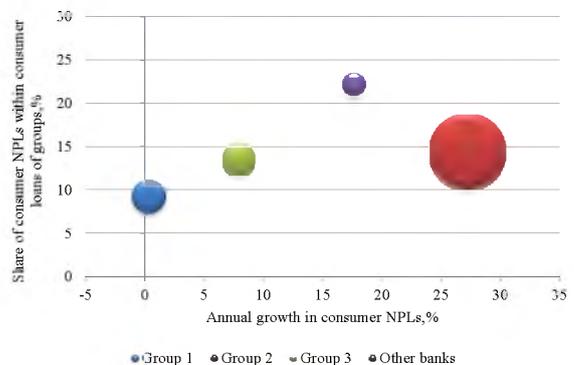
In general, banks which are aggressive in terms of their strategy and/or rates of the portfolio growth, accordingly demonstrate the highest degree of deterioration in the credit risk parameters in the consumer lending segment (Figure 3.1.2.15).

Figure 3.1.2.15³²

Credit risk parameters in the consumer segment by groups of banks, at 31.12.2012



Credit risk parameters in the consumer segment by groups of banks, at 31.12.2013



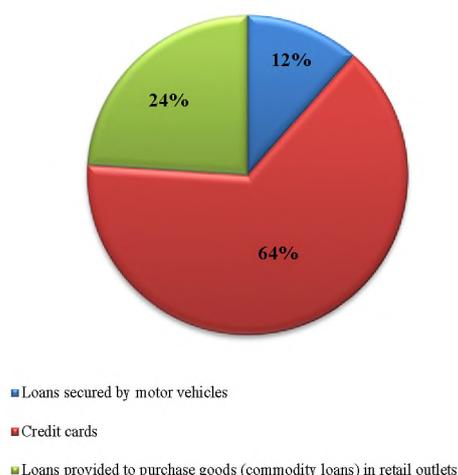
Note: The circumference's diameter corresponds to the share of consumer loans in the loan portfolio, broken down by groups

Source: NBRK

³¹ Resolution of the Board of the National Bank of the Republic of Kazakhstan of December 25, 2013 No.294 "On Amendments to Some Regulations on the Matters of the Banking Activities Regulation"

³² Banks were grouped as follows: group 1 – large banks; group 2 – medium-size banks with the share of consumer loans in their loan portfolio over 35% and group 3 – medium-size and small banks, which are actively building up their loan portfolio in the niche.
 1) Group 1 includes Kazkommertsbank and Halyk Bank of Kazakhstan;
 2) Group 2 includes Alliance Bank, Temirbank, Eurasian Bank, Kaspi bank, Subsidiary of HomeCredit Bank and Kassa Nova Bank;
 3) Group 3 includes Tsesnabank, Nurbank, Subsidiary of VTB Bank (Kazakhstan) and Bank RBK.

Figure 3.1.2.16
Structure of consumer loans by types of products, at 30.09.2013



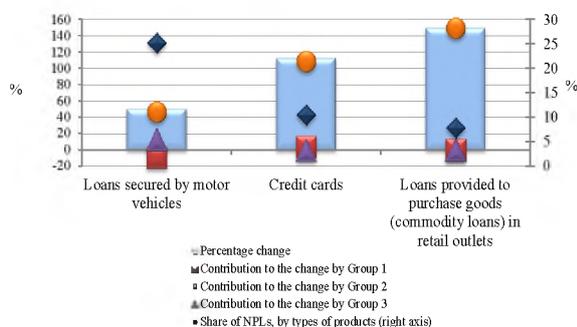
Source: banks

September 30, 2013; their volume increased twice as compared to the same period of the last year (at September 30, 2012 – 7.9%). The share of non-performing loans on credit cards accounted for 8.4 % at September 30, 2013 (for 10.5% at September 30, 2012) (Figure 3.1.2.17).

Credit cards and credits on goods provided in retail outlets are the most demanded products of consumer lending³³. Banks specializing in this type of loans use the entire range of financial products that are interesting to the public (Figure 3.1.2.16). Large systemic banks are mainly oriented on providing consumer loans in the form of credit cards and other banks use loans secured by motor vehicles as a “launching ground” for future activities in this lending segment.

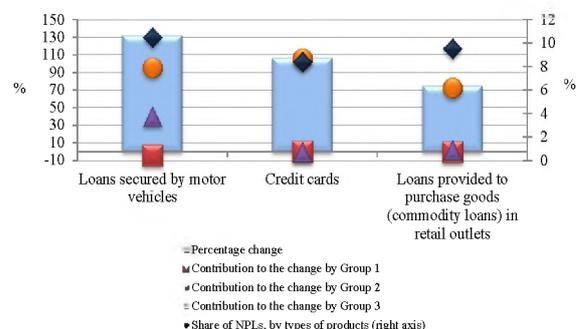
Despite a three-fold decrease in volumes of non-performing loans secured by motor vehicles, credit risk exposure of this product is still high. The share of non-performing loans on this line of lending accounted for 10.5% at September 30, 2013 (at September 30, 2012 – 25.2%). The share of non-performing loans provided in retail outlets accounted for 9.5% at

Change of the consumer loan portfolio by types of products (versus the corresponding period of the previous year, at 30.09.2012)



Source: banks

Figure 3.1.2.17³⁴
Change of the consumer loan portfolio by types of products (versus the corresponding period of the previous year, at 30.09.2013)

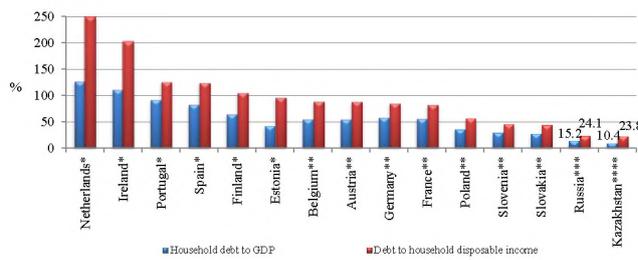


Booming growth in the consumer lending segment is promoted by a high competition among banks and unexhausted potential of the segment due to a relatively low credit load of borrowers as well as a low level of financial inclusion. At the same time, slowing growth rates of real cash income of the population in the long run may increase the burden on the paying capacity of the population thus increasing potential risks.

³³ The assessment was made based on the information analysis of twelve banks which are most active in consumer lending (their share in the consumer loan portfolio accounted for 86% at October 1, 2013).

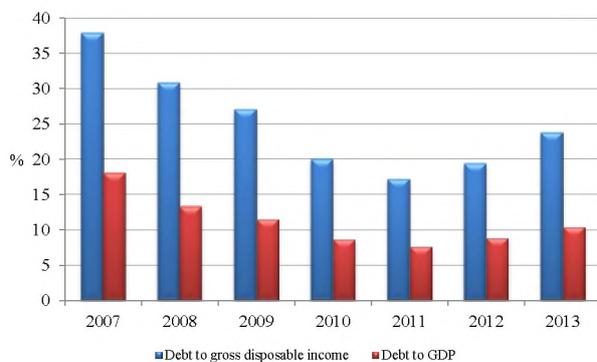
³⁴ Banks were grouped as follows: group 1 – large banks; group 2 – medium-size banks with the share of consumer loans in their loan portfolio over 35% and group 3 – medium-size and small banks, which are actively building up their loan portfolio in the niche.
 1) Group 1 includes Kazkommertsbank and Halyk Bank of Kazakhstan;
 2) Group 2 includes Alliance Bank, Temirbank, Eurasian Bank, Kaspi bank, Subsidiary of HomeCredit Bank and Kassa Nova Bank;
 3) Group 3 includes Tsesnabank, Nurbank, Subsidiary of VTB Bank (Kazakhstan) and Bank RBK.

Figure 3.1.2.18
Parameters of the households' debt burden, by countries



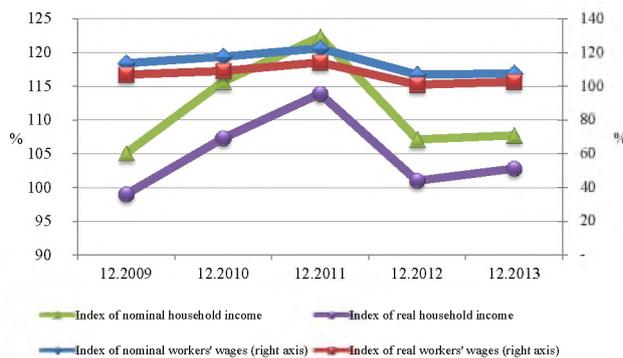
Note: * data as of the beginning of 2012;
** data as of the beginning of 2013;
*** data as of the end of the 3d quarter of 2013
**** data as of the end of 2013
Source: Thomson Reuters Datastream, IMF, CBRF, NBRK, ASRK

Figure 3.1.2.19
Parameters of the households' debt burden



Source: ASRK, calculations by NBRK

Figure 3.1.2.20
Nominal and real indices of household income and wages of workers



Source: ASRK

So, if average values of the share of non-performing unsecured and secured loans in the sample of borrowers in this income category accounted for 17% and 13.7%, respectively, for borrowers with a higher level of income the same indicators accounted for only 5% and 4.6%, respectively.

At the end of 2013, total debt of the Kazakh households to GDP and to the gross disposable income accounted for 10.4% and 23.8%, respectively; this is much lower than the same ratios in developed countries and developing Eastern European countries (Figure 3.1.2.18).

In Kazakhstan, the coverage of the population with consumer loans is also significantly lower than elsewhere. So, the share of economically active population with consumer loans accounts for 22% in Kazakhstan, whereas in Russia this ratio reaches 45%. Moreover, the share of borrowers with no more than one loan is estimated to be at 75%³⁵, whereas in Russia – 64%. The average number of loans per one borrower is 1.3 in Kazakhstan and 2.1 in Russia³⁶.

At the same time, there is an upward trend in the household debt burden (Figure 3.1.2.19). This occurs against slowing growth of wages and cash income of the population, both in nominal and real terms, thus creating certain opportunities for risk concentration in this segment (Figure 3.1.2.20). Alongside with the above trend, high differentiation in income of the population is observed in Kazakhstan: in 2012 income of the ten per cent of the most financially secured population exceeded the income of the ten per cent of the least financially secured population by 5.9³⁷ times.

According to the estimate made on the basis of data provided by the “First Credit Bureau” LLP, depending on the credit risk concentration and the level of paying capacity of the borrowers, borrowers from among the low groups of income distribution are the most vulnerable ones. In particular, according to the data sample³⁸, the highest volume of non-performing loans in the consumer lending segment is typical for the category of borrowers with income below KZT 150 000; since once the borrower’s income is decreasing, the share of earnings used to service the loan is increasing.

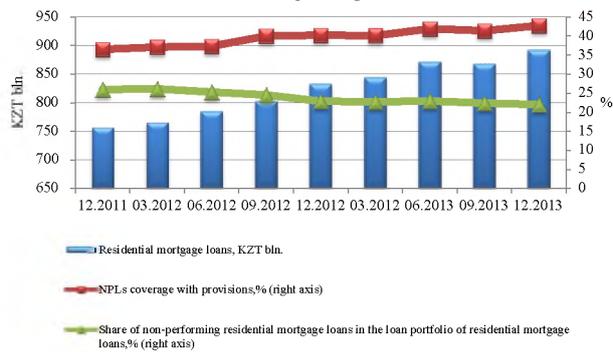
³⁵ Excluding loans provided via credit cards

³⁶ Forecast data from the National Credit History Bureau (Russia) at January 1, 2014

³⁷ As reported by the ASRK

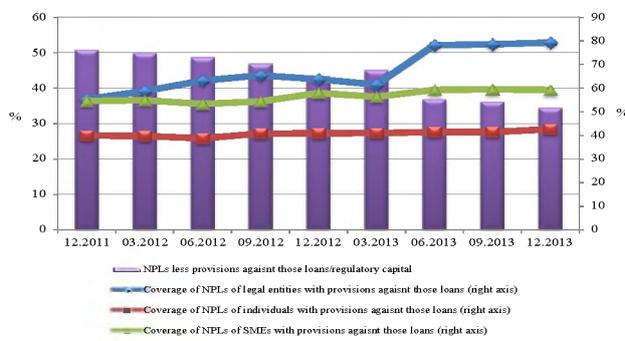
³⁸ The data was provided by the “First Credit Bureau” LLP and characterizes the level of non-performing loans of borrowers included into the “Other consumer purposes” category and distributed by different income groups. The sample was analyzed by the second-tier banks without singling out borrowers having 2 or more loans in different banks at the same time.

Figure 3.1.2.21
Change in the residential mortgage loan portfolio and its quality



Source: NBRK

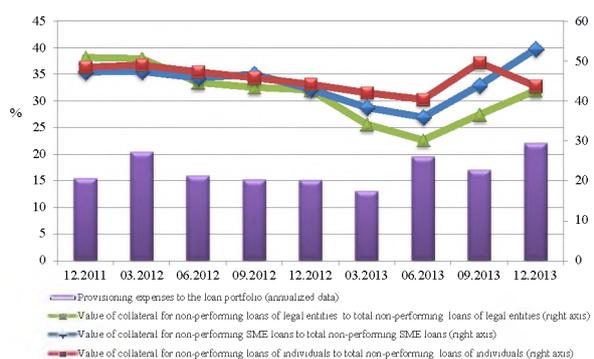
Figure 3.1.2.22
Non-performing loans less created provisions against those loans/total regulatory capital



Note: excluding BTA Bank

Source: NBRK

Figure 3.1.2.23
Coverage with collateral accepted for calculation of provisions and the dynamics of total provisions created



Note: excluding BTA Bank

Source: NBRK

Alongside with booming growth in the consumer lending, the segment of residential mortgage loans demonstrates less dynamic development; it was secured mainly by the national residential mortgage loans operator, Housing Construction and Savings Bank JSC, as well as by banks with foreign equity.

Stable macro-indicators of growing income and recovery of the real estate market do not lead to any significant change in the credit risk parameters in this segment (Figure 3.1.2.21). Slow dynamics in the development of the residential mortgage lending market is caused by a number of reasons, including: a limited number of banks are involved in this segment; conservative lending policy and lower returns as well as pay-back periods as compared to consumer lending.

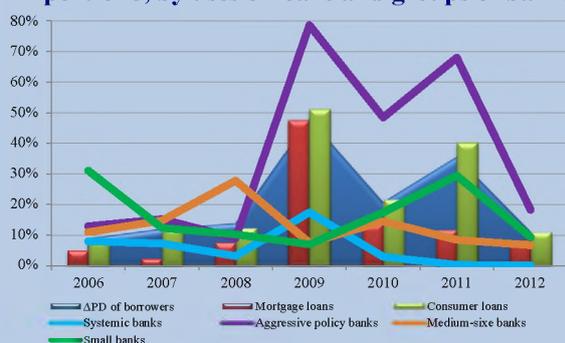
In the reporting period as a whole, the growing coverage of non-performing portfolio with provisions reflected the revaluation and decreased coverage of the portfolio by collateral. The growth of the ratio of provisions against non-performing loans accrued under IFRS to total loans from 57.4% at December 31, 2012 to 65.6% at December 31, 2013 had a positive impact on the decrease in the share of non-performing loans uncovered with provisions in total regulatory capital from 43.2% to 34.4% over this time period. (Figure 3.1.2.22).

