



NATIONAL BANK OF THE
REPUBLIC OF KAZAKHSTAN

FINANCIAL STABILITY REPORT OF KAZAKHSTAN

December 2012

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 Control and Supervision of the Financial Market and Financial Organizations:

"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.

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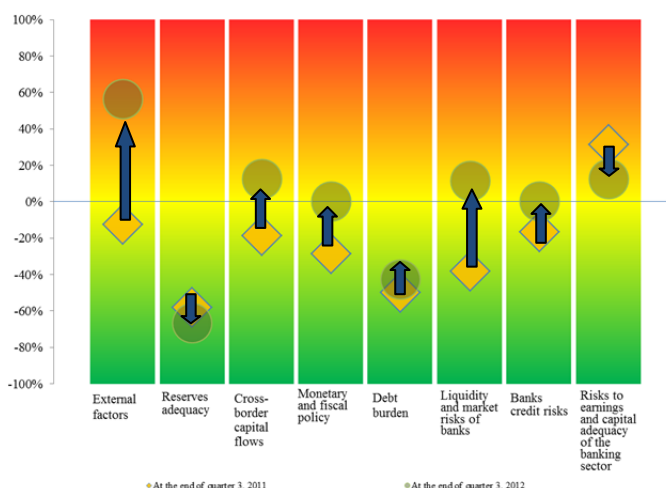
List of Abbreviations:

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
CIAA	compulsory insurance against accidents
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
GSs	government securities
IFRS	the International Financial Reporting Standards
IMF	the International Monetary Fund
JSC	Joint-stock company
KASE	the JSC "Kazakhstan Stock Exchange"
KDIF	the JSC "Kazakhstan Deposit Insurance Fund"
KISC	Kazakhstan Interbank Settlements Center
KZT	Kazakh Tenge
LLP	limited liability partnership
LTD	loan-to-deposit ratio
LTV	loan-to-value ratio
M3	money supply
MEDT	the Ministry of Economic Development and Trade of the Republic of Kazakhstan
MFRK	the Ministry of Finance of the Republic of Kazakhstan
MLSP	Ministry of Labor and Social Protection of the Population of the Republic of Kazakhstan
NBRK	the National Bank of the Republic of Kazakhstan
NFRK	the National Fund of the Republic of Kazakhstan
NGSs	non-government issue-grade securities
Non-performing Loans (NPL)	loans classified as doubtful loans of category 5 and loss loans
PAMC	pension asset management companies
PLF	"Problem Loans Fund" JSC
RF	the Russian Federation
ROA	Return on 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
USA	the United States of America
USD	dollar
VAT	valued-added tax
un.	unit
thous.	thousand
mln.	million
bln.	billion

I. Executive Summary

A comprehensive assessment of factors determining financial stability and trends in the development of the financial intermediation system in 2012 showed that a number of aspects outlined in the previous Financial Stability Report become increasingly important for sustainable economic development in the current perspective, against a slowdown in external demand as well as volatility in the markets (Risk Map).

Risk Map¹



In particular, the increase in internal consumption of households continues to make a major contribution to the country's economic growth. The role of fixed capital investments is not so significant, thus limiting the potential for the increase in real GDP. In such circumstances, the depletion of the previously made stock of undervaluation of the domestic currency versus currencies of countries - key trading partners and, thus, the neutral nature of the current exchange rate policy of the NBRK gives a priority to encouraging the investment activity with a view to ensure fundamental principles of competitiveness of the real sector of the economy.

Risks of slowdown in the economic growth realized in 2012 against a generally favorable pricing environment in the global commodity markets resulted in the need for maintaining the government spending by means of increasing the transfer from the NFRK. This allowed offsetting insufficient tax revenues. However, the reliance of the budget on the NFRK is likely to be of a long-term nature, and more time and efforts will be required in future to reduce a non-oil budget deficit and implement a countercyclicity principle pertinent to the fiscal system.

The demand for credit resources from enterprises and population remains high. At the same time, the supply of credit resources by banks is limited and is distributed within the system unevenly. The policy of increasing the share in the banking services market and, thus, high lending rates by medium-size banks including banks with foreign participation, is offset by low risk appetite of top banks. Banks with foreign participation and other medium-size banks unencumbered with the portfolio of non-performing loans are able to implement a more flexible pricing policy for their loan products and are also more active in crediting the industry. Large banks, on the other side, try to limit additional losses and, therefore, are focused on preserving their loan portfolio accumulated during the boom, particularly loans made to the construction sector and to the sector of services, i.e. they are cautious in assuming additional risks. As a result, the decrease in the market share of largest banks by 13% over 5 years was accompanied not so much by the growth in the share owned by bank subsidiaries but by a significant increase in the market share of other medium-size banks.

Therefore, banks need to be more active about cleaning up their balance sheets from problem loans to increase their competitive position in the financial market. At the same time, the potential declared by banks of using the cleaning up instruments in the form of transfer to the SAMC, to the

¹The 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 Q3 2012. Please see the Financial Stability Report of Kazakhstan dated December 2007, for more details about the methodology.

PLF established by the NBRK, and in the form of forgiving bad debts, is not in line with the provisions made by the laws.

In the environment of increased activity of consumers, growth in the households' income and slowdown in the industrial production, banks have been increasingly favoring short-term consumer lending. The current level of credit risks associated with this type of lending is minor, however, it requires control if there are persisting growth rates in the debt burden of households that outstrip the growth in their income.

Banks continue to keep a high liquidity level, both because of a significant portion of short-term liabilities in their funding structure and due to a limited market of interbank lending and collaterals to attract additional liquidity.

Banks do not see much difficulty in complying with the existing regulatory requirements for FX position. The calculation of a total FX position for balance sheet accounts and off-balance sheet accounts allows "over-covering" existing foreign exchange risks on the balance sheet accounts with contingent claims or contingent liabilities. In order to improve the control over foreign exchange risk, the need for improved regulatory requirements through establishing certain limits for total volume of transactions in financial derivatives, increases.

Measures taken by the NBRK to restrict the chances for using the guarantees from parent companies to reduce credit risks in a number of banks with foreign participation helped leveling conditions in the market of bank services and appear to be sufficient.

Banks will not be able to use opportunities for growth without a more active use of the debt market of medium-term funding with a view to level the structure of lending and give necessary impulse to the lending activity. Government financial support programs, however, should not distort pricing parameters of the funding market or should not be regarded as an instrument of restoring those competitive positions that were lost during the crisis and discourage banks from borrowing including from foreign capital markets under the market principles.

The assessment of a potential effect from implementation of a pessimistic macroeconomic scenario on the current capital adequacy level of banks shows that despite a relatively high amount of expected losses, the system's ability to absorb negative shocks for a credit portfolio improved. The need of the banking system in additional capitalization based on the results of stress-testing appeared to be lower than in a similar assessment made in the previous Financial Stability Report.

In future, evening-out of bank expenses on provisioning during various periods of the financial cycle will be provided by the introduction of the dynamic provision system. In addition, ability of banks to smoothly absorb negative effects of realization of the system-specific risks requires improving the capital quality and establishing capital adequacy requirements higher than the levels recommended under the Basel III. With the allowance for future capital adequacy values, relevant profitability ratios sufficient to bring the capital in according to new standards should also stimulate banks to increase their lending activity. In addition, increased efficiency in the operating activity is required with a stronger focus on the internal risk management systems.

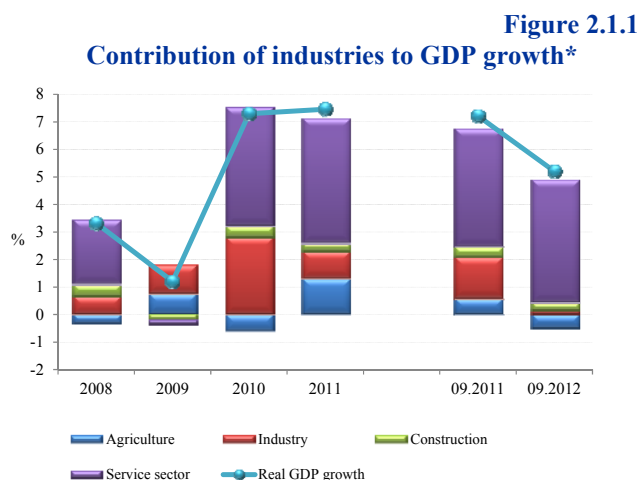
Generally, in order to improve the quality, dynamic of development and the role of the banking sector in financing of the economy, measures aimed at stimulating the improvement of a good quality balance sheet structure by banks and growth in their risk appetite, are required.

The objective of increasing the contribution of the banking sector to funding of the economy is also directly dependent on the improvement of competitive operating conditions in other

segments of the financial market. Investment opportunities and risks should be diversified as much as possible, significant institutional concentration must be avoided, unjustified competitive advantages in certain segments should not be provided, and accountability to financial services consumers should be enhanced.

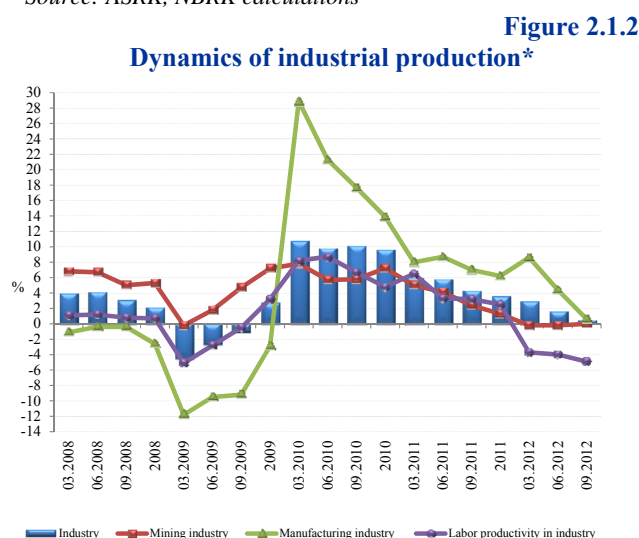
II. Macroeconomic and Financial Environment

2.1 Macroeconomic Environment and its Sustainability Factors

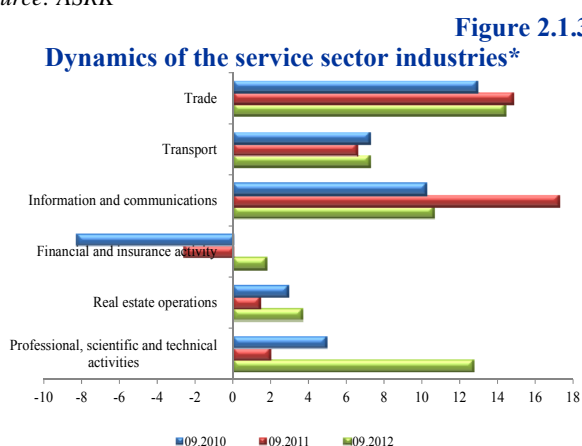


The potential for business activity development of Kazakhstan is limited due to poor diversification and strong dependence on the external pricing environment and demand, and uncertainty related to the world economic outlook, the economies of the European Union and China, in particular.

In 2012 the slowdown in the economic growth was observed; specifically, the real GDP growth for 9 months of 2012 decreased from 7.2% to 5.2% versus the respective period of the prior year. In fact, the service sector appears to be the only source supporting the economic growth (it accounted for 4.5% of contribution to the GDP growth). The industry input has dropped (up to 0.2%) and the construction sector still has minimum contribution to the economic growth. The contribution by the agricultural sector appeared to be negative (-0.5%) due to a double reduction in crop yields as compared to the prior year as a result of draught in the main grain-producing regions of Kazakhstan (Figure 2.1.1).

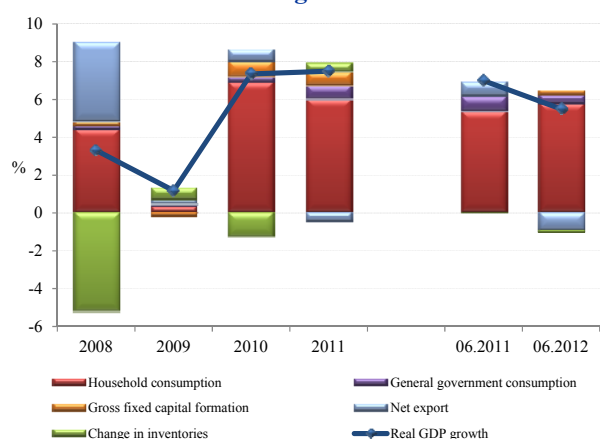


The slowdown in the industrial output has been caused mostly by a significant reduction in the growth rates of the manufacturing industry from 7% to 0.6% during 9 months of 2012 versus the respective period of the prior year as a result of decrease in the metallurgical industry output by 1.2%, which was due to the reduction in prices for metals and external demand (Figure 2.1.2). In this regard, a small increase in the manufacturing industry in 2012 was ensured by production of foodstuffs and beverages, products of the light industry and chemical industry, machine building and petroleum products.



Notwithstanding a rather favorable level of oil prices in the global markets, the slowdown in the growth rate was observed in the mining industry as a result of the decreased production of crude oil and natural gas, and iron ore caused by deterioration in external demand and capital works held on the field of the Kazakhstan's largest oil producing company – Tengizchevroil LLP.

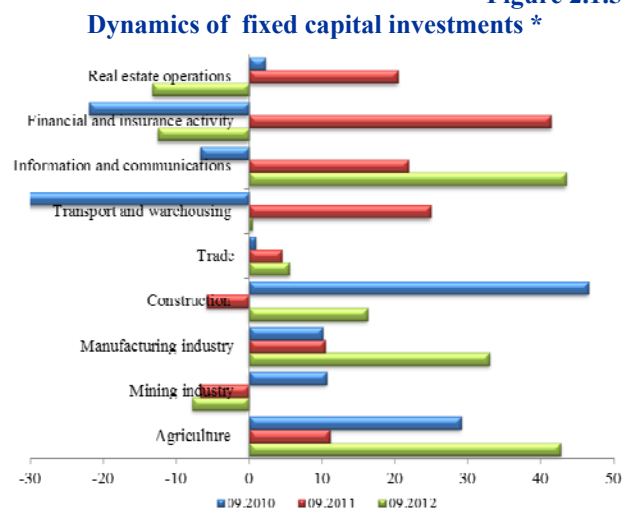
Figure 2.1.4
Contribution of the aggregate demand components to GDP growth*



Note: *real change, in % on the YoY basis

Source: ASRK, NBRK calculations

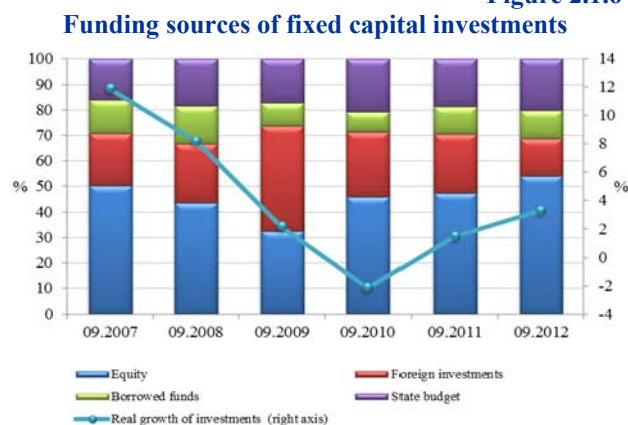
Figure 2.1.5



Note: *real change, in % on the YoY basis

Source: ASRK

Figure 2.1.6



Source: ASRK

In addition, physically and morally obsolete production facilities accumulated at many of the mining enterprises adversely impact the labor productivity, thus limiting the industrial production growth potential in the long-run.