The increase in the ratio of provisioning for non-performing loans was caused by the actions of two banks regarding the loss recognition. The growth of provisioning was pre-determined, *inter alia*, by decreased portfolio coverage with collateral, especially in respect of decreased collateral for non-performing loans of legal entities (Figure 3.1.2.23).

Assessing Δ PD and LGD of the banks' retail portfolio

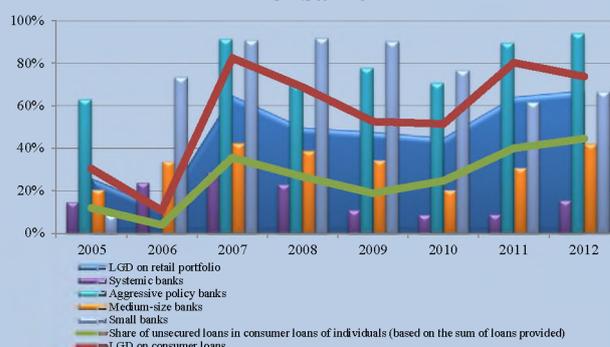
Amidst the growing consumer loans, the highest increase is noted in the share of unsecured consumer loans among banks with aggressive consumer policy; this comes laden with the risk of future deterioration in the loan portfolio quality in the event of default by retail borrowers. When analyzing the probability of default by retail borrowers, a direct impact on the ratio on the part of consumer loans is noted (Figure 1). The decrease in the ratio in 2012 versus the prior year, to a large extent, occurred because of the growth of new consumer loans. A major portion of risk is concentrated in banks with aggressive retail policy. The share of consumer loans in this group of banks exceeds 70%, while 83% of such loans are unsecured; that is, in the event of the borrowers' default banks with aggressive policy will incur losses accounting for 94.0% on average (Figure 2).

Figure 1
 Δ PD of borrowers of the overall retail bank portfolio, by uses of loans and groups of banks



Source: NBRK

Figure 2
LGD of the overall banks' retail portfolio, by groups of banks



Source: NBRK

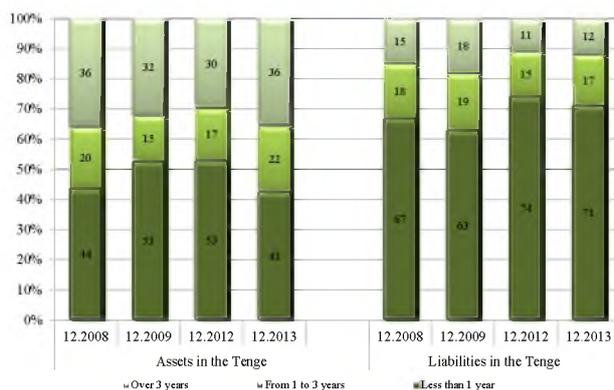
Note:

- 1) Calculations are made on the basis of the credit register and do not include loans on card accounts and loans made by BTA Bank.
- 2) The analysis included only the portfolio of existing bank exposures.
- 3) The Δ PD parameter (probability of borrowers' default) is calculated based on the transfer matrix; the calculation uses only the data about those borrowers which were transferred to the problem loans category during 1 year, excluding borrowers that had problem loans during the prior periods.
- 4) Problem loans mean loans in the doubtful loans of category 5 and loss loans category according to the classification rules that were in effect until July 1, 2013.
- 5) The LGD parameter (losses given borrowers' default) is calculated as the average of LGD for all loans under the following formula: $LGD = 1 - (\text{collateral value} / (\text{outstanding principal} + \text{outstanding accrued interest}))$
- 6) Systemic banks are the banks, whose stable operation ensures continuity and uninterrupted operation of the country's financial system as a whole or of its individual segments, according to "Rules for Attributing Financial Organizations to Systemic Organizations" dated February 1, 2010 No.923;
- 7) Banks with aggressive policy mean large banks which service over 100 000 retail loans and whose policy is focused on consumer loans.
- 8) Medium-size banks are banks which service from 10 000 to 100 000 retail loans.
- 9) Small banks are banks which service less than 10 000 retail loans.

3.1.3 Risks Associated with Liquidity and Funding Structure, and Foreign Exchange Position

Due to their relative "cheapness" and "affordability", clients' funds constitute the basis of the bank funding sources. Customer deposits are placed mainly for short term, thus resulting in a higher level of liquidity that needs to be maintained by banks. To ensure more active investments in long-term assets and reduce the mismatch in maturities between assets and liabilities, the issue of availability of permanent bank funding sources alternative to deposits remains actual. Moreover, uneven distribution of foreign exchange risk puts an excessive pressure in the foreign exchange and money markets in the periods of significant tension.

Figure 3.1.3.1
Assets and liabilities in the Tenge, by remaining maturities



Source: NBRK

Figure 3.1.3.2
Assets and liabilities in foreign currency, by remaining maturities



Source: NBRK

In the reviewed period, total volumes of long-term bank assets exceed the volumes of long-term liabilities by more than twice. During the pre-crisis period (2005-2007), long-term assets to long-term liabilities were within the range of 1.2 – 1.7. The most significant changes over the last few years had been observed in the structure of foreign currency assets and foreign currency liabilities³⁹. So, if during six consecutive years the share of short-term liabilities of banks in Tenge has always been at a high level (over 60%), the share of short-term liabilities in foreign currency has been gradually increasing during the same period (Figure 3.1.3.1 and Figure 3.1.3.2). To a large extent this was explained by the existence of significant volumes of foreign liabilities on a bank's balance sheet before the crisis. For comparison – the share of bank liabilities to non-residents with maturity over 5 years decreased from 14% of total liabilities at the beginning of 2007 to about 1.5% in 2013. Alongside with that, the share of customer deposits with maturity over 5 years within bank liabilities also increased. As a result, at present most Kazakh banks demonstrate a significant mismatch between maturities of assets and liabilities, both in the domestic currency and in foreign currency. Nonetheless, funding of long-term assets with short-term

liabilities is typical not only for Kazakh banks (see Box 9).

Box 9

Liquidity and funding in foreign banks

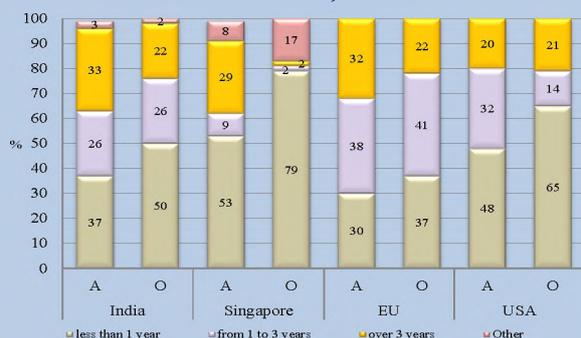
McKinsey & Co. in their study about liquidity and funding in Asian banks conducted in 2013 (McKinsey working paper on risk, number 45, “Between deluge and drought. Liquidity and funding for Asian banks”) mention the presence of significant maturity mismatch in banks' assets and liabilities, both in developed and developing countries (Figure 1).

According to the information presented in the McKinsey's working paper, in 2012 short-term liabilities in those countries were mainly represented by deposits. At the same time, customer deposits form the basis of deposits in Asian countries (India, Indonesia, Thailand, and Malaysia - over 70%, Vietnam, Hong Kong, and Australia - 52-59% in the funding structure). In the USA and Singapore, on the contrary, bank deposits are prevailing (49% - USA, 47% - Singapore), and customer deposits are the second largest source of funding in terms of size (35% - USA, 42% - Singapore). In the UK, however, equity, reserves as well as other provisions and liabilities form the basis of funding (55%), and customer deposits comprise 40% of funding.

It should be noted that the trend of active buildup of the deposit base among Asian banks leads to excessive liquidity in the banking system of a country in general and in large banks in particular. For instance, stress-testing of liquidity risk of Malaysian banks performed under the IMF's Financial Sector Assessment Program showed that Malaysian banks have significant liquidity surplus and even in case of high levels of deposit withdrawals only half of small banks will have insufficient liquidity to meet their obligations (Financial Stability Report of the Central Bank of

³⁹ Data provided in this section doesn't include BTA Bank

Figure 1
Structure of assets (A) and liabilities (L) by
maturities, in several countries (based on the data for
2011)



Note: *Other - other bank liabilities, where maturities are not specified

Source: McKinsey working paper prepared based on the annual reports as well as regulatory reports of banks

Malaysia, March 2013). At the same time, historical Malaysian data demonstrates “stability” and absence of high volume deposit withdrawals during stress time. According to the Financial Stability Report of the Central Bank of Taiwan (May 2013), there is excess liquidity in Taiwan due to inadequate growth of customer deposits and banks’ loans (the ratio of deposits to loans is 129.1%). Nonetheless, despite the liquidity risk inherent in deposits, most countries regard them as a “stable” funding source, especially if a country has a deposit insurance system in place. In addition, authors of the study conducted by McKinsey note that for Asian countries whose banks are funded mainly with deposits, in the event of loans growing faster than deposits, the gap between the size of deposits and the size of loans may become wider leading to the increased competition for deposits among banks and, thus, the growth in the price of customer deposits. In developed countries banks generate revenues by investing attracted cheap short-term liabilities in longer-term assets. Additionally, authors argue that in Asian countries (India, Indonesia, Thailand, and Malaysia) there is an upward trend of deposit interest rates (3%-7% in 2013), whereas in developed countries (the USA, the UK and the EU) interest rates are decreasing (not more than 1% in 2013).

Factors of relative “cheapness” of customer funds’ attraction their availability pre-determined the current policy of Kazakh banks in attraction of funds. They prefer deposits as the main source of funding.

Figure 3.1.3.3
Various forms of bank funding as percentage of total liabilities



Source: NBRK

At December 31, 2013, the share of deposits in total liabilities of Kazakh banks accounted for 77.3% (67.6% of total bank assets). During 2013, the share of owners’ equity decreased by 1.8 pp to 15.2% % in the total volume of bank liabilities. The share of issued securities and borrowed subordinated debt accounted for 11.2% (Figure 3.1.3.3).

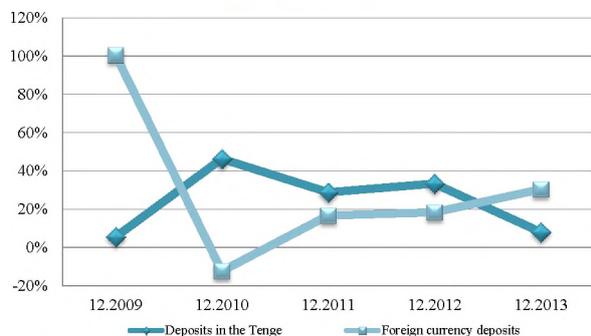
At December 31, 2013, customer deposits of banks amounted to KZT 9 294 bln. and increased by 16.3% during 12 months of 2013. A significant contribution to the growth of deposits was made by deposits of legal entities – 9.6%. During 2013, retail foreign currency deposits were growing. Their annual growth accounted for 30.4%, of which 23.7% fall on 5 large banks (Figure 3.1.3.4). Active placement of deposits in foreign currency by the population was associated with periodic expectations regarding devaluation of the domestic currency.

In general, deposits of legal entities dominate in the structure of the deposit base of banks. The share of deposits of the NWF “Samruk-Kazyna” and other organizations of the quasi-government sector accounts for about 29% of all deposits⁴⁰. The share of deposits of NWF

⁴⁰ Despite an important role of the NWF “Samruk-Kazyna” and other organizations of the quasi-government sector in providing funding to banks, the part of resources allocated under government economy support programs is still insignificant. As of December

“Samruk-Kazyna”, of its subsidiaries and organizations from the quasi-public sector remained at a steady high level (over 20%) during three consecutive years. In general, over 75% of all deposits are accumulated in 8 large banks and a major contribution to the growth of total deposits is made by 4 large banks.

Figure 3.1.3.4
Annual growth in deposits of individuals in the Tenge and in foreign currency



Source: NBRK

investments in a second-tier bank makes 1% of its total liabilities, and maximum amount reaches 19%. At the same time, the share of total pension asset investments in financial instruments of some banks exceeds the equity of those banks.

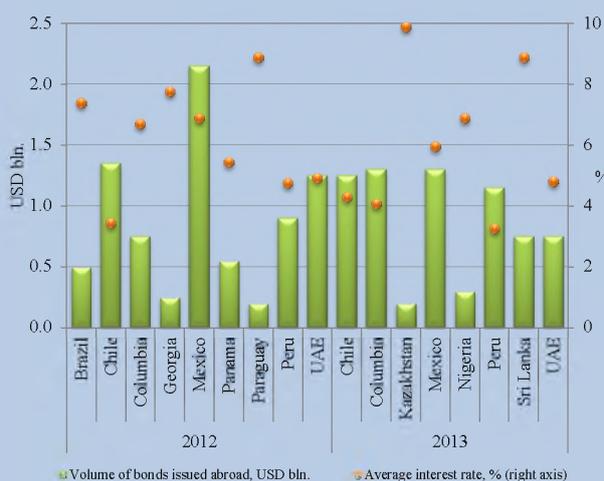
As a result of repayment of debt to non-residents, the external debt of banks is decreasing. At the same time, there is no replacement with other debt since the level of risk premium for Kazakh banks borrowings significantly increased after the crisis (see Box 10).

The share of funding with issuance of securities on domestic market decreased by 2 pp during 12 months of 2013. During 2013, 10 banks launched securities issues with the placement volume of KZT 134.5 bln. This number constitutes 25% of the total equity of banks, which issued securities. Key investors during the bank bond placements were institutional investors represented by APFs. At December 31, 2013, total investments of APFs in financial instruments⁴¹ of 20 banks amounted to KZT 841.6 bln., accounting for 7.6% of those 20 banks' total liabilities (6.9% of the total liabilities of all banks). Minimum amount of

Box 10

Opportunities for banks to attract additional funding in the external market

Figure 1
Cross-country* comparative analysis of volumes and interest rates of funding attracted by banks by issuing bonds abroad



Note: *Breakdown by groups of developing markets was made according to the IMF publication (Global Economy and Development Prospects)

Source: Thomson Reuter Eikon, calculations by NBRK

In the environment of limited medium- and long-term funding, external funding represents one of the main sources to attract financial resources by banks. However, at present foreign capital market is virtually closed for many issuers from developing markets, including for Kazakh banks. Such low activity of banks in terms of attraction of foreign funding is explained, on the one hand, by “expensiveness” of the cost of funding due to relatively high rates of attraction on issued bonds and, on the other hand, decreasing investment attractiveness of countries with the developing market due to the loss of some confidence on the part of potential investors. Moreover, certain measures undertaken by central banks and government of many countries to limit external funding with a view to mitigate foreign exchange risks were also conducive to slowing activity of banks. So, despite a minor growth of the volumes of

31, 2013, funds utilized by banks under the government programs accounted for only 1.66% of the total bank liabilities or 1.7% of the total loan portfolio of banks.

⁴¹ Deposits, corporate bonds, common and preferred shares, depositary receipts.