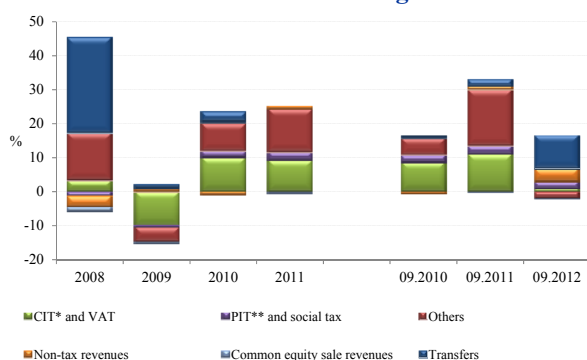
The slowdown in the industry was compensated by the growth in the service sector, where in 2012 key drivers traditionally included trade, transport, information and communication (Figure 2.1.3). High business activity in the service sector was supported by the increase in households spending on consumption (contribution to GDP accounted for 5.8% during 6 months of 2012) that were promoted by the growth in consumer lending and wages (Figure 2.1.4)

The negative contribution of net exports (-0.9%) was due to higher growth rates in imports compared to those of exports. Contribution by the general government to GDP dropped to 0.4%.

The role of investments in the economic growth still remains at a minimum level – the real growth of capital investments was 3.3% during 9 months of 2012 as compared to the respective period of 2011. In this regard, the investment attractiveness differs among different sectors. In particular, the average real growth of investments in agriculture, manufacturing industry, construction, information and communication increased from 12% to 34%. At the same time, the real amount of investments decreases, in average, by 11.2% in the mining industry, finance and insurance, and real estate operations (Figure 2.1.5).

The equity capital of the enterprises still remains the key source for the financing of capital investments due to limited access to borrowed funds (Figure 2.1.6). Almost a double decrease in foreign investments has been caused by the Government purchase of 10% interest in the Karachaganak project in compliance with the policy of the Government of the Republic of Kazakhstan aimed at increasing the state presence in the strategic oil and gas sector.

Figure 2.1.7
Contribution of tax and other state budget revenues to overall revenues growth

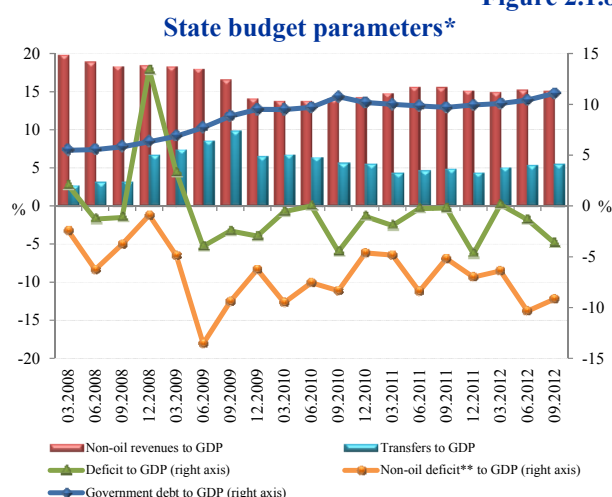


Note: * CIT - corporate income tax

**PIT - personal income tax

Source: MFRK, NBRK calculations

Figure 2.1.8

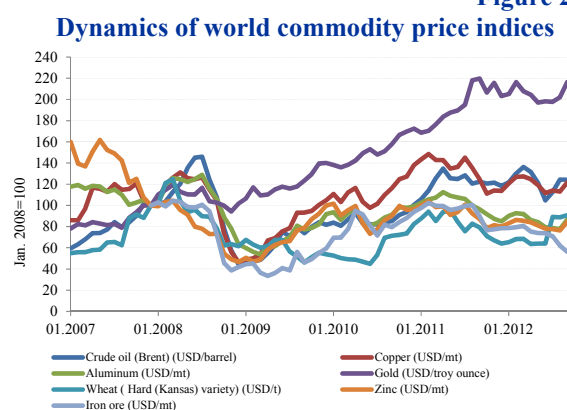


Notes: * in annual terms

**less transfers from NFRK

Source: MFRK, NBRK calculations

Figure 2.1.9



Source: Thomson Reuters (Datastream), NBRK calculations

Despite the growing involvement of the state in the economy, as a result of slower economic growth and lower revenues growth rates, the state budget is still more oriented at fulfillment of social obligations with the increasing dependence on transfers from the NFRK.

The growth of budget revenues decreased from 33% during 9 months of 2011 to 15% during 9 months 2012. The corporate income tax and valued-added tax accounted for the major portion of the decrease (their input to revenue growth dropped from 11% to 1%), which is due to the decrease in advance payments and tax exemption provided to the “Company on Managing Shares in the Final Production Sharing Agreement” established as a result of sales by non-residents of their shares in the Karachaganak project, and VAT² refund to participants of the Kashagan project³ (Figure 2.1.7).

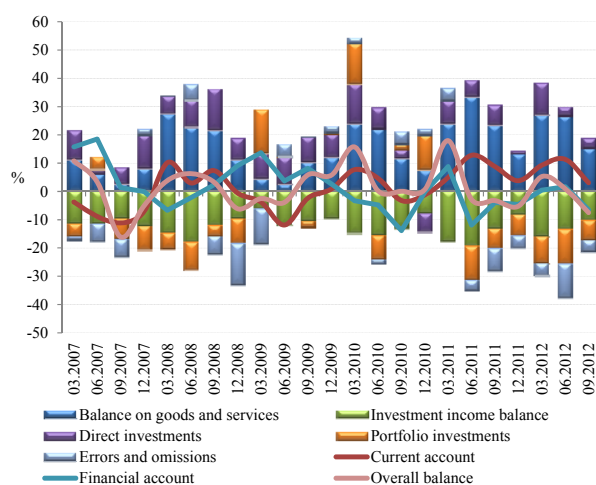
The slowdown in the revenues growth was offset by the increased transfers from the NFRK to maintain the growth rate of government spending. As a result, the growth in expenditures was as high as 18% for the first 9 months of 2012 as compared to the respective period of the prior year. The current expenditures traditionally account for a major portion in the structure of expenditures (68.5%) and are spent mostly for social security, education and health. The growth rate of capital expenditures during the first 9 months of 2012 increased to 11.6% as compared with 1% in the respective period of 2011, and capital expenditures were directed primarily to such spheres as defense, housing and utilities, education, transport and communications.

The increase in the state budget spending without the respective growth in non-oil revenues expanded the non-oil deficit from 5.2% during 9 months of 2011 to 9.2% during 9 months of 2012. (Figure 2.1.8)

²VAT – value-added tax

³According to the materials of the Ministry of Finance of the Republic of Kazakhstan “On the results of budget execution for nine months of 2012”

Figure 2.1.10
Key parameters of the balance of payments
(per quarter, % of GDP)



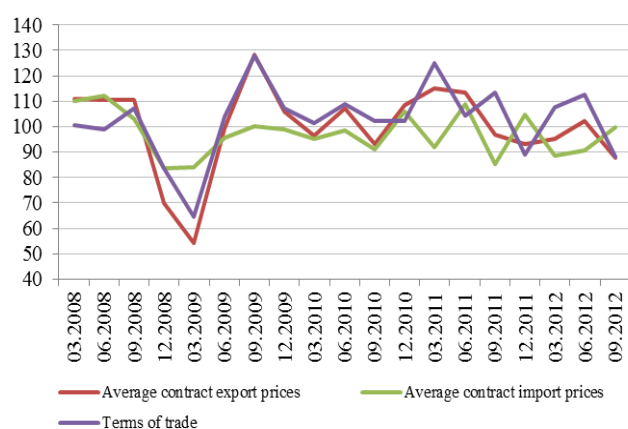
Source: NBRK

Table 2.1.1
Consensus forecast for commodities (USD)

Goods	12.12	04.13	07.13	10.13	12.13
Brent, per bbl	110	109	108	106	105
Wheat, per ton	869	887	890	892	900
Gold, per troy ounce	1 732	1 730	1 733	1 736	1 739
Copper, per ton	7 892	7 901	7 911	7 917	7922
Aluminum, per ton	1 997	2 067	2 090	2 112	2 133
Zink, per ton	1 946	2 032	2 056	2 080	2 100
Iron ore, per ton	115	120	125	122	125

Source: Bloomberg, as at 30 November 2012

Figure 2.1.11
Terms of trade (Dec 2009 = 100)



Source: NBRK

The cumulative dynamics of internal and external factors, which determined the competitiveness of the real economy in 2012, resulted in depletion of the price reserve associated with the previously accumulated undervaluation of the domestic currency.

In 2012, the decreased external demand and the volatility of prices for the main groups of exported goods, somewhat slowed down the growth rate of Kazakhstan's exports; at the same time, a growing domestic demand stimulated the growth in imports, resulting in 10.2% decrease of the positive balance on goods and services during 9 months of 2012. (Figures 2.1.9 and 2.1.10). Due to a quantitative factor, the increase was observed almost within the entire range of imported commodities. In this case, the highest increase was noted in the group of investment goods. Decrease in the trade balance and balance of services was partially offset by slower capital outflows under the item of investment returns on the balance of payments. As a result, the current account decreased by 8.6% during 9 months of 2012 as compared to the respective period of the prior year but remained positive (3.1% of GDP for 9 months of 2012.)

In parallel to a reduction in the current account surplus, there was a capital outflow on the financial account of the balance of payments.

This has been due to the lower net inflow of direct investments to Kazakhstan as a result of acquisition by Kazakhstan of 10% stake in the Karachaganak project, and a simultaneous increase in net outflow of portfolio investments due to increment in the NFRK foreign assets, as well as lowering of debt obligations of Kazakhstan's banks.

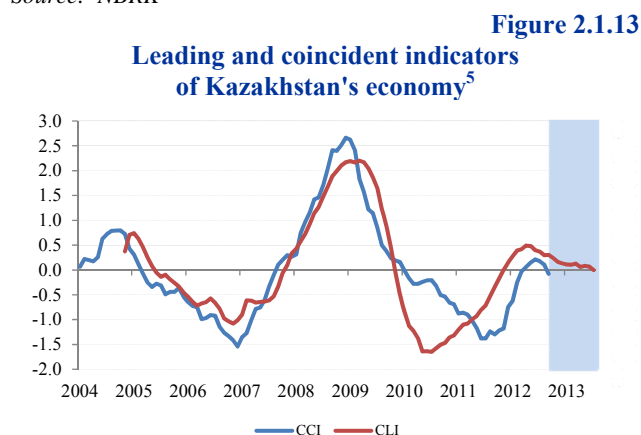
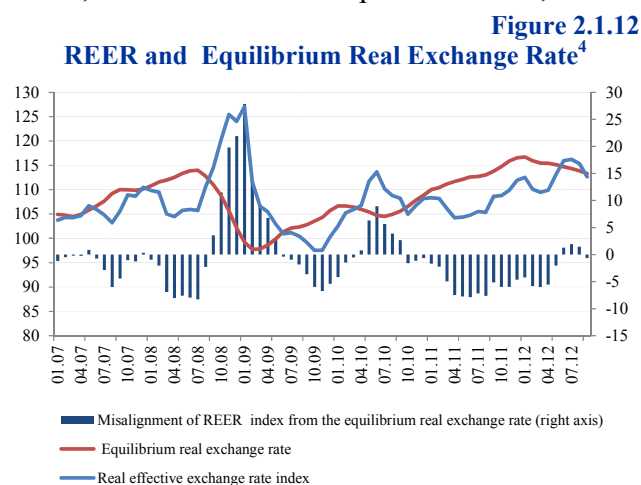
In this regard, the beginning of the commercial implementation of Karachaganak project, continuing high prices on oil and metals and reduction in oil reserves and oil production will support stability of the balance of payments of Kazakhstan in the mid-term (Table 2.1.1, Box 1). In general, despite the positive impact of foreign price trends on the terms of trade starting from 2012, the decreased world prices for minerals and metals in the 3rd quarter of 2012 led to the deterioration of the export price index, and accordingly, of the terms of trade index (Figure 2.1.11).

Another indicator of the country's price competitiveness – REER⁶ in its turn, demonstrated the multi-directional trends during 9 months of 2012. Such dynamics was caused by high volatility of oil prices during the reviewed period and respective changes in the exchange rates of local currencies of Kazakhstan's major trade partners, primarily, the Russian Ruble (Figure 2.1.12). As a result, as of the end of September 2012, the real effective exchange rate appreciated by 3.8% as

compared to the respective period of the prior year.

At the same time, according to the NBRK estimate, with current levels of the exchange rate, its actual real rates are almost close to its equilibrium value, which indicates the neutrality of the exchange rate policy and its relevance to the fundamental factors, which have been developed in the country's economy.

In general, according to the forecasts of international financial institutions, further slowdown in the world economy, including the economies of the Eurozone and China, will limit the economic growth rate in Kazakhstan in the future due to its high dependence on the external factors. Thus, the IMF estimates Kazakhstan's real GDP growth⁷ at 5% in 2012 and at 5.7% in 2013; MEDT forecasts the GDP growth of Kazakhstan⁸ at the level of 5% and 6%, respectively. In this case the dynamics of the composite leading indicator intended to determine the turning points, indicates the risks for the business activity levels in the country within the next 10 months, which are associated with uncertainties in the prospects of the economic recovery in the countries - major trade partners of Kazakhstan, and, accordingly, with the pessimistic moods of the real sector with regard to potential of growth in the



industrial products output (Figure 2.1.13).

⁴ Equilibrium Real Exchange Rate was assessed using the Vector Error Correction Model (VECM) based on the following equation (all variables are presented in logarithmical form):

$$eqreer = 3.03 + 0.17tot - 0.04nfa_prod + 0.14greal$$

where: tot - the terms of trade; nfa_prod - the net foreign assets to production ratio; and greal - the government spendings.

⁵ The composite leading indicator (CLI) is constructed on the basis of 5 quantitative indices: oil price index, composite index of business activity in the US, IFO World Economic Survey, money supply (M2) index, asset price 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.

⁶ REER – real effective exchange rate

⁷ Forecast for 2012 - according to the final statement of the IMF mission of December 5, 2012. Forecast for 2013 – according to the IMF country information

⁸ Forecast for 2012 was updated as of December 25, 2012. Forecast for 2013 is provided on the basis of the Forecast of Socio-Economic Development of the Republic of Kazakhstan for 2013-2017 approved by the Government of the Republic of Kazakhstan.

Forecast of the balance of payments for 2012-2015

Based on the performance in 2012, the surplus of the current account of the balance of payments is expected to decrease due to falling prices on the exported goods and decline in their external demand in the 2nd quarter of 2012.

With world oil prices at the level of 90 USD/barrel in 2013-2015, the surplus of trade balance will continue decreasing. In this case, the distributions to foreign investors will remain high and will offset the loss of oil exports. As a result, the current account surplus in 2013-2015 may be in the range of 1.9-2.5% of GDP. At the same time, the decrease in the inflow of direct investments to Kazakhstan and continuing significant rates of increase in external assets of NFRK will result in deficit of the capital and financial account. As a result, the country's balance of payments will be within the range of (-) 0.1 - 1% of GDP.

Table 1

Forecast of the balance of payments for 2012-2015, USD bln. (as of November 2012)

	2011	2012	2013 (forecast)			2014 (forecast)			2015 (forecast)		
	Actual	Estimate	USD 60	USD 90	USD 120	USD 60	USD 90	USD 120	USD 60	USD 90	USD 120
A. Current account	13.6	11.1	-3.4	5.9	14.6	-2.8	5.4	13.9	-2.2	6.8	15.1
<i>as % of GDP</i>	7.3	5.3	-1.7	2.5	5.5	-1.3	1.9	4.4	-1.0	2.1	4.0
Balance of trade	47.9	44.1	19.4	34.8	49.7	19.5	33.6	49.0	21.0	36.3	51.8
Export (fob)	88.5	90.5	57.2	78.8	100.7	57.5	78.6	104.0	59.8	83.2	112.9
Import (fob)	-40.5	-46.4	-37.8	-44.0	-51.0	-38.0	-44.9	-55.0	-38.7	-46.9	-61.0
Balance of services	-6.4	-7.6	-7.1	-7.4	-7.5	-7.1	-7.5	-7.7	-7.7	-8.3	-8.9
Balance of income and transfers	-27.9	-25.4	-15.7	-21.5	-27.5	-15.1	-20.7	-27.4	-15.5	-21.2	-27.8
B. Capital and financial account	-13.3	-11.5	-0.3	-6.2	-13.0	2.0	-5.1	-12.0	0.6	-7.0	-16.0
B-1 Capital and financial account (except for short-term capital)	-2.2	-1.4	3.1	-1.9	-7.4	4.7	-2.3	-7.6	1.5	-5.2	-3.1
Direct investments (net)	9.1	8.8	4.6	4.7	4.8	4.1	3.2	3.5	1.6	1.7	-1.3
Portfolio investments	-12.9	-14.1	0.0	-7.1	-12.8	0.2	-7.0	-12.7	-0.6	-7.4	-13.0
Other long-term investments (net)	1.7	3.9	-1.4	0.5	0.6	0.5	1.4	1.6	0.5	0.5	1.3
B-2. Short-term capital	-11.1	-10.0	-3.4	-4.3	-5.6	-2.8	-2.8	-4.5	-0.9	-1.8	-3.0
C. Total balance	0.3	-0.3	-3.7	-0.3	1.6	-0.8	0.3	1.9	-1.6	-0.3	-0.9
<i>as % of GDP</i>	0.2%	-0.1%	-1.9%	-0.1%	0.6%	-0.4%	0.1%	0.6%	-0.7	-0.1%	-0.2%
NBRK's reserve assets	-0.3	0.3	3.7	0.3	-1.6	0.8	-0.3	-1.9	1.6	0.3	0.9
For reference only:											
GDP (real growth, in %)	107.5	105.8	102.0	106.0	106.0	102.7	106.1	106.1	103.7	107.6	107.6

Source: NBRK

The decrease in oil prices to USD 60 per barrel will result in even stronger decline in exports; at the same time the import of goods will decrease due to decline in the economic growth and domestic demand. Concurrently, the decrease in exports of goods will be also offset by lower distributions to non-residents, and therefore, it is expected that during the entire forecast period the current account deficit will not exceed 1.7% of GDP. This deficit will be partially financed through maintenance of the net inflow of direct investments and inflow of funds from foreign assets of the NFRK, thus contributing to a surplus of the capital and financial account. As a result, in 2013-2015 the deficit of the balance of payments will not exceed 2% of GDP and will allow keeping the international reserves at an adequate level to fund the imports of goods and services.

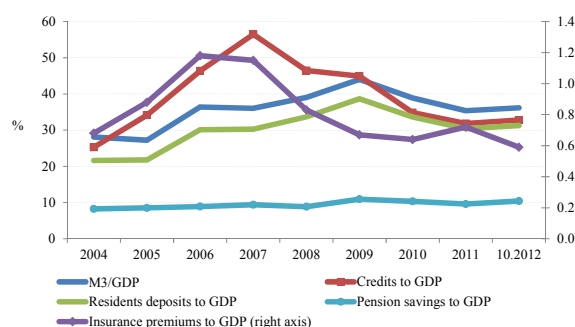
While in the first cases, the most pronounced is the effect of decline in demand for exports, with the oil price of USD 120 per barrel in 2013-2015, the exports of goods will exceed USD 100 billion. In this case, significant export proceeds will be offset by the increase in the demand for

imports and distributions to non-residents. As a result, in 2013-2015 the surplus of the current account will be within 4.0-5.5% of GDP. Moreover, the increase in the deficit of the capital and financial account is expected to grow due to the increase in the growth rate of the NFRK's foreign assets. On the whole, it is expected that the total balance of payments throughout the forecast period will be within (-)0.2% to (+)0.6% of GDP, which will allow increasing the NBRK's international reserves in general.

2.2 Role of the Financial Sector and Concentration Risks

Despite a high demand for credits on the part of the borrowers, a low risk appetite of banks continues to be the key factor curbing the lending of the real sector of economy. The available offer of loans is limited by certain sectors of economy, which demonstrate lower level of risks and higher turnover of investments. High level of competition on the part of banks with foreign participation will result in the decrease in the banking sector concentration and encourage other banks to review the terms of lending policy.

Figure 2.2.1
"Depth" in the development of financial relations in Kazakhstan

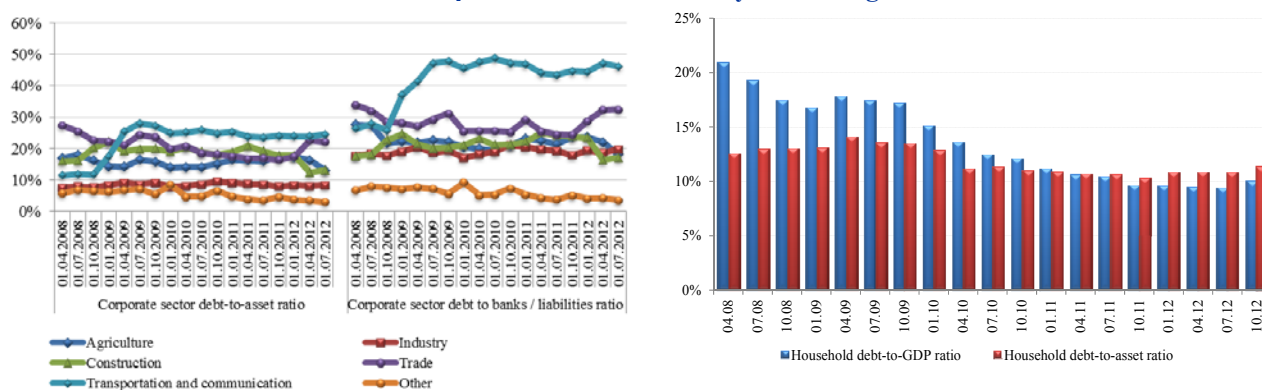


Note: GDP data are provided on an annualized basis
Source: ASRK, NBRK calculations

"Depth" in the development of financial relations. The absence of serious external shocks in 2012, on the one hand, and pending key problems in the financial sector, on the other hand, limited the growth of monetization and the penetration rate of financial services in the economy (Figure 2.2.1). Thus, the ratio of money supply and credits to GDP remains at a level comparable with the period of 2005-2006. i.e. the beginning of the following credit boom. Accordingly, the extent to which the corporate sector uses bank loans remains rather low (Figure 2.2.2).

Figure 2.2.2

Dependence of real economy on funding



Source: ASRK, NBRK calculations

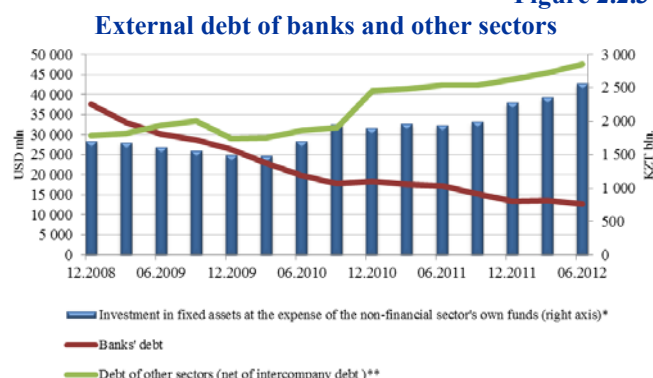
In this regard, enterprises partially compensate the deficit of long-term financing from banks by the use of their own funds (Figure 2.2.3).

Generally, the share of liabilities of economic sectors to banks in the total liabilities, except for transport, communications and trade, does not exceed, on average, 22% at 01.07.2012. As a result of implementation of infrastructure projects under the government programs for development of transport and communications, the debt of the enterprises of this sector to banks in the total

liabilities increased from 43.4% at 01.07.2011 to 46.2% at 01.07.2012. Amounts due from the trade have grown from 24.4% to 32.4% over the same period.

Due to risks which historically accumulated in the construction sector and traditionally high risks in agriculture, the amount of lending provided by banks to these sectors keeps decreasing.

Figure 2.2.3



Note: *on YoY basis

**non-banking financial corporations, non-financial corporations, households and non-commercial organizations, which serve the households

Source: ASRK, NBRK calculations

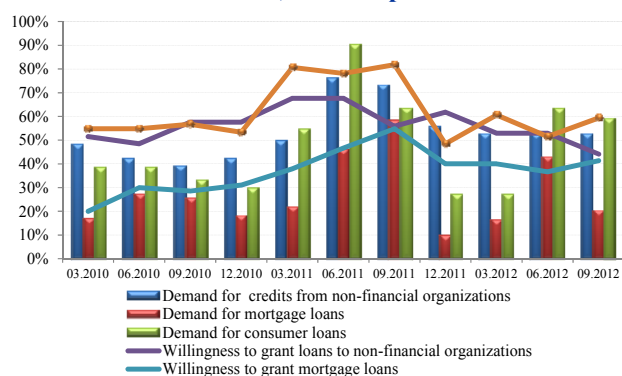
Thus, the share of the construction sector's liabilities to banks dropped from 24.2% at 01.07.2011 to 17.0% at 01.07.2012; that of the agriculture - from 21.4% to 18.2%, respectively.

The level of the bank lending to households also remains below the previous cycle peaks, despite the fact that the household debt growth rate increased from 2.9% at 01.10.2011 to 16.4% at 01.10.2012 (as compared to the respective period of the prior year).

According to a survey of the credit market quality parameters conducted among banks during 2012, the demand for credit resources on the part of corporate entities and

Figure 2.2.4

Change in the demand for and supply of credit resources, % of respondents



Note: the results are provided as net percentage change, which is calculated as the difference between % of respondents that have mentioned increase /softening of certain parameter, and % of respondents that have noted decrease/tightening of certain parameter. In this case the Figure presents changes in the actual demand and wish to lend.

Source: banks, NBRK calculations

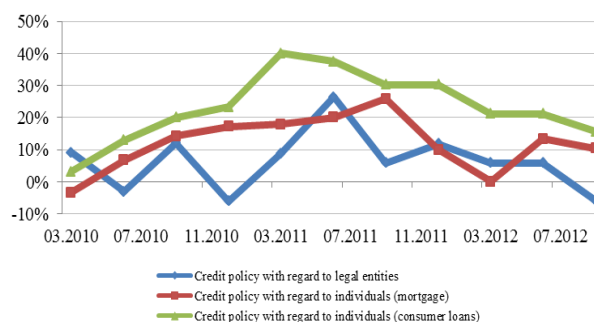
individuals remained high (Figure 2.2.4). In this case the demand on the part of non-financial organizations was more oriented at meeting their financing needs for working and fixed capital, and refinancing of the existing debts. The growing demand for consumer loans on the part of individuals was due to restoration of creditworthiness as a result of the economic upturn, less time required for consideration of loan applications and some liberalization of the banks' lending policies. No significant growth in demand for mortgage loans has been observed as the population is waiting for a significant reduction in interest rates; however, banks are not planning to reduce interest rates in the near future.

The most pronounced liberalization of the bank lending policies has been observed in the retail lending segment, while in the corporate lending the banks estimate the risks associated with the deterioration of the financial condition and the increased risk of individual borrowers as being rather high. As a result, the banks followed more moderate lending policy with respect to the corporate customers as compared to individuals (Figure 2.2.5)

Taking into account the current trends in lending, the banks forecast that the preservation of competition among banks to attract borrowers would force them to improve lending conditions, in

Figure 2.2.5

Change in the credit policy of banks



terms of both the timing and the amounts of loans offered. In addition, the banks will continue improving the quality of the customer service by reducing the time frame for consideration of loan applications and providing an opportunity to have an individual amortization schedule, and granting favorable terms to the customers with good credit histories.

The key factors, which will primarily determine the lending activity of the banks, are availability and cost of financing in the capital markets, growing competition among banks, and as a consequence, liberalization of their lending policies, as well as expectations of banks regarding the supply and demand for loans on the part of large and medium-size businesses (Box 2).

Box 2

Indicator of expectations about the credit market development

To perform the in-depth analysis of the main trends and factors in the development of Kazakhstan's credit market, and to make assessment of its development in the short-term, the indicators of expectation about the credit market development have been designed on the basis of the input information from the questionnaire "Status and Forecast of the Credit Market Parameters". Due to the large amount of data used, in terms of both the amount and scope of coverage of diverse characteristics of the credit market, the principal component analysis¹ was used as the optimal method for the design of indicator. Four principal components have been selected based on the results of the work done, which explain 75% of the sample variance. To assess the quality and acceptability of indicators derived from the practical point of view they have been compared with the dynamics of the reference series². To identify possible coincident and leading properties of the indicators, their cross-correlation was calculated (Table 1).