Figure 2

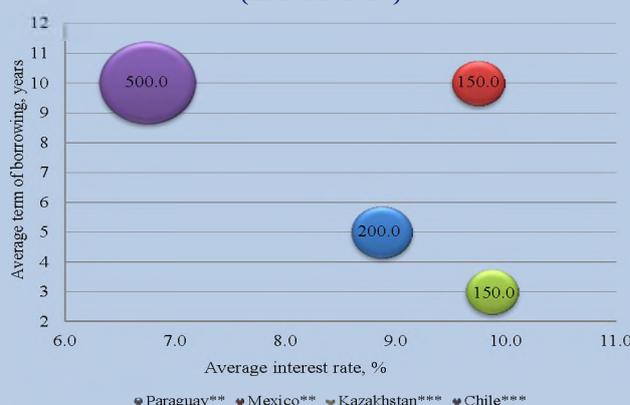
Structure of bond issues by Kazakh banks



Source: Thomson Reuters Eikon, calculations by NBRK

Figure 3

Banks comparable* in terms of the risk level (in 2012-2013)



Note: *with credit rating of « B-» and « B+»

**of the end of 2012

***of the end of 2013

Circumference diameter corresponds to the average volume of securities issued abroad, in mln. USD.

Source: Thomson Reuters Eikon, calculations by NBRK

average volume of issued bonds is 3.3 times lower than in Chile; this indicates the presence of additional potential for borrowing.

bonds issued by banks abroad in Columbia and Peru, a significant decrease in the volumes in 2013 (versus the prior year) is observed in the UAE – by 40.0% and in Mexico – by 39.5% (Figure 1).

High activity of Kazakh banks in attracting funding by issuing bonds abroad was observed in 2010 and 2011; the share of bonds issued abroad accounted for 94.7% and 61.9% of the total volume of the bond issue launched by banks. However, because of objective factors of limitation in external funding, starting from 2012 the external capital market was completely closed for Kazakh banks thus reducing the share of liabilities on issued bonds in total liabilities of banks.

The funding was orienting on the domestic investor base only while the amount of medium- and long-term resources within the country cannot provide for relevant needs of banks and replace foreign funding (Figure 2).

When comparing banks by the level of risks in the developing markets, there's certain imbalance in the cost and volumes of attracting funding through the issue of securities abroad (Figure 3).

So, despite the fact that in Kazakhstan average rates of borrowing and average volume of bonds issued abroad are commensurate with those in Mexico, average maturities are the shortest. However, the

The cost of funding based on deposit-taking among Kazakh banks does not exceed 8%, during the last 4 quarters the average rate of return⁴² in liabilities in the form of deposits for Kazakh banks has been within the range of 1% - 8%. In general, the spread in values of the cost of funding for banking business is large; however, the most expensive source of funding for banks are issued securities and subordinated debt, whose average rate of return is in the range of 6%-14%.

Together with active growth of short-term liabilities, relevant accumulation of highly liquid assets has been taking place in the banking system. At December 31, 2013, highly liquid assets to demand liabilities of banks had increased from 0.79 to 0.91 over 1 year. The volume of highly liquid assets of banks amounted to KZT 2 395 bln. or 20% of total bank assets. 70% of highly liquid assets are concentrated in 10 banks, including 35% - in three large banks. In the banking system in general, during 12 months of 2013 the volume of highly liquid assets of banks increased by 12%, and the contribution of 3 banks alone into this growth accounted for 7.4%.

Increase in the customer deposit base along with moderate growth in loans results in the buildup of the portfolio of highly liquid assets by banks, including owing to the GSs portfolio. At

⁴² The rate of return is calculated as the ratio of annualized expenses on each type of liabilities to average amount of a respective type of liability for the last four quarters.

December 31, 2013, the banks' total securities portfolio contained encumbered securities worth KZT 247.7 bln, accounting for 2.1% of the banks' liabilities (20.8% of the banks' securities portfolio). The encumbered securities consisted solely of the MFRK's government securities as well as bonds of the NWF "Samruk-Kazyna".

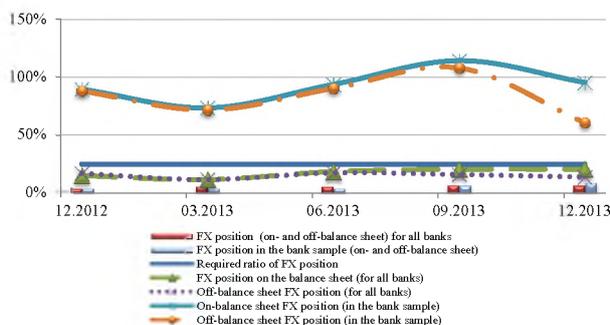
Based on the existing requirements⁴³, at December 31, 2013 a potential additional volume of securities which may be pledged to NBRK under reverse REPO transactions amounted to KZT 500.6 bln. or 4.3% of total bank liabilities, where the volume of securities issued by the MFRK amounts to KZT 465 bln. (3.9% of total bank liabilities), bonds of the NWF "Samruk-Kazyna" – KZT 50.8 bln. (0.4% of total bank liabilities), and the NBRK's short-term notes⁴⁴ – KZT 3.5 bln. (0.03% of total bank liabilities). It is worth mentioning that about 80% of the unencumbered volume of the MFRK's government securities (KZT 415 bln.) is held in portfolios of 13 banks.

When a potential volume of the MFRK's government securities and bonds of the NWF "Samruk-Kazyna" is pledged, banks' liabilities to the NBRK will account for about 6.4% of total liabilities. This amount exceeds the amount of bank liabilities to the NBRK under refinancing operations during the last financial crisis of 2010 (KZT 454.8 bln. or 3.53% of total banks' liabilities). Nonetheless, the problem of possible extension of the list of collateral eligible for the NBRK when conducting the operations for liquidity provision to banks is actual, given that short-term liquidity accumulated by banks is not excessive but rather is induced.

For instance, banks' securities portfolios contain securities which, under the existing laws, cannot serve as collateral for reverse REPO operations with the NBRK but may be regarded as collateral due to a high paying capacity of their issuers. Specifically, these include unencumbered bonds of the NWF "Samruk-Kazyna" (issued and purchased after 01.04.2009), bonds issued by Kazakh national companies as well as GSs issued by foreign states, whose total present value is KZT 206.6 bln. or 1.8% of total bank liabilities (17.5% of the total bank securities portfolio). The major portion of these securities (KZT 168.2 bln. or 81.4% of the total volume) is held in the portfolios of four large banks. About 15.8% of securities are held in portfolios of 6 banks and the remaining 2.8% – in portfolios of other 9 banks.

Figure 3.1.3.5

Total foreign exchange position in the banking sector



Note: 1) The figure shows the ratios of FX position/bank owners' equity (in %). 2) The sample consists of 5 banks which account for over 50% of the total off-balance sheet currency exposure of the banking sector

Source: NBRK

the off-exchange market of financial derivatives transactions is distributed unevenly and concentrated in certain banks. So, on average over a half of open off-balance sheet positions including off-balance sheet positions on financial derivatives transactions fall on five banks (including subsidiaries of non-resident banks), which maintain open off-balance sheet foreign exchange positions at a level equal to or exceeding the banks' equity.

Overall open foreign exchange positions in the banking sector as a whole and in banks individually are maintained within the established limits for foreign exchange risk. Nonetheless, due to developed disproportions in the balance sheet accounts in foreign currency, banks open massive off-balance sheet positions in FDs in order to comply with the ratios for currency positions as well as to manage short-term liquidity (Figure 3.1.3.5).

Given the specifics of the domestic infrastructure of the foreign exchange market and money market, in the absence of the central counter-party institution, banks mainly enter into financial derivatives transactions in the off-exchange market. Foreign exchange risk in the

⁴³ NBRK enters into reverse REPO transactions with the second-tier banks against the pledge of GSs and bonds issued by the NWF "Samruk-Kazyna" before 01.04.2009 and purchased by banks in the primary market.

⁴⁴ The NBRK's short-term notes depend on the current liquidity situation in banks and the NBRK's policy, are subject to the market fluctuations and have a zero net effect on liquidity in the end.

3.1.4 Capital Adequacy

Unstable macroeconomic situation in developing economies, wrapping of the support developed countries programs and capital outflow from developing economies are reflected in the scenarios of conducted stress-tests of the banking sector. Based on the assessment of such scenario, the probability of default (PD) and the share of non-performing loans in the sample of 30 banks increases by nearly 8.6%. Given the changed assessment horizon in the context of negative development in the macroeconomic situation, the capital buffer⁴⁵ will decrease by 129.4% during two years in the assessed sample of banks. At the same time, it should be noted that capital deficit shows up with a time lag of one year. Losses of banks included in the sample in the course of stress-testing appear to be larger by 1.8 times in the second year versus the first year. The feedback effect on GDP made by the reduction in bank lending also caused deterioration in the ratios.

This Financial Stability Report presents the results of stress-testing of credit risk in the banking sector based on a number of methodological changes. As the practice showed, a time horizon in the development of a stress-scenario in one year doesn't fully reflect the depth of the shock effect on the bank's financial standing. In this connection, in order to determine the scale of bank's losses in a more precise manner, the forecast period was extended from one year to two years. The scenario was changed based on the current global trends. Also, for more adequate evaluation of losses in case of prolongation of the stress period, approaches and assumptions were reviewed in relation to the following parameters:

- total loss based on the results of stress-testing was determined as the amount of losses under two models: the multi-factor portfolio model⁴⁶ and the panel model for evaluation of non-performing retail loans⁴⁷;
- assets and the loan portfolio of banks are recalculated once based on the annual performance in line with the forecast of the rates of growth in credits to the economy received on the basis of a macroeconomic forecast model from the multi-factor portfolio model. The assumption is that when credits to the economy are decreasing the growth of assets and of the loan portfolio is equal to zero, in order to avoid the increase in the capital adequacy ratios by means of diminishing the inputs;
- risk-weighted assets are recalculated once at the year-end, based on the historical average ratio between this parameter and assets of the banks in question;
- the probability of default for a corporate portfolio is adjusted for the level of expected losses incurred as of the end of each year;
- the industry-based structure of the loan portfolio is forecasted for each bank on the basis of the panel model taking account of the changes in the rates of credits to the economy and the share of the sector in GDP⁴⁸;

⁴⁵ Capital buffer (in excess of required minimum ratio) – is the difference between the existing capital and the capital that a bank needs to comply with the capital adequacy ratio.

⁴⁶Stress-testing was conducted for 30 banks, whose share of assets accounts for 85.8% of total assets of the banking system and which provide credits to the sectors that are exposed to the shock (the mining and manufacturing industry, construction and trade). Stress-testing was based on the data as of the 4th quarter of 2013 with the two-year forecast period (from the 1st quarter of 2014 to the 4th quarter of 2015).

In conducting the stress-testing, the model uses the assumptions that no additional capital injections are provided for throughout the entire forecast period.

The multi-factor portfolio model designed with participation of the Deutsche Bundesbank (IFO Working papers No.85 "Methodology of stress test for the Kazakh banking system", April 2010) is used for the stress-testing. The Model evaluates influence of macro-economic parameters on credit risk of banks and recognition of systemic and specific risks through the changes in the loan portfolio by economic sectors based on interrelation within sectors.

⁴⁷The panel model, in order to evaluate the increase in non-performing loans of individuals, evaluates the dynamics of non-performing loans depending on the change in real GDP, real estate prices, the exchange rate and in the oil price (Brent) and real income of the population.

When conducting the stress-testing, the model uses the following assumptions: the share of loans in bank assets remains at the level of December 31, 2014; the income to expense ratio will be at the level of the 4th quarter of 2013; the ratio of credits to the economy to GDP will coincide with the trend outlined at December 31, 2014.

– the effect of reduced rates of changes in real GDP is superposed on macro-economic scenarios as a result of decreased credits of banks⁴⁹ which violate the capital adequacy ratio k2 at the end of the first year of stress-testing.

When analyzing the current state of the banking system, one may note that none of the Kazakh banks has violated minimum required capital adequacy ratios k2 and k1-2. To evaluate potential losses of the banking system from the realization of credit risk, the development of a possible but not probable (the probability does not exceed 2.8%) macro-economic scenario is reviewed. The scenario is based on the following assumptions:

- slowdown in developing economies;
- capital outflow from developing economies due to recovery of developed economies wrapping;
- wrapping of support programs of developed countries;
- decreasing rates of GDP growth of trading partners of the Republic of Kazakhstan;
- changes in the exchange rate with a view to restore competitiveness of the real sector;
- the decline in oil price to USD 40 per barrel, which is equal to the depth of price decline of 63.4%; oil price is expected to be falling during 5 quarters, which corresponds to the worst historical figure.

Parameters of the resulting scenario are shown in Table 3.1.4.1.

Table 3.1.4.1

Macroeconomic indicators	Stress-testing scenarios			
	Baseline scenario		Stress scenario	
	3 quarter of 2014	3 quarter of 2015	3 quarter of 2014	3 quarter of 2015
1	2	3	4	5
Oil price - Brent (USD, average for the period)	minor decline to USD 101.5 ⁵⁰	minor decline to USD 104.1	gradual decline to USD 53.9	decline to USD 40 in the 1st qtr. Of 2015, gradual growth to USD 50.3
Nominal exchange rate (KZT/USD) ⁵¹	depreciation by 3.7%	depreciation by 3.52%	depreciation by 18.7%	depreciation by 7.2%
Russia's real GDP (for the eperiod, RUR bln.)	growth by 1.7%	growth by 2,7%	minor decline by 0.3%	decline by 2.7%
Kazakhstan's real GDP (for the period, KZT bln.)	growth by 6%	growth by 4.3%	growth by 4.3%	decline by 2%
Output in the mining industry	growth by 2.3%	growth by 1.6%	growth by 1.7%	minor growth by 0.5%
Output in the manufacturing industry	growth by 1.6%	decline by 1.1%	decline by 4%	decline by 4.3%
Output in the construction sector	growth by 5.4%	growth by 5.7%	decline by 1.5%	decline by 9.95%
Output in trade	growth by 8.9%	growth by 8.7%	growth by 6.3%	decline by 1.9%

Source: NBRK

According to the results of stress-testing obtained at the end of the first year, when a stress-scenario is implemented, 4 banks will violate the capital adequacy ratio. The decrease in capital as a result of shock would require additional capitalization of banks and would have negative impact on their credit activity. Based on this fact and on the values of the elasticity of the loan growth from the change in the capital buffer⁵², the decreasing growth rate of credits to the economy relative to

⁴⁸ The Model evaluates the change in the structure of bank loan portfolios by economic sectors that are exposed to the shock depending on the rates of growth in GDP and the change in the GDP structure in the same sectors, based on the forecasts obtained for the multi-factor portfolio model. The strategy of banks is assumed to undergo no changes during the two years of forecasting.

⁴⁹ The description of the Model was provided in the Financial Stability Report for 2012, Box 4, p. 40.

⁵⁰ Baseline scenario is based on consensus-forecasts of Bloomberg

⁵¹ Numbers of the indicators are presented in the form of a change in the last quarter of the corresponding period to the same quarter of the prior year.