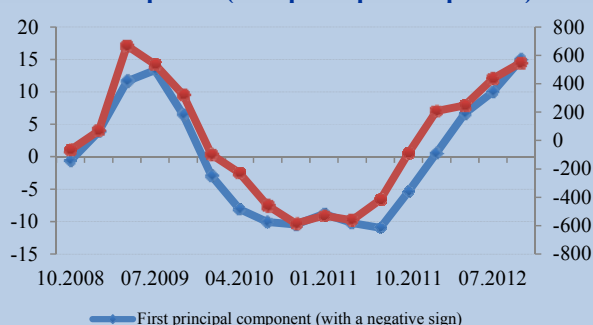
Table 1

Cross-correlation between principal components and reference series

	First principal component (PC1)		Second principal component (PC2)		Third principal component (PC3)		Fourth principal component (PC4)	
Macroeconomic indicators	Coefficient of correlation	Leading (+)/lagging (-)	Coefficient of correlation	Leading (+)/lagging (-)	Coefficient of correlation	Leading (+)/lagging (-)	Coefficient of correlation	Leading (+)/lagging (-)
GDP	-47.6%	-3 qtr.	-49.6%	+ 12 qtr.	-44.2%	+ 6 qtr.	-48.7%	- 4 qtr.
Domestic credits	-96.8%	0	-59.3%	+ 3 qtr.	55.0%	+ 3 qtr.	-37%	- 6 qtr.
Banks' loan portfolios	-93.2%	0	-56.7%	+ 3 qtr.	57.9%	+ 3 qtr.	-41.7%	- 5 qtr.
Credits-to-GDP	-72.4%	+ 1 qtr.	72.8%	0	45.2%	+ 3 qtr.	-54.1%	- 5 qtr.

Source: NBRK

Figure 1
Indicator of expectations about the credit market development (first principal component)



Note: *time series of the domestic credits without consideration of seasonality and trend

Source: NBRK

Analysis of the first and third components is the most noteworthy. Thus, the first principal component has a coincident property in relation to such indicators as "credits to the economy" and "bank loan portfolio" (Figure 1). Given that in practice the first principal component usually covers the greatest variation of the data scattering, it may be assumed that in our case it includes the survey data, which are the main factors explaining the dynamics of the bank lending. It should be noted that by using the method of principal components it is impossible to determine exactly what factors characterize each component, but

with the help of the eigenvectors it is possible to single out those rows that make the greatest contribution to the component.

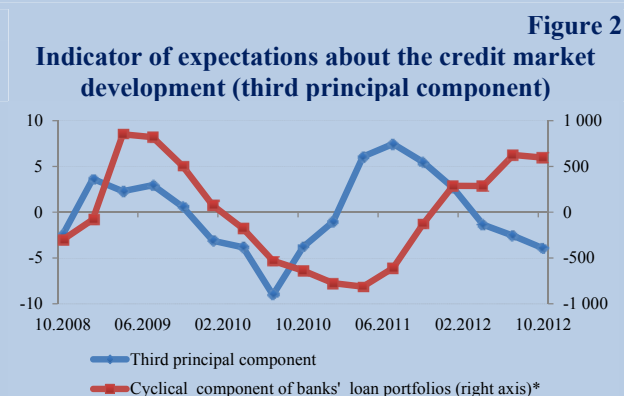
In general, the first principal component includes those questions of the questionnaire, which relate to the impact of risks on the lending policies of banks, changes and expectations of changes in demand and supply of credits to the large business as well as changes in the lending

terms. Therefore, the different parameters of lending of the large and medium-size businesses of the corporate sector determine, to the greatest extent, the lending activity of the banks and, accordingly, the current development of the credit market as a whole.

The third component, in its turn, has the leading properties in relation to such indicators as "loan portfolio of banks" and "domestic credits" (Figure 2).

Issues concerning the consumer lending and lending to the small and medium-size businesses contribute the most to this component. In addition, it reflects the reasons for changes in the terms of the bank lending (tightening/liberalization) for commercial real estate.

The dropdown dynamics of the third component starting from the second half of 2011 has been determined by the decreasing willingness of banks to provide loans to small and medium-size businesses and the banks' expectation about the decrease in the demand for loans from small businesses.



*Note: *time series of the banks' loan portfolios without consideration of seasonality and trend*

Source: NBRK

The above survey data has the highest values of eigenvectors (weights) (over 10%) in the third component, which is an evidence of their relatively high importance and, therefore, they may determine the changes in the dynamics of the loan portfolio in the short-run. However, the relatively low correlation (60%) between the third component and the loan portfolio and the short time series requires a careful interpretation of the findings.

In general, the derived indicators may serve as a good forecasting benchmark for the analysis of a change in the trend of

indicators related to the bank credits to the economy. However, it is necessary to take into consideration that in practice, similar indicators are built based on a long historical series, and this fact imposes an obligation on the further analysis and development thereof.

¹ This method allows grouping and reducing the dimensions of the input data and to single out the most significant factors, which characterize the data variance. All input data had been statistically processed (excluding the trend and seasonality).

² Such indicators as Kazakhstan GDP, domestic credits, loan portfolio and the ratio of the domestic credits to GDP have been used as the reference series.

Structural parameters of the financial sector

Though the number of banks and accumulation pension funds remains unchanged, one can see the decrease in the number of professional participants in the securities market and insurance organizations (Table 2.2.1).

Table 2.2.1

The Structure of the financial sector (units)

Number of financial institutions	01.01.2007	01.01.2008	01.01.2009	01.01.2010	01.01.2011	01.01.2012	01.10.2012
Banks	33	35	37	38	39	38	38
Insurance organizations	40	41	44	41	40	38	35
Professional participants of the securities market*	147	208	213	172	153	144	134
Accumulation pension funds	14	14	14	14	13	11	11
Trade organizers	1	1	1	1	1	1	1
Mortgage companies	10	12	12	7	6	4	3
Organizations engaged in certain types of banking operations	15	22	21	8	8	6	5

*Note: *a number of valid licenses to operate in the securities market. The indicator shows the total number of brokers-dealers, registrars, pension assets management companies, investment portfolio management companies, custodians and transfer agents*
Source: NBRK

Based on the performance during 9 months of 2012, the degree of concentration in the banking sector declined: share of assets of five largest banks decreased from 65.3% at 01.01.2012 to 60.8% at 01.10.2012. The slight decrease in the institutional concentration was observed in the sector of credits to corporate entities and individuals. This situation is explained by the fact that banks with foreign participation and other medium-sized banks are expanding their presence in the lending market. From the beginning of 2012, the concentration rate in the insurance sector and pension system remained practically unchanged (Table 2.2.2).

Table 2.2.2

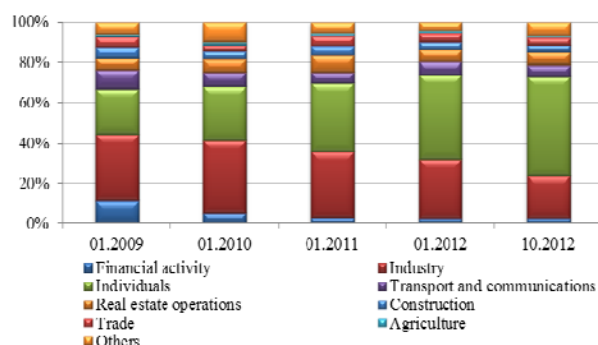
Concentration of financial institutions (share of assets) in each segment, in %

Indicator	5 largest financial institutions					Financial institutions with foreign participation	
	01.01.2009	01.01.2010	01.01.2011	01.01.2012	01.10.2012	01.01.2012	01.10.2012
Banks lending the following sectors:							
legal entities	84.4	85.8	83.0	81.1	78.2	23.5	24.6
individuals	66.5	60.2	57.3	52.9	48.3	28.8	29.4
consumer loans to individuals	73.1	54.7	43.9	40.3	37.1	20.4	23.2
for housing construction and purchase for individuals	63.1	61.3	66.1	62.6	59.5	32.1	32.3
mortgage housing loans to individuals	64.0	60.5	62.7	59.8	56.9	30.2	31.0
construction	87.9	91.5	86.6	87.9	86.4	15.1	14.3
trade	79.2	80.2	73.5	69.5	66.2	23.6	25.4
Share of assets of 5 largest banks	74.0	73.9	71.8	65.3	60.8	-	-
Share of assets of foreign banks						30.8	32.3
Insurance (reinsurance) organizations in the following sectors:							
general insurance	57.2	55.6	57.6	59.9	60.0	28.7	25.6
life insurance	83.0	86.0	87.0	86.2	86.0	6.6	6.5
Accumulation pension funds							
Based on the pension assets attracted	78.1	76.0	76.7	81.0	81.0	-	-

Source: NBRK

Sectoral concentration of the insurance market

Figure 2.2.6
Share of insurance premiums by types of economic activity in the total amount of insurance premiums

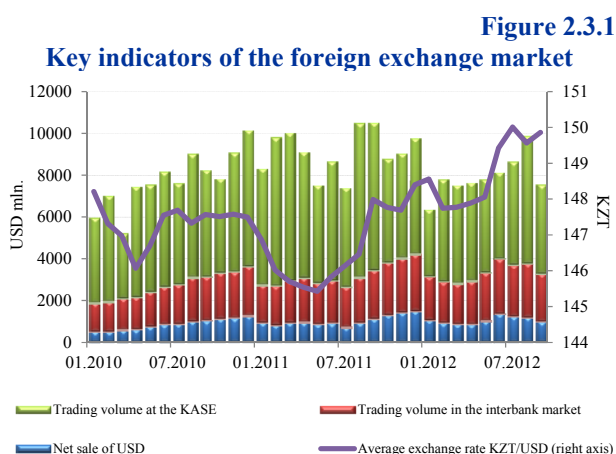


Source: NBRK

The share of insurance premiums received from insurance of individuals was increased due to the growing activity in the insurance sector. Thus, during 9 months of 2012, the share of insurance premiums increased from 41.9% to 49.2%. The share of insurance premiums received from industrial enterprises dropped from 29.4% at 01.01.2012 to 21.1% at 01.10.2012 (Figure 2.2.6).

2.3 State of the Financial Markets

The persisting trends of slow depreciation of the Tenge that outlined in mid-2011, represented the main trends in the country's foreign exchange market in 2012 and, to a large extent, were caused by the decrease in the surplus of balance on foreign economic operations and changing environment in the global commodity markets and foreign exchange markets (especially the Russian FX market).

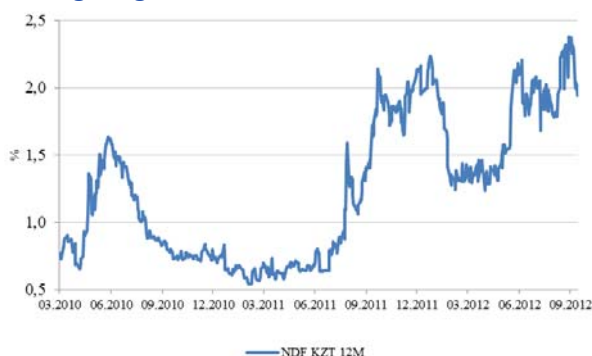


Source: NBRK, KASE

Money market was still in a hyper-liquid condition during the first half of 2012. The change in the situation in the local foreign exchange market followed by the "exit" into foreign exchange resulted in the growth of profitability across all operations - from short-term money market instruments to long-term GSs.

The existing level of the risk of manipulations in the securities market is associated with low market liquidity, limited number of players engaged in active securities trading, and a probability of collusion between the participants.

Figure 2.3.2
Change in gains on NDF transactions, KZT to USD



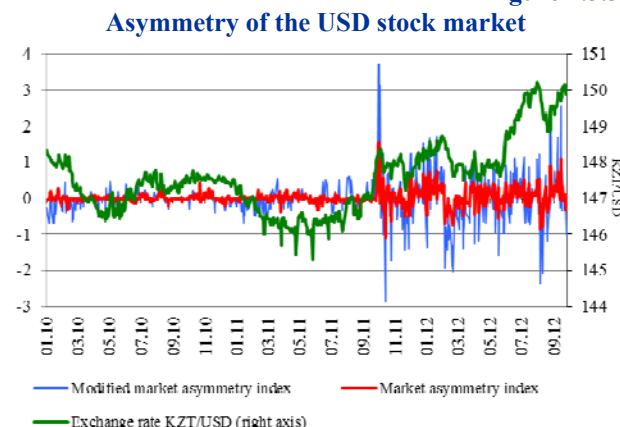
Source: Thomson Reuters (Datastream), NBRK calculations

During January-September 2012, there was some weakening of the Tenge to the US Dollar and the exchange rate was fluctuating in the range of KZT 147-151 per 1 USD (Figure 2.3.1).

The volume of operations in the domestic foreign exchange market changed a little in comparison with the prior year (during 9 months of 2012 the decrease accounted for 0.9%). At the same time, the decrease in the trading volumes in the organized market (KASE) occurred concurrently with the growth in operations in the off-exchange segment and operations in exchange offices. The growth in operations of exchange

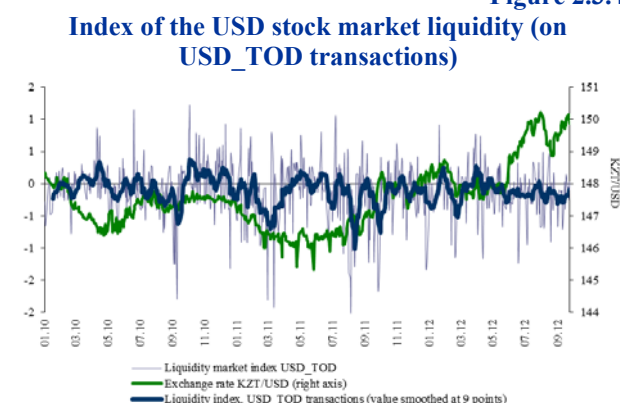
offices, as in the prior years, is explained by the striving of the population to diversify their savings. The decreased volumes of foreign currency operations at the stock exchange against continuing growth in bilateral transactions between banks are associated with the fact that some banks through which large exporters conduct their operations, hold foreign exchange with a view of getting additional gains in the environment of volatile exchange rates, by selling foreign exchange during those periods which appear to be more "favorable" in terms of the exchange rate.

Figure 2.3.3



Source: KASE, NBRK calculation

Figure 2.3.4



Source: KASE, NBRK calculations

January-September 2012, the NBRK on an aggregate basis provided liquidity to banks worth KZT 187.2 bln., both through the foreign exchange market and via the money market operations (Figure 2.3.5). Alongside with that, a large liquidity volume was provided through bilateral reverse REPO operations in the off-exchange segment.

Moreover, negative expectations in respect of the Tenge depreciation to the US Dollar in the domestic foreign exchange market were dominating throughout 2012 (Figure 2.3.2).

Increasing oil prices that were observed since July 2012 represent a positive factor for the exchange rate of the Tenge. At the same time, remaining instability in some countries of the Eurozone as well as volatility of prices for gold and oil are potential factors of pressure on the domestic currency exchange rate in the future.

Asymmetry index⁹ of the foreign exchange stock market testified to increased pressure on the foreign exchange market caused by a significant number of bids for foreign exchange purchase and sale (Figure 2.3.3). Alongside with that, those bids which were not satisfied by FX supplying banks, were satisfied by increasing relevant demand or supply on the part of the NBRK; this fact is confirmed by the dynamics in the liquidity index¹⁰ of the USD stock market which, in its turn, was less volatile in 2012 to 2011 (Figure 2.3.4).

The high liquidity of the banking sector during 2012 supported by the operations of the NBRK, was the main reason for the low level of interest rates in the money market. During

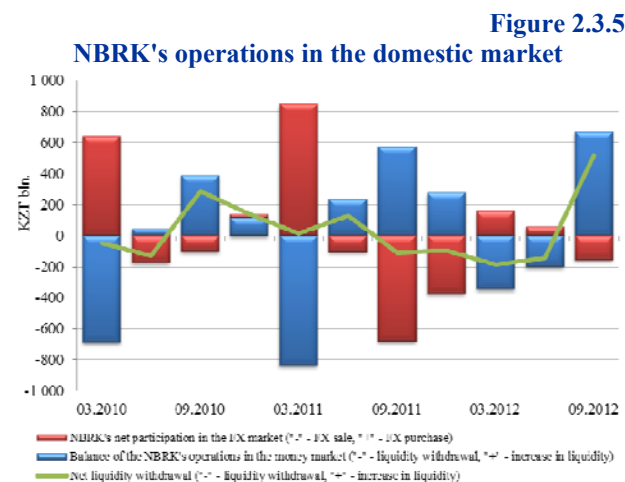
⁹ Asymmetry index is calculated as the difference between aggregate volumes of bids for USD purchase and sale divided by the aggregate volume of transactions in the market. This index is used to estimate the pressure on the price by the market players and allows assessing possible changes in the trend. Positive values indicate the pressure on price by demand and negative values – by supply. Modified asymmetry index is computed similar to asymmetry index but transactions and bids of the NBRK are not taken into account. The use of two indices allows assessing the role of the NBRK's interventions as the factor of shock absorptions.

¹⁰ Liquidity index in the USD exchange market was calculated by using series of normalized values of spread between the average weighted demand and supply prices, 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. The following formula was used in the computation: $\text{Liquidity index} = -\text{Spread} + (\text{Number of transactions} - \text{Average transaction})/2 - \text{Ratio of the of price differential between the first and the last transaction to the amount of the average transaction modulo}$. It is assumed that the market is liquid to maximum when the spread is minimal, number of transactions is maximal, and the ratio of the price differential between the first and the last transaction to the amount of the average transaction is minimal. As part of this Report when building up an index a data series are used on the KASE trading (instrument USD_TOD) for the period from 5.01.2009 to 30.09.2011. Series were normalized by dividing the difference between the actual value of the indicator and its average for the period by a standard deviation in a sample. The structure of the liquidity index includes the market resistance determined as the ratio of the price differential between the first and the last transaction to the amount of the average transaction.

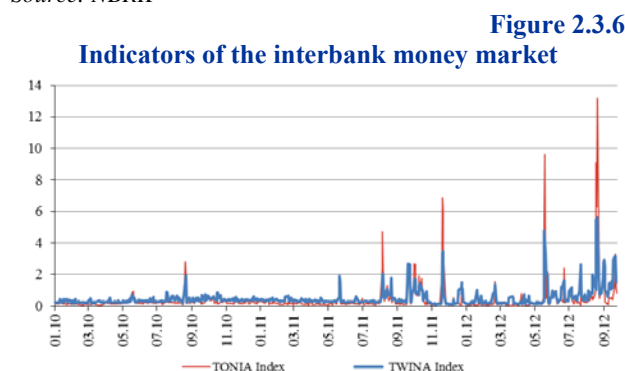
Since mid-2012, there has been an upward tendency in terms of yields, both in the money market (Figure 2.3.6) and in the primary offering of long-term debt instruments – MFRK GSs (Figure 2.3.7). At the same time, the reasons for the growth in rates lie in a plane of the demand for financial instruments that somewhat decreased in 2012 whereas their supply didn't undergo significant changes. First, remaining negative medium- and long-term expectations on the part of

market participants about the development of foreign financial markets and, therefore, the exchange rate of the Tenge, result in the increase in the price of longer-term resources. Second, in 2012 supervisory requirements for APFs were liberalized in respect of investments of pension assets, therefore APFs cut their demand for GSs. As a result, the growth in yield on medium- and long-term GSs from the beginning of the year till September 2012 accounted for 1.5-2 pp on average (Figure 2.3.7).

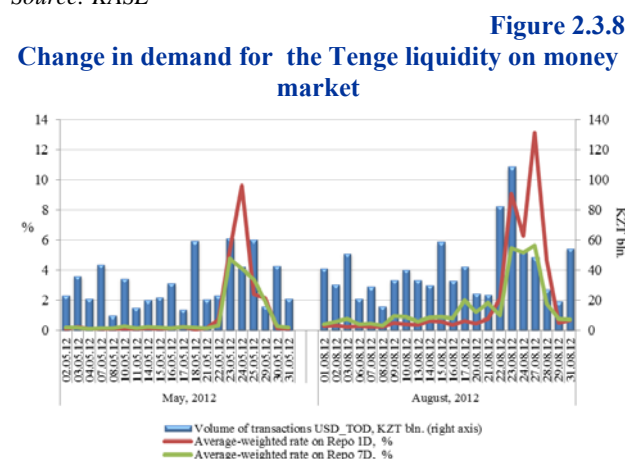
Payments of mineral extraction tax (MET) become an important cyclical factor, which has a decisive influence on the money



Source: NBRK

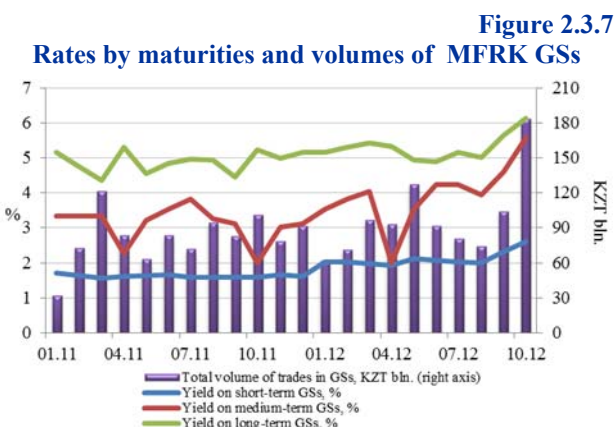


Source: KASE



Source: KASE, NBRK calculations

national currency to pay MET and in some periods by placement of government securities of the MFRK as well as a limited potential for the banks to attract liquidity from NBRK.



Source: KASE, NBRK calculations

market at the end of the second month of each quarter. Substantial amounts payable to the state budget reduce significantly the liquidity of banks, leading to the jumps in the rates. Typical growth of the interest rates in the money market during a short period of time with subsequent return to the previous level was observed in August and November 2011, but in 2012, especially in May and August, the amplitude of fluctuations increased dramatically (Figure 2.3.8). Moreover, no other fundamental reasons for the change in the situation in the money market have been noted. The situation is worsen by the need to convert the foreign currency into

The equity market, just as during the prior years, was characterized by low activity. Occasional large transactions resulted in significant surge in the market performance. So, in the 2nd

Figure 2.3.9
Dynamics of the total turnover on equity market

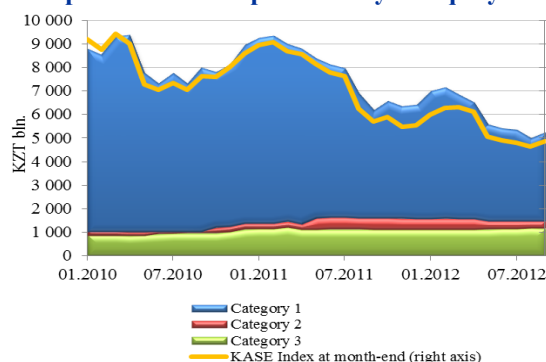


Source: KASE

quarter of 2012, increased equity market activity was caused by the purchase and sale of shares of joint-stock companies "Kazakhtelecom" and "Kaspiy Neft" (Figure 2.3.9).

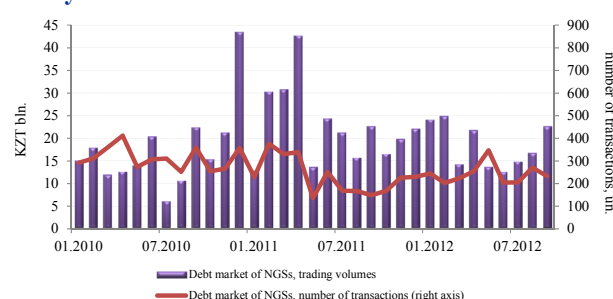
In the equity market the trading volume as of 01.10.2012 decreased by 2.9% as compared to 01.10.2011. During 9 months of 2012, the KASE Index decreased by 18.6%, and capitalization of the equity market reduced by 25 % because of slow recovery of the economy after the crisis (Figure 2.3.11).

Figure 2.3.10
Capitalization and profitability on equity market



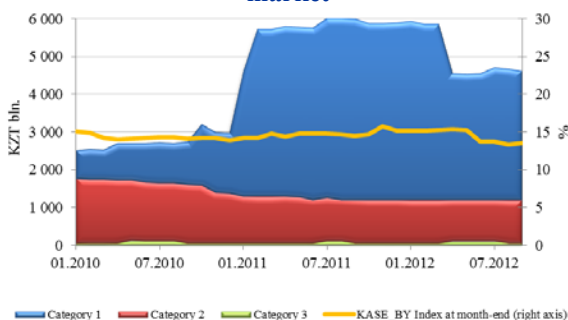
Source: KASE

Figure 2.3.11
Dynamics of the total turnover on bond market



Source: KASE

Figure 2.3.12
Capitalization and profitability of the corporate bond market



Source: KASE

In the non-government bonds market the trading volume increased by 14.0% during 9 months of 2012 as compared to the respective period of 2011, thus indicating a commencing process of replacement of foreign funding sources with more accessible domestic sources (Figure 2.3.11).

The KASE_BY stock index reflecting the average-weighted yield on corporate bonds has decreased by 1.7% from the beginning of 2012 and equaled to 13.5% at 01.10.2012.

Capitalization of the market of non-government securities dropped by 20.9%. It should be noted that a sharp decline in the capitalization for the 1st category of securities in April 2012 was due to transfer of the bonds of one large market player to the "buffer category"¹¹ by reason of the commenced process of restructuring of its liabilities (Figure 2.3.12).

¹¹ In accordance with point 13-1 of the Resolution No. 77 of 26 May 2008 of the Board of the Agency of the Republic of Kazakhstan for Regulation and Supervision of the Financial Market and Financial organizations "On Requirements to the Issuers and Securities thereof Admissible (Admitted) for Listing in the Stock Exchange as well as to Certain Categories of the Stock Exchange Listing" (hereinafter - "the Resolution), transfer of the issuer's securities to the "buffer category" of the "debt securities" sector of the Stock Exchange Official Listing takes place in the following cases:

- 1) non-compliance of the securities and issuers thereof with the requirements set in points 10 and 11 of the Resolution;
- 2) the issuer's default on payment of interest on its liabilities (except for interest for the last coupon period in case, if this issue of the debt securities is the only issue of the debt securities of this particular issuer in the official listing of the stock exchange;
- 3) restructuring of the issuer's liabilities.

Activity in the market of corporate bonds of Category 2 continued to slow, due to tightened requirements of the supervisor in relation to information disclosure to their holders, and proper use of borrowed funds a result of the bond issue and placement. In addition, issuers find it increasingly difficult to control cash flows and ensure timely coverage of liabilities to bond holders. Alongside with that, borrowing through the interbank market remains relatively difficult and more costly as compared to credit arrangements with banks, and requires additional measures for more dynamic development of the market and enhancement of its attractiveness for the market players. Because of low liquidity, limited number of players engaged in active securities trading and due to the existence of risks of collusion between them, the problem of manipulations in the securities market still exists. This problem is deepening due to low efficiency of the institute of market makers which maintain firm quotations on securities and thereby restrict the growth in liquidity level in the stock market.

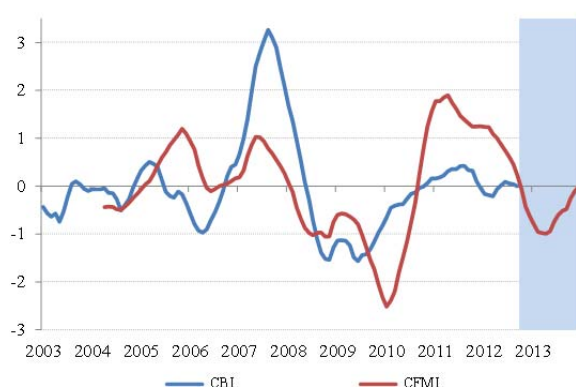
III Risks of the Financial Intermediation Institutions

3.1 Risks of the Banking Sector

3.1.1 Risk Profile

The problems with a low quality of the loan portfolio and undiversified funding base force the banks to increase lending primarily in a "shorter" and more profitable retail segment with a view to come up with reasonable returns. Such problems are mainly faced by the largest, mainly domestic banks which have limited opportunities to maintain a required level of profitability in the sluggish lending environment, contrary to banks with foreign participation that are capable of implementing a more aggressive and flexible strategy in the financial services market.

Figure 3.1.1.1
Financial market and banking stress composite indicators¹²



Note: CFMI is shifted to the right for 15 months to reflect its forward-looking feature. The forecast is shaded.

Source: NBRK

developments in the global economy will have impact on the prospects for the development of the sector in the second half of 2013. Nonetheless, despite possible change in the trend, risks for the financial market remain at an acceptable level.

A general trend for risk mitigation is reflected in the bank strategies, depending on the existing competitive advantages as well as current financial condition. A certain risk profile is inherent to each group of banks, with its specific vulnerability factors and sensitivity to shocks.

In what follows, banks were classified into following groups with a view to analyze current parameters of the market of financial services:

1 group – 4 top banks, with similar characteristics of their portfolio structure, development strategy, duration of their operation in the market of financial services (Kazkommertsbank, Halyk Bank Kazakhstan, ATF Bank, CenterCredit Bank).

2 group – large and medium-size banks with foreign participation (CitiBank, HSBC Bank of Kazakhstan, RBS (Kazakhstan)», Sberbank Subsidiary, VTB Bank (Kazakhstan)», and Subsidiary of Alfa-Bank).