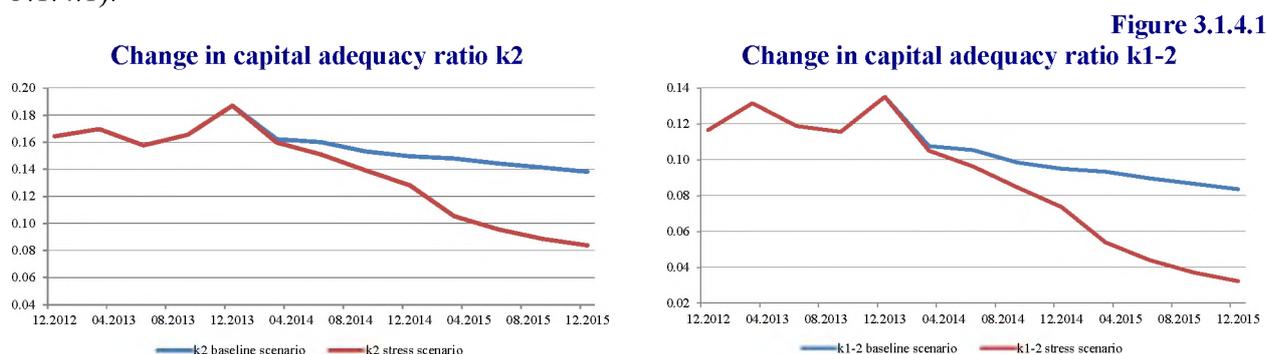
⁵² Based on the Model of evaluating banking sector indicators' influence on lending growth, the Financial Stability Report for 2012, Box 4, p. 40.

the actual values as a result of implementation of the stress-scenario was evaluated. It accounted for 4% per annum for the 4 banks in question violating the k2 ratio. Given the share of the loan portfolio of those banks in the banking system, a reduction in loan growth rate in the system is estimated at 0.4 pp a year. Estimated losses in case of the stress-scenario implementation would reduce credit activity of banks and eventually would lead to the 0.09 pp decreases at the end of 2014 in the forecasted GDP growth.

Given the change in the volume of the loan portfolio, increased probability of default and increase in risk-weighted assets, losses⁵³ for the second year in case of the stress-scenario implementation, including the outliers in the GDP growth, will account for 14.9% of regulatory capital in annual terms. This would result in the drop in capital adequacy ratio and violation of established ratios by some banks. In general, out of 30 banks in the sample, by the end of the second year the k1-2 capital adequacy ratio will be violated by 10 banks, and k2 – by 11 banks including the two banks that had already violated the ratios in the first year.

For 11 banks violating the k2 capital adequacy ratio, the effect of decreasing loan growth rate at the end of the second year of the stress-testing will account for 6.4%. Given the share of the loan portfolio of these banks in the banking system, the reduction in the loan growth rate in the whole system would account for 4.3% in the second year of the testing horizon and the GDP contraction would account for 1 pp. at the end of 2015. Thus, additional superposition of this effect in the stress-scenario shows that contraction in GDP as determined under the forecast will diminish from -2% to -3%.

In general, if the stress-scenario is implemented, at the end of the 4th quarter of 2015 capital adequacy ratios for k2 would diminish to 0.087 (with the required minimum of 0.10), and capital adequacy ratios for k1-2 would diminish to 0.036 (with the required minimum of 0.05) (Figure 3.1.4.1).



Note: calculated for 30 banks
Source: NBRK

In order to increase financial soundness of banks, the required level of additional capitalization⁵⁴ in the end of the first year is estimated at KZT 40.1 bln. and KZT 11.5 bln., and in the end of the second year⁵⁵ – KZT 328.3 bln. and KZT 330.6 bln. for regulatory capital and the tier 1 capital, respectively (Table 3.1.4.2).

Therefore, in this sample of banks, the required increase both in the tier 1 capital and in the regulatory capital for two years will account for 17% of actual regulatory capital.

Contagion Risk. Violations of ratios by eleven banks result in violation of capital adequacy ratios by 2 banks which are lending in the interbank market. This fact, accordingly, leads to increase in the level of recapitalization of KZT 7.1 bln and KZT 6.2 bln. for regulatory capital and for tier 1 capital, respectively. In this case, capital adequacy ratios in the reviewed sample of banks decrease to 0.085 in respect of k2 and to 0.034 – in respect of k1-2.

⁵³ The impact of the baseline and stress-scenarios on the credit risk of banks is analyzed by estimating expected losses and respective decrease in owners' equity.

⁵⁴By taking into account expected losses on the households, received from the results of stress testing of credit risk on the loans granted by banks to individuals.

⁵⁵ The level of additional capital is calculated based on the existing ratios without regard of implementation of capital requirements on the basis of Basel III from January 2015.

Table 3.1.4.2

Level of additional capitalization⁵⁶ in case of the stress-scenario for k2 and k1-2 , KZT bln.

		At end 4 quarter 2013 (actual)	At end 4 quarte 2014	At end 4 quarter 2015
k2	Required level of additional capitalization	0	40.1	328.3
	Capital surplus ⁵⁷	784.1	349.6	157.8
	Net capital buffer ⁵⁸ (above the required minimum)	784.1	309.6	-170.6
k1-2	Required level of additional capitalization	0	11.5	330.6
	Capital surplus	740.9	277.8	152.3
	Net capital buffer (above the required minimum)	740.9	266.3	-178.3

Source: NBRK

Thus, based on selected stress-testing parameters and taking account of the feedback effect on GDP, the number of banks violating capital adequacy ratios and amounts of additional capital required for proper operation of banks increase significantly. The major decline in capital adequacy ratios of banks under the stress-scenario falls on the second year of the stress-testing.

The major decline in capital adequacy ratios of banks under the stress-scenario falls on the second year of the stress-testing. Moreover, because of violation of ratios by the majority of banks the contagion risk of lending banks is realized, despite minor development of the interbank lending market.

3.2 Risks of the Non-Banking Sector

3.2.1 Insurance Sector

In 2013, the activity of insurance organizations was determined by continuing reliance on the state and development of the domestic banking sector, keeping the “status-quo” in the practice of transferring large risks to reinsurance abroad and the increasing influence of high fees to insurance agents and high loss ratios in certain lines of insurance on the insurance sector stability.

Over a long period of time the insurance market was characterized by reliance on the banking sector’s development, which plays a role of one of the drivers for the insurance market influencing the dynamics of the insurance premium collections to a significant extent.

Amendments to the legislation introduced in 2011-2012, under which banks cannot restrict borrowers in selecting insurance organizations or compel a borrower to insure his/her life or health, as well as tightened requirements to transactions with affiliated entities of financial organizations, were conducive to a partial decrease in the volume of transactions of insurance (reinsurance) organizations within banking groups, including transactions with affiliated entities. Meantime, the system of cross-sales in the second-tier banks continues to exert substantial influence on the insurance market development as a whole – the share of bank insurance in the total volume of insurance premiums accounted for 31% at December 31, 2013

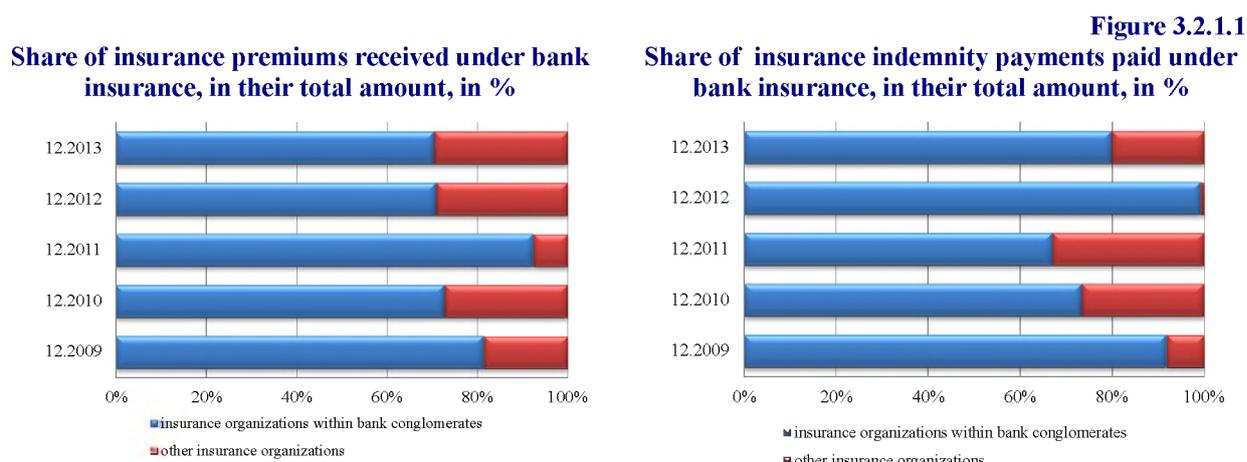
In its turn, there is a redistribution of positions in the market of banking insurance in favor of insurance companies that are not part of bank conglomerates. So, at December 31, 2013, the share of such companies in total insurance premiums under the bank insurance accounted for 29.5%

⁵⁶ For 30 banks included in the stress-testing.

⁵⁷ Capital surplus is the total capital required for banks included into the sample in order to meet their capital adequacy requirements.

⁵⁸ Net capital buffer is the difference between capital stock and required additional capital.

(Figure 3.2.1.1). As compared to the same period of the prior year, the share of “unaffiliated” insurance companies in the market of banking insurance had doubled.



Source: NBRK

As of December 31, 2013, along with the growing volume of insurance premiums there is an increase (after a significant decline at the end of 2012) in the share of premiums of insurance (reinsurance) organizations which form part of bank conglomerates (Table 3.2.1.1). Interestingly that, despite a minor restoration of positions (21.6% of total insurance premiums in the market), the overall mid-term trend reflects a gradual decrease in the share of insurance premiums of insurance subsidiaries in total insurance premiums. This was mainly caused by amendments made to the insurance legislation to decrease the share of insured risks within a banking group; it has a positive effect on the development of the scheme of cross-sales through insurance organizations which are not related to parent banks.

Table 3.2.1.1
Share of premiums and assets of insurance (reinsurance) organizations within a bank conglomerate

Period	Share of premiums and assets of insurance (reinsurance) organizations within a bank conglomerate, in total insurance premiums	Share of premiums and assets of insurance (reinsurance) organizations within a bank conglomerate, in total assets of the insurance sector
31.12.2005	64.8%	70.3%
31.12.2006	58.3%	67.5%
31.12.2007	59.7%	62.5%
31.12.2008	43.9%	35.7%
31.12.2009	31.7%	47.0%
31.12.2010	35.3%	32.3%
31.12.2011	48.9%	49.6%
31.12.2012	14.4%	55.0%
31.12.2013	21.6%	61.0%

Source: NBRK

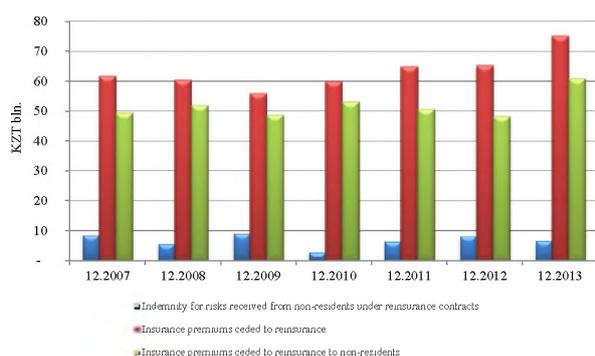
Reinsurance of risks abroad still prevails in the structure of reinsurance; it is characterized by a large outflow of reinsurance premiums and a small inflow of insurance benefits from non-resident reinsurance companies. An excessive outflow of resources through reinsurance channels limits the capitalization growth of the domestic insurance market and restrains sound development of the insurance market in general.

So, 2013, premiums under insurance and reinsurance contracts collected by the domestic insurance (reinsurance) organizations amounted to KZT 279.2 bln. This exceeds the amount collected during the same period of the prior year by 18%. Out of collected premiums, 91% fall on

the insurance contracts (KZT 253.1 bln., with the 20% growth versus the same period of the prior year), and 9% fall on the reinsurance contracts (KZT 26.1 bln., with the 2% growth versus the same period of the prior year).

It should be noted that despite the significant share of bancassurance in total premiums, the coverage of the market by the number of bancassurance contracts is less than it is observed in classes of compulsory insurance, which represent the mass forms of insurance. Excess of bancassurance over the share of compulsory insurance in total premiums is stipulated by statutory insurance rate for compulsory classes of insurance.

Figure 3.2.1.2
Dynamics of insurance premiums ceded to reinsurance,
in KZT bln.



Source: NBRK

The volume of premiums ceded to reinsurance also increased by 15% versus the prior year and amounted to KZT 75.1 bln. (27% of the total volume of premiums collected); out of this amount, KZT 60.8 bln. of premiums were ceded to non-residents, exceeding the amount in the same period of the prior year by 26% and accounting for 22% in the total premiums collected (Figure 3.2.1.2).

In 2013, the indemnity amounts from reinsurers totaled KZT 11.6 bln. As compared to the volume of total expenses of insurance organizations related to insurance benefit payments, indemnity for reinsurers accounts for 22%.

A new policy for regulation in the reinsurance market related to the measures aimed to make the use of the reinsurance instrument more efficient and retain insurance premiums within the Kazakh economy, so far hasn't resulted in cardinal changes in the activity of the domestic insurance organizations.

A low capitalization level of insurance companies and the lack of ability to retain large industrial and financial risks within the country help keeping a high share of insurance premiums ceded to reinsurers – non-residents of the Republic of Kazakhstan. The structure of premiums ceded to reinsurance shows that 19% are ceded to local reinsurers and 81% – to foreign reinsurers.

There is an objective need to transfer risks to highly-rated international reinsurers for reinsurance with a view to diversify the insurance portfolio, ensure financial soundness and protect from large catastrophic losses. The total liability under existing insurance contracts ceded for reinsurance to non-residents amounts to KZT 21.8 bln. (44% of the total liability).

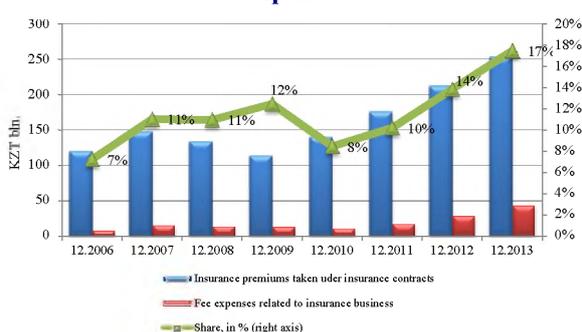
When insuring large risks, insurance companies apply to foreign reinsurers with the financial soundness rating of "A" or higher. When insuring against less severe risks, companies appear to be better off when they reinsure in the domestic market than, say, in Russia, since the burden on the solvency margin increased. In the total amount of premiums ceded to non-residents of the Republic of Kazakhstan, the share of reinsurers with a rating of at least "A-" is 85.8%.

Due to the new requirements to reinsurance, the market shows, together with the retention of insurance premiums, the trend of increasing risks related to concentration of their distribution within Kazakhstan. At the same time, the domestic insurers shifted the priority in selection of non-resident reinsurance partners to the European companies; this can be characterized as a better approach in reinsurance.