3 group – other medium-size banks including those with the domestic capital (Nurbank, Tsesnabank, KaspiBank, Eurasian Bank, Alliance Bank, and Temirbank).

4 group – other banks.

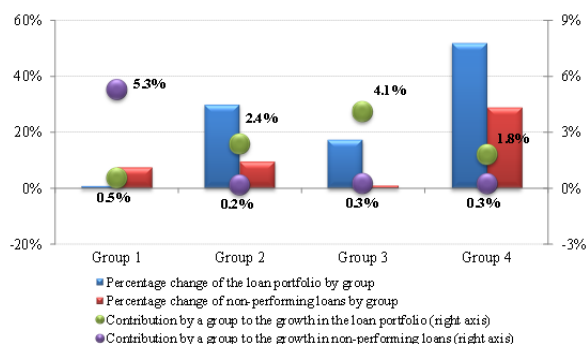
The following banks were not included in the calculation:

BTA Bank which was undergoing the restructuring process;

Zhilstroysberbank of Kazakhstan and the Islamic Bank Al-Hilal as banks with specific activity.

¹² Composite financial market stress indicator (CFMI) is designed on the basis of 5 indices: the ratio of money supply and FX reserves, inverse index of real exchange rate, real interest rate, interest rate differential and the ratio of current account to GDP. Composite banking stress indicator (CBI) which characterizes current level of risks in the banking system, is designed on the basis of 6 indices: bank foreign liabilities to foreign assets of banks; bank loans in the industry, construction and trade to total loans; growth rate of bank loans; real interest rate of banks; profitability of banks; bank loans to GDP; and money supply to total loans.

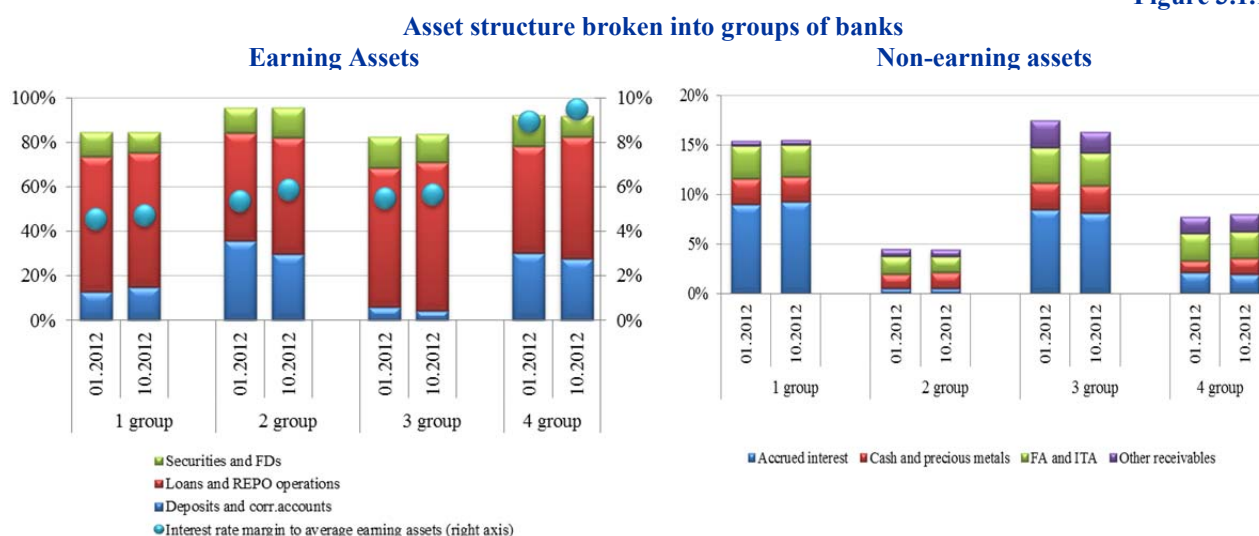
Figure 3.1.1.2
Change in the loan portfolio and the volume of non-performing loans for 9 months of 2012, by groups of banks



Source: NBRK

Differences in the development strategies between groups of banks. The lending policy of the **1st group** of banks is to a larger extent aimed at maintaining the existing level of the loan portfolio and reducing additional potential losses from the portfolio. Decreased share of granted loans because of low lending activity (the loan portfolio increased by 0.8% only during 9 months of 2012), increased volume of non-performing loans (Figure 3.1.1.2), high volumes of interest income accrued but not received (Figure 3.1.1.3), that was primarily caused by low quality of the loan portfolio, as well as lower profitability represent

Figure 3.1.1.3



Note: 1) information about the asset structure is presented including premiums/discounts, positive/negative adjustments, less created provisions; 2) interest rate margin at 01.10.2012 was annualized; 3) average earning assets are calculated as the average value at the beginning (01.01.2012) and at the end (01.10.2012) of the period; 4) interest rate margin to earning assets is calculated excl. correspondent accounts; 5) FA and ITA – Fixed assets and intangible assets.

Source: NBRK

vulnerability factors of banks from Group 1 and limit their potential for qualitative growth in the market of banking services.

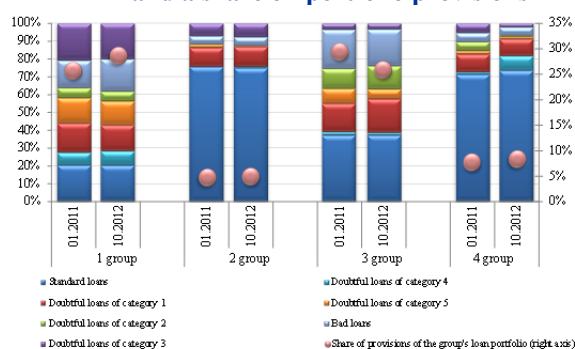
Banks in the **2nd group** amidst accumulated problems of large financial institutions are pursuing active lending policy to expand their presence in the market of banking services of Kazakhstan, mainly based on increased lending to the large business, industrial enterprises in particular. During 9 months of 2012, banks in the group increased their credit portfolio significantly (the growth accounted for 29.9%), with its share in the group's assets increasing by 4.1 pp. Competitive advantages of banks in the group, particularly, better quality of their loan portfolios, low operating expenses, availability of inexpensive funding sources as well as their business reputation and image, allow them making significant competitive pressure on other banks and get stable, high financial results.

It is worth mentioning high lending activity of banks in the **3rd group** that resulted in the 17.4% increase in the loan portfolio over 9 months of 2012. At the same time, lending policy of banks in the group is mainly oriented at the sector of retail lending where the growth is primarily ensured by highly-risky and unsecured consumer loans. This lending policy allows achieving such interest rate margin per unit of performing loans that is commensurate with the margin of foreign banks in the 2nd group. Generally, banks with low quality of their loan portfolio and without large

foreign financial institutions as their shareholders, are able to maintain comparable returns on their core financial operations, however, their strategy to a larger extent is aimed to generate short-term profit.

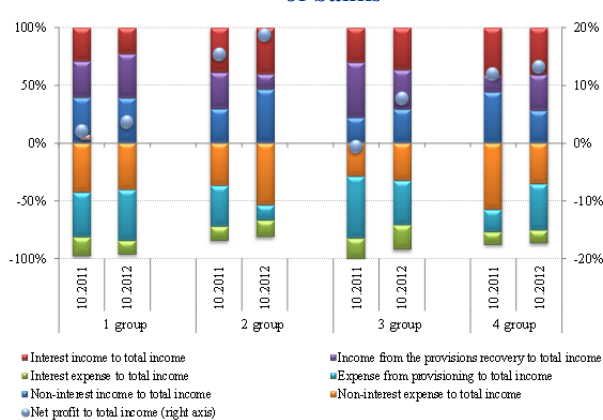
Banks in the **4th group** are characterized by aggressive lending policy not only aimed at increasing their borrowing operations but also at generating high profits from such operations; this is evidenced by a significant increase in their loan portfolio (the growth by 51.9% since 01.01.2012) as well as by a high interest rate margin received per unit of income generating assets (9.5%). However, a high margin against active lending operations and a more significant growth in non-performing loans, than in the system as a whole, indicates the presence of assets with a higher risk/returns ratio in portfolios of those banks thus making an assertion of potential unsteady profits.

Figure 3.1.1.4
Structure of bank credit portfolio broken into groups and a share of portfolio provisions



Source: NBRK

Figure 3.1.1.5
Structure of income and expenses broken into groups of banks



Note: 1) income from the recovery of provision s is not included in non-interest income; 2) expenses from the provisioning are not included in non-interest expenses.

Source: NBRK

development of these banks (Figure 3.1.1.5).

Banks in the **2nd group**, due to their selective lending activity aimed at attracting large borrowers, have an intrinsic competitive advantage with regard to the scale of their expenses for provisioning due to a better quality loan portfolio. The share of standard loans of foreign banks accounted for 74.9%, share of non-performing loans in the credit portfolio accounted for 5.4%. Alongside with that, expenses related to provisioning/total income accounted for 13.2% for 9 months of 2012, which represents the lowest ratio as compared to other groups of banks.

Quality of the loan portfolio becomes

one of a major competitive advantages in the market of banking services, since a minor percentage of non-performing loans in credit portfolios of banks allows getting more interest rate margin per a unit of allocated assets, take a more flexible approach to pricing of financial products as well as to minimize expenses for provisioning and recovery of assets value.

A large share of the low quality loan portfolio is concentrated in the banks of **groups 1 and 3**, specifically, in banks which restructured their liabilities (Figure 3.1.1.4). Credit risk concentration in such banks can be explained by a more aggressive lending policy they implemented in the pre-crisis period and a high level of assumed risk coupled with an imperfect system of its assessment. As of 01.10.2012, the share of non-performing loans in the credit portfolios of banks in the 1st and 3rd groups accounted for 31.5% and 26.1%, respectively, while as of 01.10.2012, the share of standard loans of the 1st group accounts for 20.4% only, and of the 3rd group – for 37.3%¹³.

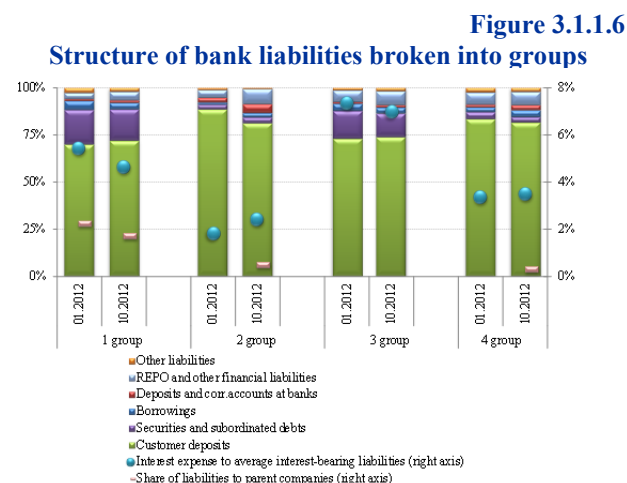
At the same time, the position of the 1st group of banks appears to be more vulnerable since they have a lower share of "performing" loans, which generate income, that, in combination with a high level of expenses related to provisioning for classified loans puts pressure on profitability and a further

¹³The share of non-performing loans in the loan portfolios of restructured banks comprising the 3rd group, as of – 46.7%, share of standard loans – 18.7%. As for the rest of banks in the 3rd group, the share of non-performing loans in the loan portfolio accounted for 14.6%, and the share of standard loans – 47.6%.

The credit expansion strategy of banks in **the 4th group** in the sector of retail lending, respectively, has a negative impact on the amount of expenses related to their provisioning.

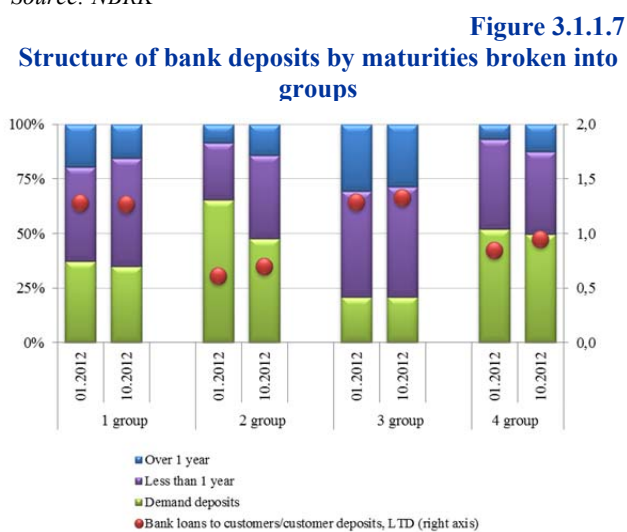
The funding structure, particularly, an opportunity to borrow "affordable" and relatively "long" resources also affects the efficiency of bank performance and represents one of the key factors for generating a sufficient rate of return.

The role of deposits as a resource base is increasing amidst a failure to use the potential of alternative sources of medium- and long-term funding; this is evidenced by a high share of deposits in the structure of bank liabilities.



Note: 1) information about the structure of liabilities is presented including premiums/discounts, and positive/negative adjustments; 2) interest expenses at 01.10.2012 are annualized; 3) average interest-bearing liabilities are calculated as the average at the beginning and at the end of the period.

Source: NBRK



Source: NBRK

prevail in the deposit mix of this group (47.6% of all attracted deposits), where interest rates offered are lower than those on term deposits. Moreover, foreign banks in the 2nd group can reasonably rely on the funding from their foreign parent companies, however, given the existing structure of liabilities, advantages of obtaining direct financing from the parent bank - the shareholder in this group of banks - were not used actively.

It is worth mentioning that in terms of maturities, customer current accounts, demand deposits and deposits with maturity less than 1 year prevail in the deposit mix of all banks in the group.

At the same time, a short-term nature of the resource base represents one of vulnerability factors primarily for those banks which have a high LTD ratio.

The deposit base had increased by 7.8% over 9 months of 2012; in doing so, the banks comprising **the 3rd group** were the most active in attracting customers with their contribution to the inflow of deposits accounting for 3.2%. Such growth was due to higher deposit rates offered by those banks, thus affecting the cost of borrowed resources. At October 1, 2012, interest expense to interest-bearing liabilities accounted for 7.0% (Figure 3.1.1.6).

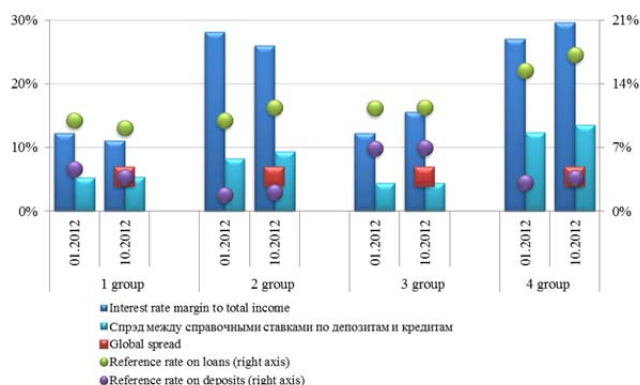
Banks in the **1st group** are more limited in their opportunities to raise additional funding, since, in the first instance, they are not willing to offer high rates on attracted deposits against significant expenses related to provisioning and essential debt burden accumulated in the pre-crisis period. Second, current position of banks in this group makes them less attractive both for institutional investors and for corporate customers, against the backdrop of increased competitive pressure on the part of other groups of banks. So, the deposit base of the group increased by 2.0% only during 9 months of 2012.