A high amount of fees prevails in the insurance market of the Republic of Kazakhstan, being one of the reasons for overpriced insurance tariffs under voluntary insurance contracts.

As of December 31, 2013, fee expenses related to the insurance business increased by 51% as compared to the same period of the prior year. This was caused by the 20% increase in insurance premiums received under insurance contracts (insurance contracts only).

Figure 3.2.1.3
Dynamics of insurance premiums and fee expenses



Source: NBRK

Positive dynamics of the growth of commission payments and the practice of paying high commissions provoke some concern since they represent a potential factor for risk of the insurance reserves shortage; this may lead to inability of an insurance organization to meet its commitments in case of an insured event occurrence.

The existing practice of the insurance business associated with the dumping of prices for insurance products, payment of high fees and inadequate assessment of insurance reserves in the absence of robust statistics of losses, fosters the increased risk of the insurance reserves shortage.

In general, given the economic viability and the scale of insurance risk coverage, the need in cutting and revising some lines of compulsory insurance has arisen.

The current parameters of the existing Compulsory Workers' Accident Insurance Scheme (CWAI) may lead to excessive accumulation of systemic risk in the insurance sector and, thus, reduce financial soundness of insurance companies in the long run.

Since introduction of the CWAI (July 1, 2005), the growing number of insurance companies with the relevant license ensured a sustainable growth of premiums collected under the CWAI by 17% on average and increased the CWAI's weight in the structure of general insurance to 34.3%; this was accompanied by the increase in the loss ratio to 71.3% (Table 3.2.1.2).

Table 3.2.1.2

Loss ratio by lines of compulsory insurance, at 31.12.2013

Line of Insurance	Insurance premiums, in KZT mln.	Share of portfolio, in %	Insurance indemnities, in KZT mln.	Expenses in the form of a commission in insurance activity	Loss ratio*, in %	The number of licensed insurance organizations
Civil liability of motor owners	31 035	12.3	11 263	2 237	62	23
Carrier's civil liability to passengers	1 526	0.6	64.734	90.813	28	23
Crop insurance	479.386	0.2	308.594	45.868	92	2
Civil liability of private notaries	48.426	0.0	1.512	3.467	28	16
environmental insurance	1001.834	0.4	16.715	66.047	26	22
Auditors' civil liability	14.462	0.0	0	1.579	29	12
Civil liability of tour agent and travel agent	100.917	0.0	136.469	8.172	161	18
Civil liability of hazardous facilities' owners	535.925	0.2	16.721	48.739	30	23
Workers' accident insurance	18 377	7.3	8 182	1 574	71	29
Total, for compulsory lines of insurance	53 119	21.0	19 990	4 076	63	x
Total, for all lines	253 073	100	51 990	44 168	56	x

Note: * The calculation includes general and administrative expenses (expert evaluation) + fees.

Source: NBRK

The possibility of receiving life-time payments and a significant lump-sum payment for medical care (from 500 to 2000 MCIs) in case of detection of an occupational disease including “light” forms of diseases, paves the way for a welfare mentality among the insured workers. This is evidenced by a dramatic growth in the number of referrals and detected occupational diseases (73% of registered diseases have chronic but light forms).

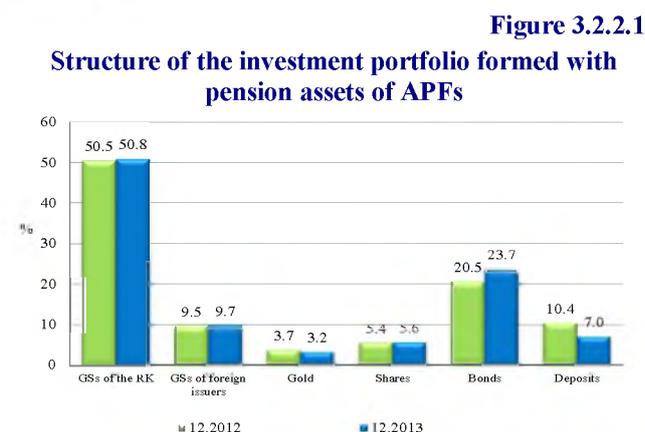
So, since the introduction of the CWAI, the collected insurance premiums amounted to KZT 98.5 bln., and the amount of actual indemnity payments totaled KZT 33.6 bln. Over the entire period, accumulated losses (expected payments in case of prolongation of fixed-term annuity contracts to the life-time annuity) had increased to KZT 59 bln., of which KZT 31 bln. are losses related to occupational diseases.

As a whole, current losses under the CWAI have already exceeded created insurance reserves. In particular, insurance reserves created for the CWAI amount to KZT 25.9 bln., while total expenses related to the CWAI (including general and administrative expenses and commissions) reached KZT 119.4 bln., which is not comparable with insurance premiums received.

Given the size of total capital of insurance organizations that engage in the CWAI (KZT 18.3 bln.), persistence of current trends suggests that losses under the CWAI will grow (to KZT 177 bln. by 2015, according to the NBRK’s estimate). This will create conditions for further realization of systemic risk in the insurance sector. Among other things, this may lead to the violation by those companies of existing regulatory requirements to adequacy of solvency margin and additional capitalization.

3.2.2 Accumulation Pension System

In 2013, the investment policy of APFs was determined by limitations related to the reform in the accumulation pension system. The established requirements to invest pension assets only in highly liquid financial instruments, on the one hand, allowed mitigating the risks associated with the transfer of pension assets and liabilities of APFs to the UAPF, but, on the other hand, they have negatively affected the returns on pension assets of APFs. Moreover, the problem of the shortage of financial instruments which are liquid and capable of generating high returns and which can be used by the UAPF for future investments of pension assets is still pressing.

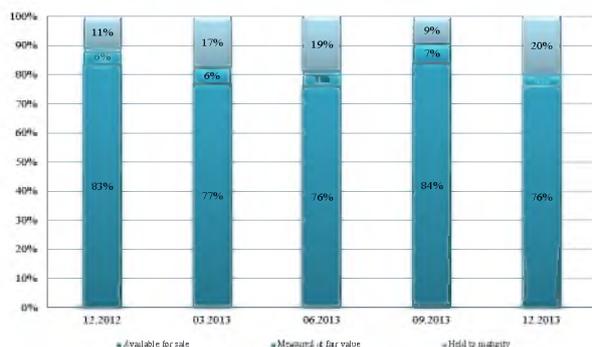


Source: NBRK

During 2013, no dramatic changes in the structure of investment portfolios of APFs were observed. The major portion of their investment portfolio is still comprised of investments in the domestic financial instruments (Figure 3.2.2.1). At the same time, in the environment of additional negative restrictions regarding the investment strategy of pension assets, APFs increased their investments in corporate bonds of issuers of the Republic of Kazakhstan. The decrease in the share of investments in government securities of the Republic of Kazakhstan was caused, among other things, by decreased market prices of these financial instruments.

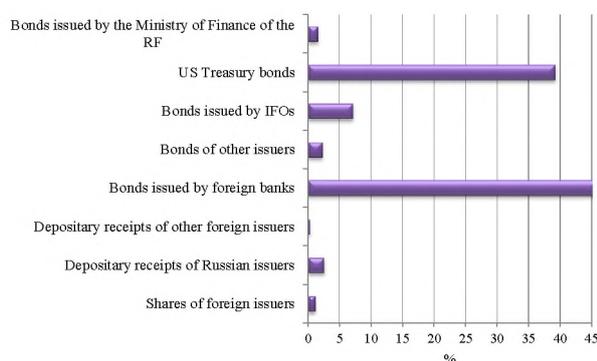
The observed growth of investments in securities issued by foreign issuers to a larger extent was ensured by increased investments in bonds of foreign banks. Also, US treasury bonds prevail in the structure of securities issued by foreign issuers and held in the pension funds’ portfolios. Investments in instruments of Russian issuers and Russian GSs remain insignificant (Figure 3.2.2.2). In general, during the period from December 31,

Figure 3.2.2.3
Investment portfolio of APFs by categories of securities



Source: NBRK

Figure 3.2.2.2
Securities of foreign issuers (in % of the securities portfolio of foreign issuers)



Source: NBRK

Figure 3.2.2.4
Change in the nominal income ratio K2 over 12 months during the year



Source: NBRK

for sale” and “measured at fair value” categories. Moreover, in 2013 the Ministry of Finance was placing GSs at lower prices versus the prior year; this resulted in the decline of market prices for some of the government securities issues and, respectively, in negative revaluation of investment portfolios of APFs on the above government securities issues.

The major volume of transactions conducted with pension assets falls on reverse REPO transactions; in its turn, this speaks for excessive money liquidity of APFs and shortage of financial instruments for pension assets investments in the domestic market. Moreover, with a view to preserve the funds of contributors (beneficiaries) during the accumulation pension system reform and until completion of the transfer of pension assets and liabilities of APFs under the retirement agreements to the UAPF, as noted above, the investment activity of APFs was limited by a small list of highly liquid reliable financial instruments which have a minor potential for generating high

2012 to December 31, 2013 the growth of pension assets accounted for 17.3%

As compared to the beginning of 2013, at the end of the year the share of securities held to maturity increased and the share of securities in the portfolio available for sale decreased (Figure 3.2.2.3).

Minor changes in the structure of total investment portfolio of APFs were caused by the fact that during the reformation stage of the accumulation pension system and until the transfer of pension assets to the UAPF is completed, pension assets may only be invested in highly liquid financial instruments. Therefore, APFs implement conservative investment policy. The introduction of such changes was pre-determined by the necessity to preserve pension assets in the period of their consolidation with the UAPF and to avoid removal of assets from APFs until all procedures associated with the consolidation of pension assets with the UAPF are completed.

The annual weighted-average return on the moderate investment portfolio of all APFs from the time of limitations for investments (from January 2013 to December 1, 2013) accounted for 2.37% (on the conservative investment portfolio – 3.97%); a similar ratio for 2012 was 4% (on the conservative investment portfolio – 1.75%). The decreased returns of APFs in the current period versus the prior period (Figure 3.2.2.4) were caused by a number of reasons.

Gold prices in the global markets decreased by 26% versus 2012, while as of December 31, 2013, the share of gold in the total investment portfolio of APFs accounted for 3.2%. A similar situation is also associated with volatility of prices for securities of foreign issuers since APFs record them in the “available

returns (GSs, gold, securities of national companies, bonds issued by IFOs and the second-tier banks). Accordingly, during 2013 APFs were trying to invest in fixed-income financial instruments.

The structure of bank conglomerates shows a minor share of pension assets in bank conglomerates. However, some APFs play a significant role in generating net profits of their financial group. Also, APFs are key investors for the second-tier banks by investing in their debt securities and placing pension assets to deposits. At December 31, 2013, the share of investments in the banking sector with pension assets reached KZT 841.6 bln. or 22.5% of all pension assets accounting for 7.6% of all liabilities of the twenty banks in whose instruments pension assets have been invested. Financing of the banking sector with pension assets is the second largest after the government sector.

After a complete transfer of pension assets and liabilities of APFs to the UAPF, one large institutional investor will appear in the stock market of Kazakhstan; it will accumulate significant investments in bank financial instruments in its investment portfolio. As a result, the share of investments in securities and deposits of an individual bank as percentage of the bank's equity will increase significantly. For instance, at December 31, 2013, the share of investments in financial instruments of each individual bank in the total investment portfolio of APFs as percentage of the bank's equity is within the range between 16.9% and 133.5%. Thus, for some banks liabilities to a single investor i.e. the UAPF may exceed the bank's equity.

In pursuance of the Message of the President dated January 23, 2013, about the establishment of the UAPF, the Government of the Republic of Kazakhstan jointly with the NBRK drafted regulations which are required to initiate the UAPF and govern the procedures for the transfer of pension assets and liabilities of APFs under retirement agreements to the UAPF. On July 31, 2013, the Government of the Republic of Kazakhstan made the decision to establish the UAPF and the UAPF commenced its operations from August 22, 2013.

The transfer of pension assets and liabilities of APFs under retirement agreements to the UAPF is carried out in compliance with the Schedule of Acceptance of pension assets and liabilities of pension funds to the UAPF as approved on September 24, 2013. According to the Schedule, October 11, 2013 was fixed as the date when the consolidation of pension assets with the UAPF will commence; the process is expected to be completed in April 2014.

The financial instruments representing pension assets of APFs are transferred to the UAPF at current prices at which these financial instruments are recorded in investment portfolios of APFs formed with the pension assets, at the date of their acceptance to the UAPF. Such approach is based on the principle of the "fair value" of financial instruments, if available. In the absence of the "fair value" due to objective reasons, their estimated cost is used. In doing so, evaluation of financial instruments of the UAPF, according to the above regulation, will take into account the interests of contributors to the maximum extent, i.e. it will not allow sharp and significant changes in prices at which financial instruments are recorded.

Fiduciary management of the UAPF's pension assets is carried out by the NBRK on the basis of a fiduciary management agreement entered into by and between the NBRK and the UAPF on August 26, 2013. Custody of the UAPF's pension assets is also carried out by the NBRK. The UAPF's Board on Pension Assets Management will be drafting proposals on how to increase effectiveness of the UAPF's pension assets management as well as the list of eligible financial instruments in which the UAPF's pension assets will be invested, and will approve such list. The personal composition of the Board is now being agreed upon and afterwards will be approved by the President of the Republic of Kazakhstan.

The existing legislation doesn't provide for prudential ratios for the UAPF, including the nominal income ratio. Therefore, since the UAPF's inception, its performance ratios are not included in the calculation of the nominal income ratio for the accumulation pension system. At the same time, profitability ratios of the UAPF and APFs should not be compared since they have a different regulatory environment and different investment policies.

At present, pension assets of the UAPF are invested in line with its Temporary Investment Declaration approved by the Resolution of the NBRK's Management Board dated July 26, 2013,

No.205. The Final Investment Declaration of the UAPF will be drafted by the UAPF's Board on Pension Assets Management. Top priority in investment management of the UAPF's portfolio is to ensure return on pension assets at the level not lower than the inflation rate and with such level of risk that would allow ensuring integrity of pension assets' value with a high degree of probability. At the same time, the increase in the volume of pension assets from compulsory pension contributions regularly coming to the system requires good quality investment instruments that are able to generate profits, among other things. At present, capitalization volume of the KASE and volume of transactions in sectors of the stock exchange market do not provide a required volume of liquid financial instruments to investors. The accumulation pension system needs not only to preserve the opportunity for circulation of already issued securities in the organized market but also for appearance of new liquid and reliable financial instruments.

The shortage of liquid financial instruments in the domestic stock market is explained by the absence of sufficient quantity of securities in the listing that would be interesting for investors as well as by a low liquidity in the secondary securities market and the absence of incentives to attract funding in the stock market for the majority of issuers (banking sector's loans still represent the most popular form of attracting funding for the issuing companies).

3.3. Payment Systems

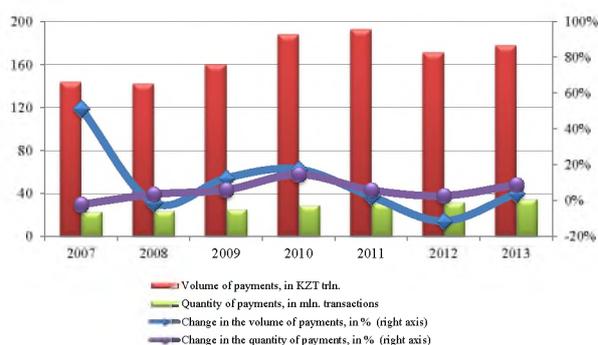
In 2013, the trend of growing payment volumes and liquidity is observed in the payment system; generally, this is an indicator of effective development of the systems and helps mitigating the systemic risk. For the purpose of maintaining an uninterrupted operation of payment systems of the NBRK and KISC, the system operator monitors the equipment, and operational risk management on an ongoing basis. Based on the completed works, a high level of accessibility and productivity of payment systems was provided.

3.3.1 Development of Payment Systems in Kazakhstan

In general, in the reporting period the upward trend in the quantity of payments and cash volumes in the payment systems of Kazakhstan continued, as compared to 2012 (Figure 3.3.1.1).

During 2013, 35.2 million transactions totaling KZT 177.6 trln. were processed in the payment systems of Kazakhstan. Over 143 200 transactions totaling KZT 721.9 bln. are processed in these systems every day.

Figure 3.3.1.1
Payment flows in the payment systems of Kazakhstan



Source: NBRK

97.3% of the total volume of non-cash payments in the country and 39.4% of the total number (13.9 mln. transactions totaling KZT 172.8 trln.) were transferred through the Interbank System of Money Transfers (ISMT), a systemically important system of the country oriented at large and top-priority payments in the financial sector operations. In the Interbank Clearing System (ICS), where retail payments for small amounts below KZT 5 mln. are processed, 60.6% of the total number of all non-cash payments in the country and 2.7% of their total volume (21.4 mln. documents totaling KZT 4.8 trln.) were processed.

As compared to the respective period of 2012, the number of payments in the payment systems increased by 9.7% (by 2,277,200 transactions), and the payment amounts increased by 3.4% (by KZT 4.2 trln.). The growth in the payment volumes was mainly caused by the 8.7% increase in the amounts of payments under operations with securities and bills issued by residents of

the Republic of Kazakhstan, as well as by the 9.3% increase in the payments for goods and services (Table 3.3.1.1).

Table 3.3.1.1

Payment volumes broken down by types of payment purposes

Item	2012		2013		Change	
	KZT bln.	% of the total volume	KZT bln.	% of the total volume	KZT bln.	%
FX transactions and transactions with precious metals	26 209.6	15.4%	25 773.4	14.5%	-436.2	-1.7%
Deposits	25 304.8	14.8%	23 371.6	13.2%	-1 933.2	-7.6%
Loans	2 035.4	1.2%	2 395.2	1.3%	359.7	17.7%
Securities, bills and certificates of deposit issued by non-residents of the Republic of Kazakhstan	199.9	0.1%	188.2	0.1%	-11.6	-5.8%
Securities and bills issued by residents of the Republic of Kazakhstan	73 070.0	42.8%	79 395.2	44.7%	6 325.2	8.7%
Goods and intangible assets	12 817.6	7.5%	13 612.6	7.7%	795.0	6.2%
Services	9 875.1	5.8%	11 254.9	6.3%	1 379.8	14.0%
Other payments*	21 194.6	12.4%	21 599.7	12.2%	405.1	1.9%
Total	170 706.9	100.0%	177 590.8	100.0%	6 883.9	4.0%

Note: * incl. retirement benefits and other benefits, specific transfers, payments to the budget and payouts from the budget
Source: NBRK

During 2013, KZT 275.6 bln. was transmitted through such money transfer systems as Western Union, Contact and others (abroad and within Kazakhstan), and KZT 90.5 bln. was received from abroad.

Kazakh banks and their customers made transfers of KZT 1.8 trln. within the country via correspondent accounts in Tenge opened between banks of Kazakhstan, and transfers abroad of KZT 89.0 trln. via correspondent accounts opened between banks.

Also, one of the important issues is to further develop innovation payment services enabling payments and money transfers with maximum convenience and speed. In particular, as of January 1, 2014 there were: 8 965 ATMs, 46 432 POS-terminals, 168 imprinters, and 3 982 bank kiosks in Kazakhstan. At January 1, 2014, the overall number of payment cards issued and circulated by the Kazakh banks and the “KazPost” JSC was 16.5 million, and the number of the payment card holders – 14.4 million individuals. The market of electronic money issued by the Kazakh companies is also developing; as of January 1, 2014, the issue of electronic money totaled KZT 2.5 bln. The number of the electronic money owners reached 4 426. 4 electronic money systems are functioning in the country - EKZT, Wooppay, KZM, and Visa QIWI Wallet. With the help of payment cards issued by Kazakh companies, non-cash payments for goods and services were made totaling KZT 921.8 bln. The volume of cash withdrawals with the use of payment cards issued by Kazakh companies amounted to KZT 5 615.5 bln.

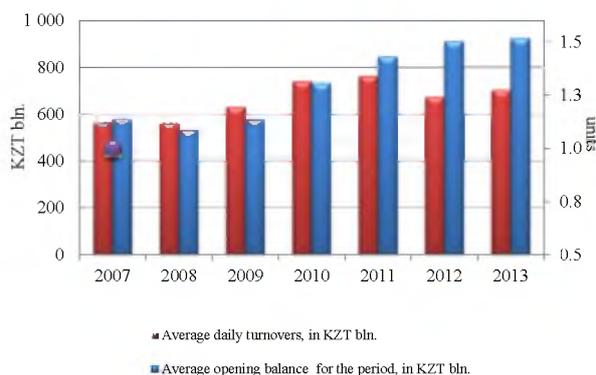
3.3.2 Regulation of Systemic Risk in the Domestic Payment Systems

With the view to manage systemic risk⁵⁹, which may have significant impact on the overall financial stability of the country, the NBRK and the payment system users monitor and control user positions in the systems on an on-going basis.

To manage such risks, the ISMT uses the mechanism of the queue management technique (identifies priority in the execution of payment documents and changes their order). Additional transfers of funds from the user correspondent account to its position in the system are made.

⁵⁹ 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.

Figure 3.3.2.1
Liquidity ratios in the ISMT



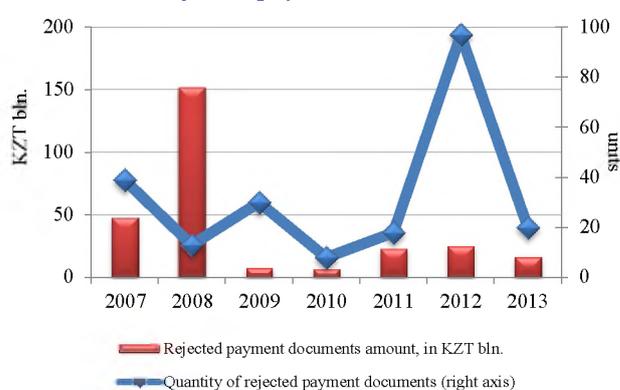
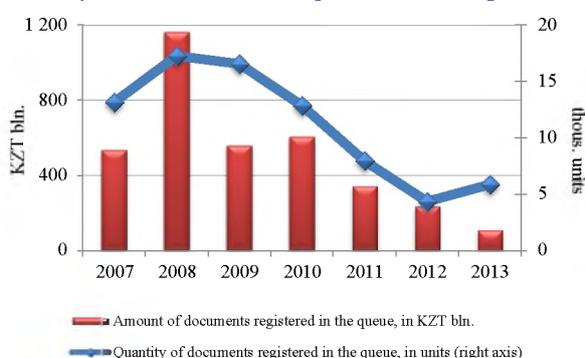
Source: NBRK

In 2013, the increased user liquidity was observed. During 2013, an average daily liquidity volume of the payment system users (opening balance in the ISMT⁶⁰, through which payments are made by the users) amounted to KZT 924.7 bln., having increased by KZT 12.7 (1.4%) versus the corresponding period of 2012 (Figure 3.3.2.1).

Generally, an average daily liquidity volume of the users in the ISMT is by 31.7% higher than the average daily amount of payments (KZT 702.3 bln.) This is an indicator of an adequate liquidity provision of the system users that enables them to make payments.

Figure 3.3.2.2

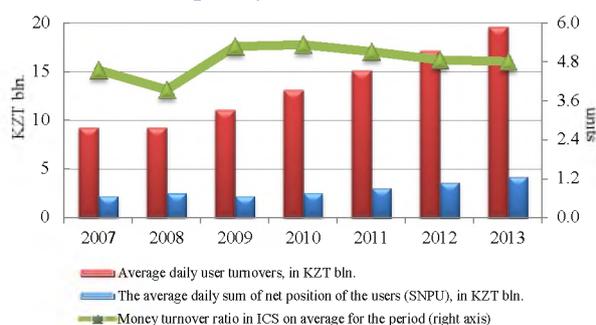
Queue of payment documents and payments rejected by the ISMT



Source: NBRK

Source: NBRK

Figure 3.3.2.3
Liquidity ratios in the ICS



Source: NBRK

In addition, an analysis is performed in respect of the payment documents, which have been in the queue during the ISMT operating day, were rejected (recalled by users) due to insufficient liquidity (Figure 3.3.2.2). During 2013, 5 863 payment documents amounting to KZT 111.2 bln. were recorded in the queue, of which 20 payment documents in the amount of KZT 16.5 bln. were rejected (recalled) due to insufficient liquidity, accounting for 0.0001% of the total number and 0.01% of the total amount

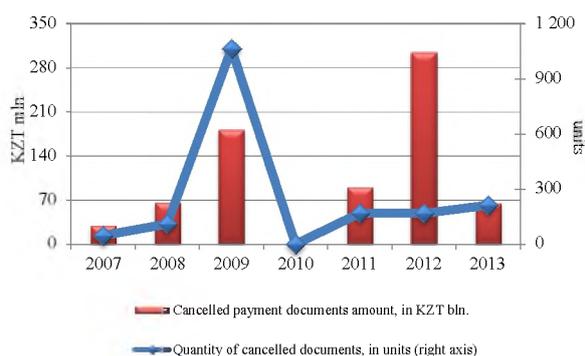
of payment documents processed in the ISMT.

All rejected or recalled payment documents were passed by the users through the system again on the same operating day or interbank transactions related to such payments were cancelled.

To manage systemic risk, the ICS uses the calculation of the MTR (money turnover ratio in the ICS) as well as the analysis of the sum of net position of the users. During 2013, the average daily money turnover ratio in the ICS was equal to 4.8; this indicates a high turnover of the system (Figure 3.3.2.3). The average daily sum of net position of the users as a result of clearing equaled to

⁶⁰ User's opening balance is a cash amount that a user transfers from its correspondent account to the position in the system.

Figure 3.3.2.4
Cancelled payment documents in the ICS



Source: NBRK

KZT 4.2 bln. (0.6% of the amount of average daily turnover of the users in the ISMT). This helps reduce liquidity risk when calculating net positions through the ISMT.

During 2013, 213 payment documents totaling KZT 65.7 mln. were rejected (recalled) in the ICS due to insufficient liquidity, accounting for 0.001% of the total number and 0.001% of the total amount of payment documents processed in the ICS. (Figure 3.3.2.4).

3.3.3 Regulation of Operational and Technical Risk in the Domestic Payment Systems

To manage operational risk⁶¹, the domestic payment systems' operator and users carry out activities aimed at improving the personnel's qualification and use the mechanism for separation of the personnel operations (access) according to their functions. To manage technical risk⁶², such methods as the use of the backup center, user inspection and continuous monitoring of the hardware and software complex of the payment systems are applied.

To permanently maintain the backup center of the payment systems fully operational, on March 15, 2013, the KISC transferred the payment systems to the software and hardware complex of the backup center. Another transfer of payment systems to the software and hardware complex of the backup center was conducted from November 21, 2013 through December 6, 2013. Also, as part of the payment systems supervision (oversight), during 2013 the NBRK conducted examinations of 14 banks regarding the safety of workplaces of the payment systems users (approval of payments and software reliability) in compliance with the requirements of Instruction No. 269⁶³.

Maintenance of high coefficient of uninterrupted operation (operability) of the payment systems (UOC)⁶⁴ that ensures timely payments within the Republic of Kazakhstan is one of the indicators of efficient development of the interbank payment systems operated by the KISC. To ensure that the operability coefficient of the payment systems corresponds to the statutory numerical value of at least 90%, the KISC performs an ongoing monitoring of the payment systems operation and manages operational and technical risks. In case of any failures in the operation of payment systems timely actions were taken to restore their operability. In general, during 9 months of 2013, the average monthly operability coefficient of ISMT was 99.91% and that of ICS – 99.97%, which corresponds to the established goal and characterizes the efficiency of the payment systems operation.

⁶¹ Operational risk is the risk of errors that can be made by the user's personnel while performing their duties.

⁶² Technical risk is the risk of defects and errors in the hardware and software and telecommunication

⁶³ The requirements to arrangements and software and hardware facilities providing access for banks and organizations engaged in certain types of banking operations to the payment systems as approved by the resolution of the NBRK's Management Board of August 24, 2012 No. 269.

⁶⁴ UOC - 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).

3.4 Financial System Regulation and Risk Management

3.4.1 Improving Regulation of Financial Organizations

In 2013, the NBRK made effort to elaborate and adopt a number of amendments to the legal framework aimed to further improve regulation of financial organizations, strengthen the financial system and increase its competitiveness in the environment of developing integration processes (functioning of the Customs Union and Common Economic Space).

Banking Sector. In 2013, a number of amendments to the regulations governing the banking sector's operation were made with an aim to:

- introduce a new approach to the banks' provisioning that implies creation of dynamic provisions (reserves) by banks;
- ensure flexibility in the transition to the Basel III Capital Standards (with regard to improving the composition of bank capital and its adequacy);
- bring the weighting ratios on residential mortgage loans and consumer loans in conformity with the standards of the Basel Committee on Banking Supervision;
- establish the procedure to determine factors that cause deterioration in a bank's financial condition taking account of provisions (reserves) created in line with IFRS;
- ensure flexible transition to calculation of prudential ratios in line with IFRS;
- determine the procedure and the basis for remission of "bad" (loss) loans by banks;
- extend the list of securities (shares) eligible for acquisition by subsidiaries of a bank or a bank holding company;
- extend the list of financial instruments that may be used by banks in their transactions, including when they engage in broker and/or dealer business;
- provide an opportunity for banks to purchase securities while they are initially offered in an unorganized market;
- specify the list of financial instruments that may be purchased by banks in the secondary unorganized securities market.

Insurance Sector. Amendments to the regulatory framework governing the operation of the insurance sector were primarily aimed at further development of certain aspects in the insurance sector regulation as part of the existing legislature. Specifically, in 2013 the following amendments were made to the insurance sector regulatory framework:

- due to the introduction of a common taxation treatment for insurance organizations, a list of insurance reserves deductible for the purposes of taxation, the procedure for their calculation as well as the procedure for calculation of the amounts of income and expense related to creation of insurance reserves by insurance organizations, are established;
- the Methods for calculation of an insurance premium and insurance indemnity under pension annuity contracts was approved, and the standard form of a pension annuity contract was established.