Despite a significant deposit base in the structure of liabilities of banks in the **2nd group**, the cost of their funding sources is the lowest as compared to other groups; this is explained, on the one hand, by an opportunity to attract large customers and offer them lower deposit rates given their sound market positions and competitive advantages. On the other hands, demand deposits and customer current accounts

So, the highest LTD level is observed among banks in the **1st and 3rd groups** (Figure 3.1.1.7), which indicates that such banks finance their borrowings, in addition to the deposit base, with alternative funding sources, in particular at the expense of accumulated foreign debt. However, as the funds borrowed during the pre-crisis period are repaid, the need in additional funding sources will be more urgent, primarily for the banks in the 1st group. Provided that the existing growth rates in deposits will be maintained, the decrease in additional funding sources is not going to be a pressing problem for the banks in the 3rd group.

Figure 3.1.1.8

Margin and spread broken into groups of banks

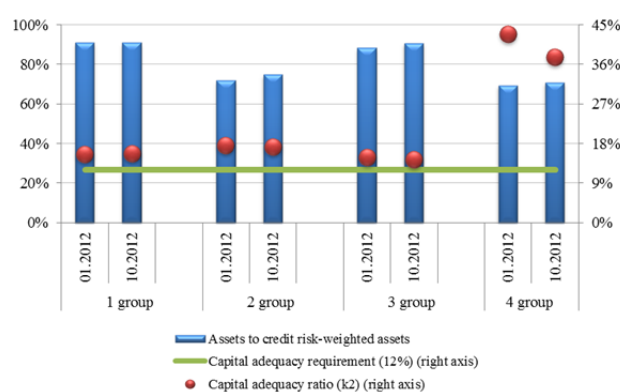


Note: 1) reference rate on loans – interest income on bank loans to customers/average position on loans; 2) reference rates on deposits – interest expenses from taken deposits/average position on deposits; 3) average position on loans and deposits – average of positions at the beginning and at the end of the period on loans and deposits, respectively; 4) global spread – the average spread between reference rates on deposits and loans of developing countries of Eastern Europe, South-East Asia, and Latin America (21 countries).

Source: NBRK, Financial Soundness Indicators (FSI)

Figure 3.1.1.9

Capital adequacy and credit risk-weighted assets



Source: NBRK

and Latin America, according to the most recent figures, accounted for 5.3%¹⁴. However, despite this fact, the magnitude of interest rate margin generated by banks in the 1st group is less than the same indicator in the 3rd group; this is explained by the pressure put by expenses for specific provisioning and operating expenses on the amount of profit, as well as by a lower interest income received. As a result, banks in the **1st and 3rd groups** with the largest level of provisions demonstrated the smallest values of **capital adequacy** (Figure 3.1.1.9). In addition, a high ratio of

Thus, credit opportunities of banks in the 1st and the 3rd groups are determined by their ability to borrow at reasonable rates, on the one hand, and by active efforts for rehabilitation of their loan portfolios and recovery of overdue debt, on the other hand.

As for banks in the **2nd group**, one may make a conclusion that their lending activity is based on the principles of risk minimization, that is the expansion of lending is entirely secured and limited by deposits attracted from customers. At the same time, maintaining the LTD ratio at the level lower than 1 indicates a high rate of the credit base turnover of those banks expressed in the process of an on-going replacement of repaid loans by new ones.

One of the factors that influence the amount of **interest rate margin** is the magnitude of interest rate spread. Thus, net interest income of banks in the **2nd group** is higher than income generated by banks in the **3rd group**, because of the difference in the cost of borrowed resources, despite comparable interest rates on placed loans (Figure 3.1.1.8).

The highest **interest rate spread** is demonstrated by banks in the **4th group**. At the same time, the magnitude of rates on loans placed by banks in this group is curbed by the existing restrictions of annual effective interest rate.

As for the **1st group** of banks, the excess in the magnitude of interest rate spread of this group over the spread of banks in the 3rd group (5.4% and 4.4% as of 01.10.2012, respectively) is observed. Interest rate spread of developing countries of Eastern Europe, South-East Asia

¹⁴ Financial Soundness Indicators (FSI), IMF.

credit risk-weighted assets to total assets of these groups of banks is worth noting (91.0% and 90.8%, respectively). In the 2nd and the 4th groups this ratio is 74.8% and 70.9%, respectively).

The highest capital adequacy level among banks in the 4th group is associated with a so far small volume of active operations, since such banks are only starting to increase their presence in the market of banking services.

3.1.2 Credit Risk

In 2012, a minor decrease in the share of non-performing loans of banks (excluding BTA Bank) has been observed, first of all, due to the outstripping growth rate of new loans, mainly consumer loans. Existing threats associated with consumer lending are insignificant. However, persistence of outstripping growth rates of consumer lending coupled with low growth rates of corporate lending might become an area of future risks for the banking system. At the same time, an objective reason for low lending activity of banks in the real sector of the economy is a high volume of accumulated debts and some slowdown in the business activity of enterprises, thus limiting the potential for improved quality of bank assets and expanded base of potential borrowers.

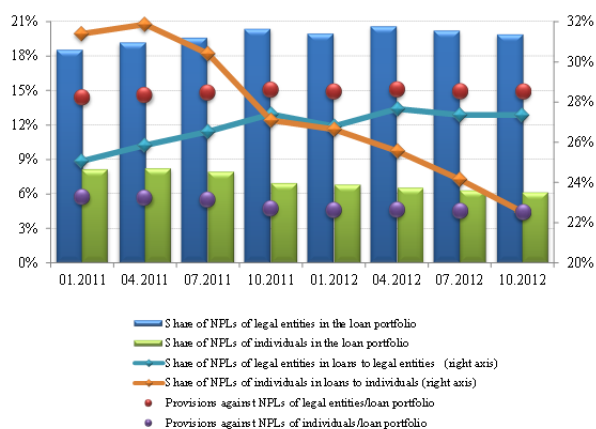
Figure 3.1.2.1
Share of non-performing loans in the total loan portfolio of banks



Note: excl. BTA Bank

Source: NBRK

Figure 3.1.2.2
Non-performing loans broken down by borrowers - legal entities and individuals



Note: excl. BTA Bank

Source: NBRK

In 2012, increased lending activity of Kazakh banks was observed due to increased consumer lending. Increased lending was accompanied by decreasing growth rates of non-performing loans, which is reflected in some improvement of relative quality parameters of the bank loan portfolios (excluding BTA Bank) (Figure 3.1.2.1). Despite a decreased share of non-performing loans in the total loans (excluding BTA Bank), the amount of non-performing loans continues to increase mainly because of further deterioration in the quality of loans provided to enterprises in the corporate sector.

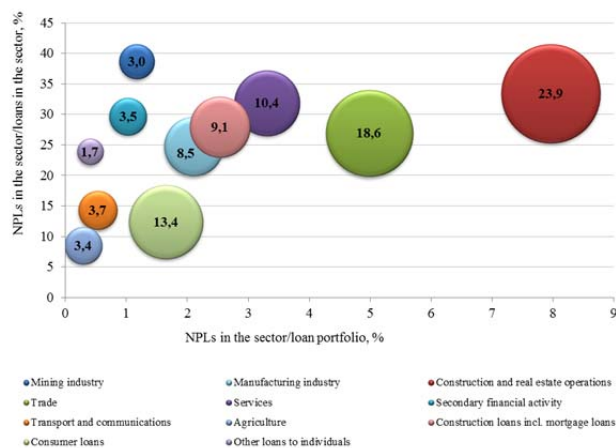
Thus, the amount of non-performing loans provided to the corporate sector increased by 10.9% since 01.10.2012, with their share in loans to legal entities at 01.10.2012 remaining unchanged versus the respective period of the previous year – 27.4% (Figure 3.1.2.2).

The volume of non-performing loans of individuals hasn't virtually changed, with their share in loans to individuals decreasing significantly from 27.1% at 01.10.2011 to 22.5% at 01.10.2012; this fact is related to the lending activity of banks in the consumer lending sector. Specifically, the growth in consumer loans in the banking system as a whole since 01.10.2011 accounted for 43.3%, whereas the growth in loans to entities operating in other sectors of the economy was 9.9%.

Credit Risk Concentration by Economic Sectors

The structure of the credit portfolio by types of economic activity helps identifying the areas of enhanced credit risk concentration and channels of potential overflow of risks pertinent to the corporate sector. Loans provided to the construction sector and related industries comprise the

Figure 3.1.2.3
Sectoral structure of the loan portfolio as of 01.10.2012



Note: the diameter of circles corresponds to the share of loans to the sector

Source: NBRK

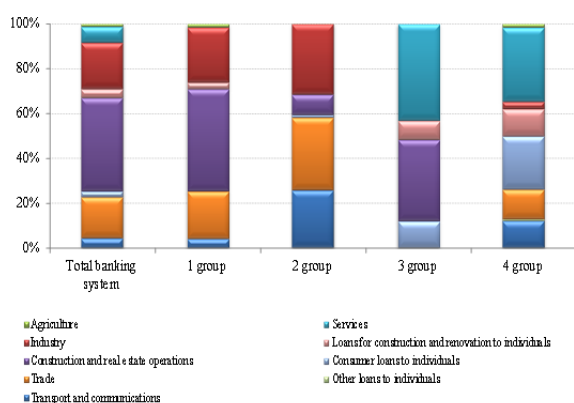
Table 3.1.2.1

Sectoral structure of the loan portfolio broken into groups of banks as of 01.10.2012, %

	1 group		2 group		3 group		4 group	
	Share in the loan portfolio	Share of NPLs in loans to the sector	Share in the loan portfolio	Share of NPLs in loans to the sector	Share in the loan portfolio	Share of NPLs in loans to the sector	Share in the loan portfolio	Share of NPLs in loans to the sector
Agriculture	2,3	15,7	4,9	1,6	3,1	7,3	15,9	1,7
Mining industry	2,2	49,1	10,0	22,0	2,4	53,6	4,1	1,9
Manufacturing industry	9,0	27,	15,2	6,7	5,7	35,3	6,1	20,4
Construction and real estate operations	32,7	33,7	9,2	3,3	12,5	44,1	9,2	3,6
Trade	17,1	37,8	19,8	3,6	20,9	19,1	23,2	4,5
Transport and communications	3,4	16,9	87	7,8	2,6	17,8	4,8	5,2
Services	12,0	32,8	8,8	1,7	8,4	44,8	7,6	6,
Secondary financial activity	2,5	56,1	9,8	0,8	2,5	26,5	6,4	5,4
Loans for construction and renovation to individuals	8,6	31,5	4,6	1,3	9,5	38,2	2,8	14,5
Consumer loans to individuals	7,3	14,1	5,1	2,1	30,8	12,6	18,7	,9
Other loans to individuals	2,2	19,1	0,2	8,7	1,3	44,8	0,7	10,4

Source: NBRK

Figure 3.1.2.4
Structure of "new" non-performing loans as of 01.10.2012



Source: NBRK

Alongside with loans in the construction sector, the share of loans to trading companies is also significant – 18.6% of the credit portfolio. The level of non-performing loans in this sector accounted for 26.9%.

Apart from that, a significant share in the loan portfolio of banks is comprised by consumer loans, where at present the credit risk concentration is minor (the share of non-performing loans for consumer purposes accounts for 1.7%). However, persistence of the growth rates of consumer loans might become an area of elevated risk, primarily for banks in the 3rd group since the maximum concentration of consumer loans is observed in the loan portfolios

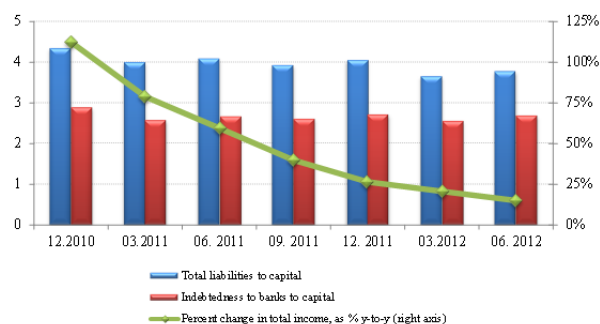
of such banks – 30.8% at 01.10.2012 (Table 3.1.2.1).

Banks in the 2nd and the 4th group hold the mostly diversified portfolio, which is the evidence of a lower potential for the credit risk realization, as compared to the 1st and the 3rd groups.

In the banking system as a whole, a major portion of "new" non-performing loans falls on loans to corporate entities – 93.5% (Figure 3.1.2.4), where 41.7% of "new" non-performing loans falls on loans to the construction sector, thus indicating that the borrowers' capacity to service debt obligations - construction companies - is continuing to decrease.

Figure 3.1.2.5

Financial independence of the corporate sector



Note: the calculation includes those enterprises which share of due to banks in total liabilities is higher than the median

Source: ASRK, NBRK calculations

Risks associated with financial position of large and medium-size enterprises in the corporate sector

Increased volumes of non-performing debt on loans granted to large- and medium-size enterprises may be explained by unstable financial position of enterprises that are most active in the bank lending market¹⁵, whose share in the corporate sector's assets accounts for 13.4%. High reliance upon borrowed funds among enterprises in this group against slowing business activity and reduced growth rates of total income decrease their ability to service debt obligations and limit their potential for rehabilitation of problem debt (Figure 3.1.2.5).

A high degree of "debt load" of those enterprises is proved out by a significant debt to equity ratio, which was 3.8 at the end of the 2nd quarter of 2012, as well as by a high share of their debt to banks (71.2% of liabilities of this group of enterprises at 01.07.2012). It should be mentioned that among the rest of the enterprises in the corporate sector that were not included into the sample, the leverage was 1.3 with a low level of bank debt (6.2% of liabilities of these enterprises).

At 01.07.2012, 2.0% of enterprises¹⁶ have maximum risk level among the enterprises with a high level of bank debt. At the same time, the share of organizations with high and medium level of risk totals 53.7% (Figure 3.1.2.6). Thus,

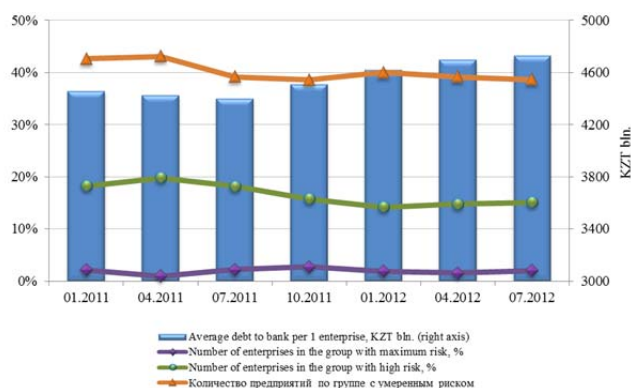
of borrowing enterprises exacerbates potential

unstable financial position of a great number of enterprises exacerbates potential vulnerability of the banking sector.