In 2013, the NBRK made an active effort to elaborate amendments to the compulsory insurance system where improvements of compulsory lines of insurance are intended. Such initiative of the NBRK is focused on excluding inefficient lines of insurance (such as compulsory civil liability insurance of auditors, tour operators and travel agents, private notaries, compulsory insurance in horticulture and insurance from accidents) which are extremely unprofitable and do not perform the functions of the insurance market drivers at present time.

In addition to that, a number of critical strategic areas of the insurance sector were reflected in the activities of the NBRK in 2013:

1) improving the system of compulsory workers' accident insurance (CWAI) – a flexible phase-by-phase model of systemic changes as part of the relevant draft law was proposed. In the

near term, measures will be taken aimed to reduce the incentives for social dependency and to establish an optimal treatment of all employees in relation to compensation for lost wages;

2) developing the system of Islamic insurance – making amendments regulating the terms and conditions of activities and licensing of Islamic insurance (reinsurance) organizations as well as the principles of Islamic insurance;

3) improving compulsory motor insurance for owners of vehicles temporary entering the territory of the Republic of Kazakhstan from the Russian Federation, regarding the adjustment of differences in the rates of compulsory civil liability insurance of car owners (CSLCO);

4) building and maintaining the insurance data base – making amendments providing for generation of a full-value data base of insurance statistics and ensuring confidentiality of the NBRK’s information (performing the functions of the organization in charge of building and maintaining the insurance data base of the “State Credit Bureau”);

5) improving the system of insurance indemnity guarantees – making amendments that govern the NBRK’s acquisition of the majority block of shares of the Insurance Indemnity Guarantee Fund (IIGF) (50% plus one share) from member insurance organizations and that are intended for ensuring additional funding in case of liquidation of systemic insurance organizations and for financial soundness of the insurance indemnity guarantee system;

6) improving taxation of insurance (reinsurance) business – making an effort to bring insurance (reinsurance) business in conformity with the generally accepted global practice (in respect of excluding the incurred but not reported claim reserve (IBNR) from the taxable base) in order to promote competitive positions of the Kazakh insurance sector as part of the effort to establish the common financial market of the Customs Union;

7) improving the regulation of insurance agent activities – making an effort to enhance soundness of insurance organizations in respect of adequacy of their insurance reserves and compliance with the assumed obligations by introducing restrictions for fees of insurance agents under compulsory lines of insurance. In a short run, the NBRK is planning to introduce a prohibition and keep the existing restriction to paying a fee depending on a compulsory line of insurance (under CWAI and CSLCO, respectively).

Pension Sector. On January 23, 2013 the President of the country, during an extended session of the Government, set the mission to establish the Unified Accumulation Pension Fund (UAPF) and to transfer accounts of all private accumulation pension funds to the UAPF.

To accomplish the mission, the NBRK made an appropriate effort to prepare the legislative basis for the pension sector reform in Kazakhstan and in the 1st – 2nd quarters of 2013 necessary amendments to the regulatory framework had been made. Such amendments imply:

– measures to ensure that starting from the beginning of 2013 pension assets will be invested only in government securities of the Republic of Kazakhstan, refined gold, financial instruments of national companies and banks pending the transfer of all pension assets to the UAPF;

– suspending the transfer of pension accumulations of contributors (beneficiaries) from APFs to insurance organizations till January 1, 2014;

– determining the measures to ensure that a large participant of an investment portfolio manager maintains capital adequacy ratio of the investment portfolio manager;

– the accounting procedure for pension accumulations from compulsory pension contributions, compulsory professional pension contributions and voluntary pension contributions with the personal pension accounts of contributors (beneficiaries);

– determining the list of key documents that should be stored and their storage time with the Unified Accumulation Pension Fund and voluntary accumulation pension funds;

– approving the format for a temporary investment declaration of the Unified Accumulation Pension Fund, which provides for determining the investment objects and investment limits for pension assets by types of financial instruments;

– setting the procedure for the unified accumulation pension fund or a voluntary accumulation pension fund to enter into a pension contract based on the voluntary pension contributions with a contributor (beneficiary) of retirement benefit payments; determining the list of

documents, the procedure for their submission, review and decision-making about entering into a contract with the pension fund; approving Standard Forms of a pension contract based on the voluntary pension contributions;

- setting prudential ratios for voluntary accumulation pension funds, methods of their calculation, forms and timeframes of reports to be submitted by voluntary accumulation pension funds;

- establishing the terms and conditions and the procedure for activities to be carried out by the unified accumulation pension fund, voluntary accumulation pension fund; the list of financial instruments eligible to be used in transactions at the expense of pension assets of a voluntary accumulation pension fund; establishing the procedure to calculate an average value of imputed unit of pension assets of the unified accumulation pension fund or a voluntary accumulation pension fund;

- setting requirements to the risk management and internal control system of the unified accumulation pension fund and voluntary accumulation pension funds;

- approving the procedure and terms and conditions for selection of an investment portfolio manager to manage pension assets of the unified accumulation pension fund.

Other Aspects of the Financial Market Regulation. During 2013, some legislative acts aimed to further improve the financial market regulation and to make the operation of financial organizations more efficient, had been reviewed and passed. The list of amendments made during the 1st – 3rd quarters of 2013 implies:

- increasing the share of the NBRK to exceed fifty percent of the total number of voting shares of the Kazakhstan Stock Exchange;

- enabling a manager of an investment fund to enter into transactions in the unorganized market independently; mechanisms were established to track and control the acquisition of financial instruments with the funds provided by qualified investors;

- introducing simplified requirements to a micro-financial organization as a member of the system of credit history formation;

- specifying the procedure for document submissions in the course of record registration of micro-financial organizations.

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

In 2013, five sessions of the FSC for Financial Stability and Development of the Financial Market of the Republic of Kazakhstan were conducted where current and perspective issues pertinent to the development of the banking and insurance sectors as well as the securities market were discussed.

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

- creation of the dynamic reserve by banks;

- transition to the Basel III capital standards in the Republic of Kazakhstan;

- regulation of risks associated with high rates of growth in the consumer lending;

- control over the size of foreign currency positions of banks in financial derivatives.

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

- the need to align the rate of compulsory civil liability insurance of car owners in case of their temporary entry into the territory of the Republic of Kazakhstan and the price of insurance policy of compulsory civil liability insurance of car owners in the Russian Federation;

- compulsory workers' accident insurance and improvements in the payment of agency fees on compulsory lines of insurance;

- challenges in taxation of insurance organizations.

As for the securities market, the Council members and financial market participants continued discussing the measures for reforms in the organized securities market in the Republic of Kazakhstan, whereby the following key measures were formulated:

- developing the mechanism for a new methodology of securities valuation that will discourage manipulations in the securities market;
- determining the list of operations that may be conducted by investment banks versus brokerage companies and deposit banks;
- introducing the mechanism for strengthening the supervision of large-value transactions and actions of insiders in the securities market.

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 Macprudential Aspects of Regulation

1. Introducing the Basel III Capital Adequacy Standards in Kazakhstan

In order to further increase bank resistance to potential shocks and threats, expand their ability to absorb losses with a view to ensure normal and uninterrupted operation of the banking sector, the National Bank adheres to the policy of introducing the Basel III Capital Standards in Kazakhstan. The Basel III Standards provide for strengthening the requirements to the capital quality and structure by excluding from the capital those instruments that do not comply with the established requirements; increasing minimum capital ratios as well as minimizing pro-cyclical nature of regulation.

At the same time, the decision to start a phase-by-phase implementation of the Basel III Standards in Kazakhstan from the year 2014 was postponed for one year because of the need to provide an additional transition period to banks in order to prepare themselves for adaptation to new capital adequacy requirements including improvement of internal information systems.

Thus, new requirements will be implemented during 2015 – 2019 concurrently with other countries and in compliance with the principles recommended by the Basel Committee on Banking Supervision.

In the first half of 2014, the NBRK will adopt a relevant regulatory framework providing for a phase-by-phase transition to new prudential capital adequacy ratios (Table 3.4.3.1).

Table 3.4.3.1

Implementation Schedule of New Basel III Capital Requirements in Kazakhstan

Implementation Time-Frames	2014	2015	2016	2017	2018
Minimum requirements					
Minimum Common Equity (CET1)	5%	5.5%	6%	6.5%	7%
Conservation Buffer – for all banks	1%	2.0%	3%	3%	3%
– for systemically important banks	2.5%	3%	3%	3%	3%
Minimum Tier 1 capital	6%	6.5%	7.0%	8.0%	9%
Minimum total equity	7.5%	8.0%	9%	10%	12%
Minimum Common Equity + Conservation Buffer – for all banks	6%	7.5%	9%	9.5%	10%
– for systemically important banks	7.5%	8.5%	9%	9.5%	10%
Counter-cyclical Buffer (*-is introduced depending on the cycle)	0%	0-3%* (the need is assessed separately)			
Capital buffer for systemically important banks	0%	1%			
Gradual exclusion of instruments not complying with the Basel III criteria from the capital	To be excluded within 5 years				

Source: NBRK

2. Functioning of the Dynamic Reserve System

In 2013, the NBRK, similar to the experience of the Bank of Spain, with a view to implement the counter-cyclical regulation, introduced the system of dynamic reserves. According to the system, banks provide additional resources to create “safety cushions” in the periods of credit expansion to cover losses occurring in the subsequent periods of contraction, while not allowing to absorb losses through the bank capital.

In Kazakhstan, the dynamic reserve is to build based on four groups of loans for which the following parameters of loan losses α and hidden losses β were provided:

Where:

ΔDP – change in the dynamic provision during the reporting period;

ΔSP – net allocations for provisioning under IFRS during the reporting period;

$\Delta DP = \alpha \cdot \Delta L + (\beta \cdot L - \Delta SP)$ ΔL – total loans provided during the reporting period;

L – total loans at the end of the reporting period;

α (alpha) – a loan loss parameter;

β (beta) – a hidden loss parameter.

In doing so, based on the NBRK’s decision, in 2013 the dynamic reserve was built only partially⁶⁵, for which reason the aggregate effect from the new system at the end of 2013 appeared to be insignificant for the banking sector. So, by the time the system was introduced, the beginning stock⁶⁶ of the dynamic reserve of the banking sector totaled KZT 140.4 bln., having decreased to KZT 126.3 bln. at the beginning of 2014.

The situation about accumulation of the dynamic reserve is not the same from bank to bank. In particular, a faster growth in loan portfolios versus the rates at which provisions are created according to IFRS in 2013 resulted in the generation of additional inflow of the dynamic reserve by a number of banks. This trend was mostly typical for smaller banks as well as for certain large banks, where the overall growth in the dynamic reserve accounted for 63% of the beginning stock at the end of 2013. On the contrary, the initial stock of the dynamic reserve decreased by KZT 52.6 bln. in the group of banks which were actively creating provisions under IFRS. Some large banks have not accumulated such reserve at all since the opening balances were actually equal to zero and the level of quarterly allocations to provisions under IFRS exceeded the need for an additional reserve.

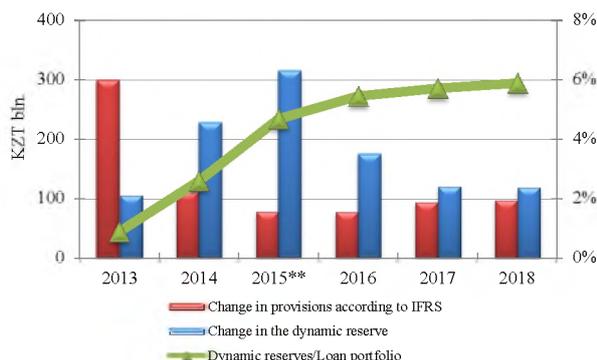
At the same time, starting from 2014, with the introduction of the hidden loss parameter β , which is commensurable with the stock of loans, the phase of active accumulation of the dynamic reserve was commenced in the banking sector. This process, which is inversely related with the rate of loan impairment, must have ended only with the achievement of the maximum reserve limit established at 5.9% of the loan portfolio. In the first instance, the maximum dynamic reserve should have been created by banks which already have a significant stock of the dynamic reserve, with moderate rates of growth in provisions created under IFRS which would require two years, according to estimates. Accumulation of the upper limit of the dynamic reserve by banks that anticipate relatively high expenses related to provisioning under IFRS could take from four to five years. At the same time, the overall dynamic reserve which should have been accumulated by the banking sector within the nearest two years is estimated to be over KZT 500 bln. (excluding BTA Bank) (Figure 3.4.3.1).

Since retained net profits are the source of the dynamic reserve, under this mechanism in the mid-term the banks should restrict its allocation including to dividend payments. In doing so, despite the actual created “layer” of additional resources absorbing potential losses before the capital depletion begins in the unfavorable periods, the “tie-up” of the financials results will put pressure on the banks’ capital during the phase of active growth in the dynamic reserve.

⁶⁵ Inflow/outflow of the dynamic reserve in 2013 is calculated only on the basis of the loan loss parameter α commensurable with the change in the loan portfolio during the reporting period and net allocations to provisioning under IFRS during the reporting period

⁶⁶ When introduced in Kazakhstan, the difference between provisions created according to the earlier existing regulatory requirements and reserves created under IFRS and as recorded on account 3300 “Reserves (Provisions) Adjustment Account” as of December 31, 2012, is recognized as an initial stock of the dynamic reserve

Figure 3.4.3.1
Assessment of creation of the dynamic reserve and provisions under IFRS in the banking sector*



Note: * excluding BTA Bank

** For 2015, the assessment of the change in provisions according to IFRS was made excluding the data on ATF Bank since the bank's data significantly distort the aggregate results of the system.

Source: NBRK's forecasts and expectations of banks as of November 2013

As a result of the dynamic reserve creation in its full volume with the parallel increase in the capital adequacy standards, a number of banks may violate prudential ratios starting from 2016. In doing so, the potential need for additional capitalization in terms of total capital will tentatively reach KZT 396 bln. by 2019. At the same time, when excluding the effect related to creation of the dynamic reserve, the estimate of a potential need for additional capital will reduce to KZT 84 bln. (Table 3.4.3.2).

Table 3.4.3.2
Assessment of the Need in Additional Capital and of Compliance with the Capital Adequacy Requirements under the Basel III Transition Schedule

	01.01.2014*	01.01.2015	01.01.2016	01.01.2017	01.01.2018	01.01.2019
Continuing to Create the Dynamic Reserve						
Dynamic reserve within Total capital (as % of risk assets)	0.6	1.1	1.25	1.25	1.25	1.25
Capital deficiency (KZT bln.)		0	-31.2	-78.7	-189.6	-395.5
Capital deficiency (as % of risk assets)		0	-0.7	-1.3	-2.7	-4.1
Aggregate κ-2 ratio for the group of banks (estimate)	16%	13%	11%	11%	11%	11%
Maximum ratio in the group of banks (estimate)	18.4%	16.5%	15.9%	16.6%	17.4%	17.9%
Minimum κ-2 ratio in the group of banks (estimate)	11.0%	8.0%	5.0%	4.6%	4.2%	3.9%
Discontinuing to Create the Dynamic Reserve						
Dynamic reserve within Total capital (as % of risk assets)	0.6	0.54	0.5	0.46	0.42	0.39
Capital deficiency (KZT bln.)		0	0	0	-6.52	-84.2
Capital deficiency (as % of risk assets)		0	0	0	-0.6	-1.3
Aggregate κ-2 ratio for the group of banks (estimate)	16%	14%	14%	14%	15%	15%
Maximum ratio in the group of banks (estimate)	18.4%	18.1%	19.3%	20.3%	21.1%	21.7%
Minimum κ-2 ratio in the group of banks (estimate)	11.0%	9.8%	9.9%	9.7%	9.4%	9.1%
For reference:						
Minimum required ratio (κ-2)	10.0%	7.5%	8%	9%	10%	12%

Note: * At 01.01.2014 actual values are presented

Source: NBRK's forecasts and expectations of banks as of November 2013, taking account of actual figures for the loan portfolio, for provisions created under IFRS, the dynamic reserve and net income as at January 1, 2014.

⁶⁷ The assessment was made based on the forecast data for the group of 8 banks whose assets account for 73% of total assets of the banking sector (excluding BTA Bank)

Thus, a cumulative burden is not offset by the provided possibility to include the dynamic reserve into the Tier 2 capital in the amount not exceeding 1.25% of risk-weighted assets as well as to optionally reallocate the earlier generated reserve capital to create the dynamic reserve.

Therefore, with a view to optimize the financial pressure and provide a balanced capital structure of banks in the mid-term, including based on the implementation of new Basel III standards starting from 2015, creation of the dynamic reserve in 2014 will be suspended while retaining its volume in the structure of capital as accumulated at the end of 2013.

Such mitigation reflects the regulator's perception of urgency to resolve the problem of asset quality and to ensure that banks continue to provide credits to the economy in a balanced manner in future; and in conjunction with other measures it creates pre-requisites for successful achievement of performance targets.

3. Regulating Risks Pertinent to the Structure of the Banks' Balance Sheet

The increasing imbalances between foreign currency structure of assets and liabilities in the bank balance sheets make up open foreign currency position of banks. The requirement to comply with the prudential ratio on open foreign currency position by banks results in the growth of financial derivatives transactions (FDs).

In order to minimize the systemic risk associated with the foreign currency structure of the bank balance sheets and volumes of financial derivatives transactions the NBRK was expected to introduce the ratio for foreign currency position on financial derivatives (FDs) starting from January 1, 2014. The ratio was implemented by setting a limit of open foreign currency position in off-balance sheet accounts on FDs transactions, which should not exceed 30% of open foreign currency position on balance sheet accounts.

However, specifics of the financial market's infrastructure and unwillingness of banks reduce efficiency of the introduced ratio. Despite the fact that banks were provided a one-year period for preparation they failed to bring their open foreign currency positions on FDs in line with the required ratio. So, according to the NBRK's estimate, such ratio on FDs, by major currencies, varies between 32% and 522% from bank to bank. At the same time, only three out of seventeen banks that entered into financial derivatives contracts comply with the ratio. To this end, the introduction of the ratio will be postponed for 6 months; this will help identify the most appropriate mechanism to control the volumes of bank foreign currency positions on FDs.

It should be noted that managing the size of foreign currency positions on FDs doesn't contradict to international initiatives on enhancing transparency and risk mitigation on the part of the financial derivatives market, including in the context of meeting the objectives of macro-prudential regulation. So, the Central Bank of South Korea set a ratio on the open foreign currency position on FDs tied up to a bank's equity as a measure to limit risks leading to increased volatility in the foreign exchange market.

4. Measures for Minimization of Risks Associated with High Rates of Growth in Consumer Lending

Apart from Kazakhstan, explosive growth in the segment of retail lending including secured and unsecured lending, has been typical in recent times for a number of developing countries including Russia, Brazil, Turkey, SAR as well as a number of Asian countries. Growing risks due to increased debt burden of the population and loan portfolio concentration, and relaxation in the lending standards as accompanying factors to the trend are held back by the measures of micro- and macro-prudential regulation. A traditional set of the above measures for minimization of risks of unbalanced growth in the loan portfolio/individual sub-portfolios is implemented via two key "channels" – ensuring consistency of bank capital and growth in bank assets with the level of systemic risks.

The mechanism of risk regulation via the bank capital involves increasing capital adequacy requirements by the segments of lending (by sectoral standards), tightening terms and conditions for

provisions created against assets and/or introducing a counter-cyclical buffer; these measures generally discourage an excessive supply of credit resources while increasing their price.

Bank assets are affected both by setting direct concentration limits or limits for the rates of the loan portfolio growth and also by tightening of general or sectoral underwriting standards which cut off the borrowers with a high level of credit risk. Specifically, in the latter case the Loan-to-value ratio (LTV) and the Debt-to-income ratio (DTI) are applied.

The range of measures shown in Table 1 and the specifics of their application in different countries are determined by the factors of exposure to credit risk in each specific case: inadequacy of provisions and capital to cover expected/unexpected losses; overheating in certain segments of lending; the growth in population's debt burden.

Thus, in developed countries residential mortgage lending is a dominant component of the growth of household debt burden; so, a potential volume of losses from such loans is restricted by applying a regulatory ratio of LTV or LTV along with DTI. Similarly, the DTI mechanism is in effect in the countries in which assumptions for excessive accumulation of systemic risk associated with the boom in the consumer lending markets were present. Apart from that, the above measures may be used concurrently supplementing each other and creating a synergic effect.

In Kazakhstan, in order to prevent potential imbalances in the consumer lending segment, it is proposed to set requirements for banks to evaluate the DTI ratio on unsecured loans on a mandatory basis, as one of the measures. The choice for this instrument is determined by the risk accumulation expressly in the category of unsecured retail loans and by the need to control the quality of bank assets in general, to assess creditworthiness of potential borrowers in a proper way as well as to prevent the growth of debt of the most vulnerable groups of borrowers, in the long run. In doing so, the maximum level of borrower's DTI at which a bank may provide an unsecured consumer loan was set at 50%. This value, on the one hand, is commensurable with the relevant global practice, and on the other hand, it has a neutral effect on the existing scoring models of banks for assessment of borrower's creditworthiness provided that lower internal DTI limits are used in such models. An essential precondition for using DTI is accuracy and reliability of assessment of the borrower's income, which serves as an additional signal for conducting a good quality underwriting by banks.

Alongside with DTI, in order to expand the loss absorption capacity of banks that are actively developing in the consumer lending segment, a capital "channel" will be employed by increasing the risk weighting on consumer loans when calculating capital adequacy requirements (from 75% to 100%).

A third measure of a direct nature is to set a limit to ensure that the rate of growth in the portfolio of unsecured consumer loans should not exceed 30% a year.

The above set of measures, when implemented, will allow preventing the accumulation of systemic risks in the consumer lending segment by ensuring good quality and adequate dynamics of its development as well as creating conditions to increase the soundness of the banking sector as a whole.

Table 3.4.3.3

Regulation of Risks of Excessive Growth of Retail Lending⁶⁸ in Selected Countries (from 2000 till present)

A Block of Measures	Mechanism	Country	Description
Capital "Pass-Through"	Increasing credit risk weightings	Brazil	For long-term consumer loans the risk weighting was increased from 100% to 150%
		Russia	Differentiation of risk weightings for retail loans depending on the full value of a loan versus new loans.
		Turkey	For new general purpose loans with maturities less than two years the risk weighting was increased from 100% to 150%, and for maturities over two years – from 100% to 200%
		Malaysia	The risk weighting for non-performing mortgage loans was increased from 50% to 100%
	Tightening the requirements to provisioning for retail loans	Turkey	For new general purpose loans general provisions were increased from 1% to 4%. For loans approaching the NPL category specific provisions were increased from 2% to 8%.
		Russia	Reserving rates were doubled for unsecured consumer loans without overdue payments (to 2%) and loans past due less than 30 days (to 6%). Where loans are past due over two years, the ratio increases by 25 pp – to 100%.
		Bulgaria	For loans with payments overdue from 30 to 60 days, the provisioning ratios are increased from 10% to 20%, for loans past due from 60 to 90 days the provisioning ratios are increased from 50% to 75%
Assets "Pass-Through"	The use of the LTV ratio	Korea	not more than 60%
		Hong Kong	values of 30%-40% depending on whether a borrower generated income in/outside the country
		Turkey	not more than 75%
		Indonesia	not more than 70%
		Japan	not more than 90%
		Singapore	values of 40%-60% depending on whether borrowers have additional mortgage loans
		Lithuania	not more than 85%
	The use of the DTI ratio	Lithuania	not more than 40% in respect of consumer loans
		Saudi Arabia	not more than 33% in respect of consumer loans
		UAE	not more than 50% in respect of consumer loans
		Kuwait	not more than 40% on consumer loans
		Poland	values of 50%-65% on consumer loans depending on the borrower's level of income
		Singapore	not more than 60% on mortgage loans
		Israel	not more than 50% on mortgage loans
	Setting direct limits on the loan growth	Turkey	the loan portfolio growth of not more than 25% based on the change in the currency exchange rate*
China		restriction of the loan portfolio growth rates in respect of the largest banks*	
Croatia		in the event the loan portfolio growth rate exceeds the recommended limit, banks must buy low-yield notes of the Central Bank	

Note: * Such restriction was introduced in relation to the total loan portfolio

Source: IMF, reports from regulatory authorities

⁶⁸ Table 3.4.3.3 shows the data on regulation of secured and unsecured retail lending.

IV. Appendices

Financial Soundness Indicators of Kazakhstan ¹

Appendix

(as percentage)

	2009 ²	2010 ²	2011 ²	2012 ³	2013 ³
Banking Sector					
<i>Capital Adequacy Ratios</i>					
Regulatory capital to risk-weighted assets	-8,1 (18,4)	17,6 (17,5)	17,3 (17,5)	18,0(17,5)	18,5(17,8)
Tier-1 capital to risk-weighted assets	-9,3 (14,1)	13,8 (13,2)	13,2 (13,0)	13,5(12,7)	13,3(12,5)
Capital to total assets	-8,5 (11,5)	10,9 (18,8)	10,2 (13,8)	14,4(14,5)	13,4(13,2)
Past due loans over 90 days net of specific provisions to capital	-52,2 (39,3)	60,2 (27,1)	78,2 (37,9)	40,5(44,6)	33,1(39,4)
Capital to total liabilities	-7,8 (13,0)	12,3 (16,4)	11,3 (16,0)	16,9(17,0)	15,5(15,2)
<i>Asset Quality</i>					
Past due loans over 90 days to total loans	21,2 (14,4)	23,8 (16,4)	30,8 (20,7)	29,8(19,4)	31,2(19,5)
Provisions to total loans	31,5 (20,7)	30,9 (21,8)	32,1 (24,6)	31,9(20,0)	34,8(22,4)
Provisions on past due loans over 90 days to past due loans over 90 days	74,9 (55,9)	63,2 (56,3)	68,4 (66,2)	76,6(57,0)	83,4(66,0)
Foreign currency loans to total loans	57,2 (54,2)	50,2 (46,8)	44,2 (38,5)	37,6(31,2)	38,4(31,5)
<i>Profitability Ratios</i>					
Return on Assets (ROA) ⁴	-24,1 (0,2)	12,0 (5,9)	-0,1 (1,3)	1,88(1,93)	1,71(1,72)
Return on Equity (ROE) ⁴	-1192,5 (1,9)	843,9 (51,2)	-1,0 (10,3)	15,2(13,6)	13,1(13,4)
Interest margin to total income*	92,9 (10,0)	16,4 (72,8)	71,1 (69,7)	27,0(63,8)	59,6(59,1)
Non-interest expenses to total income*	145,4 (99,6)	21,1 (47,1)	67,6 (50,9)	67,8(45,2)	38,1(37,2)
Personnel expense to non-interest expense*	1,0 (1,4)	26,3 (34,1)	31,3 (35,2)	11,7(37,3)	36,9(38,2)
Spread between reference rates on deposits and loans* ⁵	509,2 (745,9)	393,6 (635,4)	453,8 (581,5)	430,5(548,3)	483,9(593,3)
<i>Liquidity Ratios</i>					
Highly-liquid assets to total assets	19,2 (20,3)	21,2 (22,8)	21,0 (22,0)	17,5(18,6)	17,3(17,9)
Highly-liquid assets to short-term liabilities ⁶	53,1 (64,9)	63,3 (64,8)	57,3 (59,4)	46,9(50,3)	48,2(51,1)
Customer deposits to total loans (excl. interbank loans)	67,2 (82,1)	76,7 (88,8)	76,0 (85,8)	74,1(84,1)	74,4(85,6)
<i>Market Risk Sensitivity</i>					
Net FX exposure to capital	177,3 (1,3)	-3,2 (-3,7)	-1,3 (-0,1)	-4,0(-4,5)	-1,6(-4,6)
Other Financial Corporations⁷					
Assets to total assets of the financial system	19,9	23,4	25,5	27,0	26,8
Assets to GDP	16,9	16,8	15,9	16,9	16,9

	2009	2010	2011	2012	2013
Corporate Sector					
(large and medium-size enterprises)					
Return on Assets (ROA)	11,3	14,7	17,1	14,2	11,9 ⁹
Return on Equity (ROE)	29,8	39,6	44,7	35,7	30,1 ⁹
Total liabilities to capital (leverage)	1,7	1,6	1,6	1,5	1,6 ⁹
Net FX exposure to capital	-55,1	-61,1	-56,4	-44,5	-60,0 ⁹
Current liquidity ratio	1,3	1,4	1,4	1,3	1,3 ⁹
Households Sector					
Debt of households to GDP ⁸	11,6	8,7	7,7	8,9	10,4
Debt of households to disposable income ⁸	27,1	20,0	17,2	19,4	23,8

Source: NBRK, ASRK

* - data differ from the data of the Financial Stability Report for 2009 due to changes in methodology for generating data.

¹ – financial soundness indicators were calculated under the methodology (FSI Compilation Guide. IMF. 2007) and explanations provided by the IMF. Therefore, values of indicators may be different from those calculated by the supervisor.

² – numbers provided in brackets represent the banking system of Kazakhstan excluding BTA Bank, Alliance Bank and Temibank.

³ – numbers provided in brackets represent the banking system of Kazakhstan excluding BTA Bank.

⁴ – net income before tax to average assets (capital). Intra-annual numbers for income before tax were annualized by multiplying a current number for the indicator by a numeric value inverse to the respective period of the year. Average assets value was calculated as the average of positions at the beginning and end of the period. Average capital was calculated as the average of positions at the beginning and end of the period.

⁵ – reference rate on loans is calculated as the ratio of the sum of interest income on loans (interest income on bank loans to customers) to the average position on loans. The reference rate on deposits represents the ratio of interest expense on deposits (interest expense on attracted deposits) to the average position on deposits. The average position on loans and deposits represents the average of positions at the beginning and end of the period on loans and deposits, respectively. The numbers are given as percentage points.

⁶ – short-term liabilities are calculated based on the net position on transactions with financial derivatives.

⁷ – when calculating the indicators, only data on the sector of non-banking financial institutions were used.

⁸ – methodology of calculating household debt was changed, which includes only the residents of the country debt

⁹ – according to operational data