Low financial soundness and high risks of enterprises in certain sectors should be noted; these determine potential sectoral risk areas for the banking sector. So, heavy reliance on credits as funding sources is demonstrated by enterprises in the non-oil sector namely, the construction sector, trade and secondary financial activity (Table 3.1.2.2).

Figure 3.1.2.6

Financial soundness risk of enterprises



Note: 1) calculated on the basis of low liquidity and ROE indicators comprising the group less than 25 percentile and a high leverage ratio comprising the group over 75 percentile;

2) the calculation includes those enterprises which share of due to banks in total liabilities is higher than the median

Source: ASRK, NBRK calculations

¹⁵ Enterprises which the share of debt to banks in the total liabilities is higher than the median (the median was = 35.83%).

¹⁶ 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.

The position of enterprises in the construction sector that were included into the sample is the most unstable because of their negative equity, significant debt burden and relatively low liquidity level; these factors allow expecting a further growth in non-performing loans to the construction sector in the bank loan portfolios.

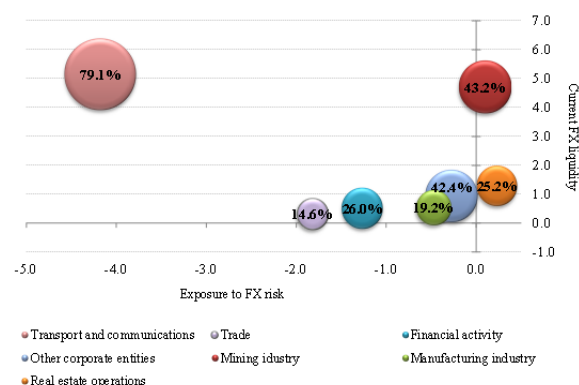
Table 3.1.2.2
Corporate sector's financial soundness indicators broken into sectors as of 01.07.2012

	ROE, %	ROA, %	Liquidity	Leverage	Due to banks/equity
Agriculture	27,9	5,8	1,3	4,0	2,9
Mining industry	88,0	38,9	1,6	1,3	0,7
Manufacturing industry	28,5	6,1	1,1	3,9	2,5
Construction	-18,2	4,0	1,0	-5,7	-2,5
Trade	221,2	3,8	1,1	59,0	13,4
Transport and communications	41,	4,6	1,3	8,2	5,8
Financial activity	-21,4	-3,5	5,8	,1	4,6
Real estate operations	79,0	17,8	1,1	3,7	2,3
Services	12,1	3,6	1,1	2,4	1,7
TOTAL	55,2	11,4	1,3	4,0	2,7

Note: the calculation includes those enterprises which share of due to banks in total liabilities is higher than the median

Source: ASRK, NBRK calculations

Figure 3.1.2.7
Assessment of FX risk broken down by economic sectors as of 01.07.2012



Note: 1) exposure to FX risk – net FX position to capital in the sector; 2) diameter of the circle corresponds to the share of FX liabilities in total liabilities of the sector; 3) the graph doesn't contain the construction sector because of its negative equity; 4) the graph doesn't contain the agricultural sector. FX risk is insignificant (-0,01) with the liquidity level – 1,4.

Source: ASRK, NBRK calculation

should be pointed out (Figure 3.1.2.7).

Risks associated with the financial position of individuals

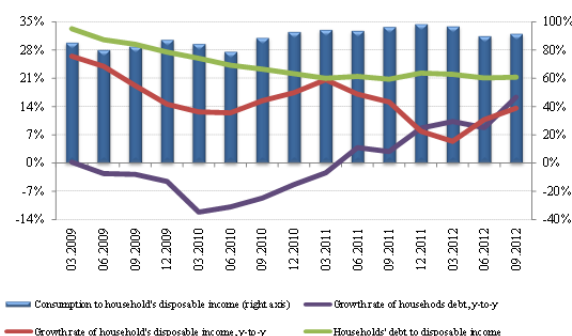
Comparability of consumption and disposable income against a modest level of debt burden and the growth in gross disposable income serves as an indicator of financial soundness among households. Thus, from 01.10.2011 through 01.10.2012, the growth in disposable income of households accounted for 13.6%, mainly due to increased earnings from labor activity and earnings from households assets. Affected by the financial crisis during 2009-2010, households cut their spending on consumption: until mid-2010 the ratio of spending on consumption to households disposable income accounted for 83% on average. At the same time, households were prone to save up to 17% of their disposable income (Figure 3.1.2.8).

During this period, the growth of debt was negative, which is indicative of (1) a drive of the population to settle up old debts, and (2) unwillingness to build up new debts in the environment of post-crisis uncertainty, thus resulting in the decreased debt burden.

In 2011-2012, the growth in disposable income in addition to the change in downbeat moods of the population, reduces the propensity to save among households, which is evidenced by the increase in the share of households spending on consumption that exceeded 90%.

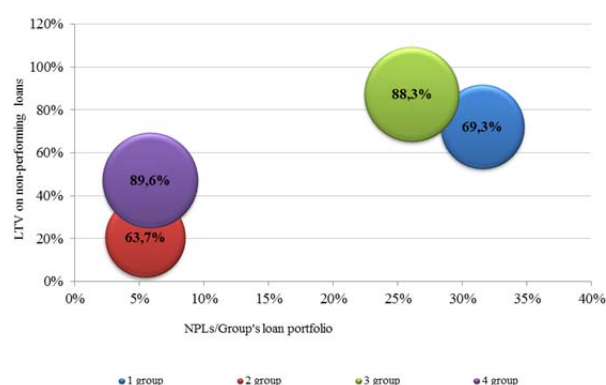
At present there is a trend of the excess in the growth rates of households debt over the growth in disposable income, in addition to the increased propensity to consume among the population. The factor that is conducive to the increase in the population's spending on consumption is active buildup of the portfolio of consumer loans by banks; this factor, in the absence of proper risk control, may lead to an increased debt burden and decreased financial stability of households in the mid-term (in the pre-crisis period the ratio of consumption to disposable income was reaching 115%).

Figure 3.1.2.8
Households debt burden and propensity to consume



Source: ASRK, NBRK calculations

Figure 3.1.2.9
Ratio of non-performing loans of a group to value of collateral taken against non-performing loans



Note: the diameter of circles corresponds to the share of provisions created against NPLs to the amount of NPLs in the group

Source: NBRK

group have a large portfolio of consumer loans where the security often doesn't cover the principal loan amount.

Banks in the 2nd group have the lowest LTV ratio as compared to the rest of the banks – 20.5%, which proves to be a high coverage of non-performing loans with collateral.

However, it should be noted that banks in the 1st group have a low coverage of non-performing loans by created provisions (69.3%), despite a higher share of non-performing loans in their loan portfolio as compared to banks in the 3rd group. On the one hand, a share of bad loans within non-performing loans of the 1st group of banks is lower than in the banks of the 3rd group. So, at 01.10.2012, in the 1st group of banks 57.4% of non-performing loans are bad loans, whereas in the 3rd group the share of bad loans within non-performing loans accounts for 78.8% (Table 3.1.2.3). In addition, some banks in the 1st group created less provisions for non-performing loans of industrial enterprises than required¹⁷ due to the use of guarantees provided by parent companies

¹⁷ Under the existing requirements, bad loans require 100% provisioning against impairment.

of banks with foreign equity comprising this group. The level of coverage for non-performing loans with provisions in banks of the 2nd group is also indicative of inadequacy of created provisions to assumed risks. So, at 01.10.2012, the level of coverage with provisions in this group accounts for 63.7%, with the share of bad loans within non-performing loans accounting for 90.4%. Foreign banks actively use the guarantees from their parent banks with a high rating for bad loans, thus enabling them to create less provisions than the amount required by the regulator.

Table 3.1.2.3

**Adequacy of provisions created against non-performing loans broken down by groups of banks
as of 01.10.2012, %**

	1 group		2 group		3 group		4 group	
	Provision against NPLs to NPLs amount	Share of bad loans in the NPLs amount	Provision against NPLs to NPLs amount	Share of bad loans in the NPLs amount	Provision against NPLs to NPLs amount	Share of bad loans in the NPLs amount	Provision against NPLs to NPLs amount	Share of bad loans in the NPLs amount
Agriculture	86.7	72.9	93.5	87.0	92.6	85.3	51.5	3.0
Industry	61.6	64.1	47.6	89.2	93.1	86.3	112.9	100.0
Construction and real estate operations	70.2	60.5	97.3	96.8	85.7	71.4	100.0	100.0
Trade	74.4	58.6	94.6	89.1	93.9	87.9	88.4	77.5
Transport and communications	79.0	68.6	75.3	99.6	97.0	94.1	109.6	100.0
Services	75.6	59.8	82.3	80.0	86.2	71.	83.5	67.0
Loans for construction and renovation to individuals	46.3	25.3	87.4	74.8	90.6	81.7	71.9	43.9
Consumer loans to individuals	62.3	42.8	96.0	92.0	80.7	77.2	78.1	86.9
Other loans to individuals	90.9	83.1	98.1	96.3	88.9	80.7	78.3	56.
TOTAL	69.3	57.4	63.7	90.4	88.3	78.8	89.6	79.4

Source: NBRK

Therefore, provisions created against non-performing loans according to the existing regulatory requirements, are not fully commensurate with the level of existing problem debts in certain banks. Moreover, the existing approach to provisioning is of a procyclic nature, that is provisions are created only in case of objective factors of deterioration in the credit quality of an asset. To this end, in 2013, the existing approach to provisioning based on the model of incurred losses will be supplemented with dynamic provisions based on the principles of countercyclical regulation (Box 3).

Box 3

Introducing dynamic provisions (reserves) into kazakh practice

In 2013, the existing approach to provisioning based on the model of incurred losses, where provisions are recognized only in case of objective factors of deterioration in the credit quality, will be supplemented with the dynamic provisions oriented on an expected losses. The mechanism of the instrument suggests a recognition of expected loan losses at earlier stages of the credit cycle, thus allowing the creation of an additional "safety cushion" in the periods of credit expansion in order to absorb losses during the subsequent periods of credit contraction.

Where:

ΔDP – a change in the dynamic provision during the reporting period;
 ΔSP – a change in provisions created under IFRS during the reporting period;

$$\Delta DP = \alpha \cdot \Delta L + (\beta \cdot L - \Delta SP)$$

ΔL – total loans granted during the reporting period;

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

α (alpha) – loan loss parameter;

β (beta) – hidden loss parameter.

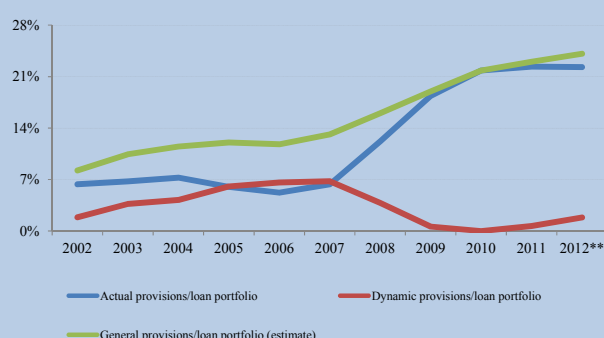
For a visual demonstration of a countercyclical effect of the dynamic reserve on the basis of historical data the scenario simulating the introduction of this instrument into practice in Kazakhstan since 2002, was reviewed. The α (alpha) parameter was determined to be at 5.9%, the β (beta) parameter was determined to be at 0.9%¹. The outcomes of the model testing show that an additional "interior layer" of provisions accumulated in the pre-crisis period would have exceeded

the level of provisions as required by the regulator and could account for about 6.8% of the loan portfolio built up at the beginning of 2008 (Figure 1). During the next period of recession, a gradual write back of this reserve could have a smoothing effect on fluctuations in a retained part of net profit during the most acute period of crisis² (Figure 2). Thus, "the build-up" in the form of dynamic provisions is justified in terms of mitigating the burden on the bank profits in the times of recession while enhancing the function of capital as a source to cover unexpected losses.

When implemented in Kazakhstan, a positive difference between provisions created under the regulatory requirements and reserves established under IFRS and recorded on a special account³ would be recognized as dynamic provisions. Based on the performance of 11 months of 2012, this indicator amounted to KZT 339.1 bln. or 3.6% of total loans (excluding BTA Bank).

At the same time, it is difficult to make an estimate of an economic effect from implementation of the dynamic reserve in the banking sector in 2013 because of the need to take into account the specifics and the development strategy of each individual bank when doing forecasting.

Figure 1
Dynamic reserve.
Demonstration on the basis of historical data of the banking sector*



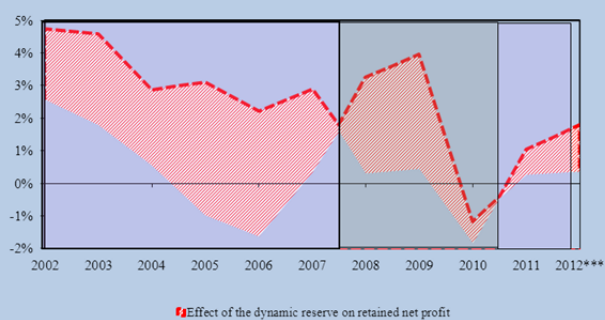
Note:

*excl. 3 banks under restructuring

** At the end of 9 months of 2012

Source: NBRK estimate

Figure 2
Evaluation of net retained earnings* based on the mechanics of the dynamic reserve**



Note:

*the ratio of net retained earnings to loan portfolio as shown in dotted line, was estimated.

The period of boom and the accumulating effect of the dynamic reserve are shown in lilac, the period of crisis and the compensating effect of its winding up are shown in grey .**

Excl. 3 banks under restructuring

*** At the end of 9 months of 2012

Source: NBRK estimate

At the same time, generally the dynamics of such provisions will be determined by the growth rates of reserves established under IFRS, as well as the growth in the loan portfolio as a whole. In particular, with the credit portfolio growth estimated at 12%⁴ in 2013, the estimate of the growth in reserves established under IFRS is ranging from 3.6% to 10%. The forecast shows that at slackened rates of growth in the reserves established under IFRS, a total volume of additional creation of the dynamic reserve in the system can exceed 20% of the reserve accumulated at the beginning of 2013. However, with the growth in provisions under IFRS commensurable with the growth in total loans, there will be a write-back of the dynamic reserve pool that would account for about 12% in annual terms. Taking into account reasonability of expectations about certain deterioration in the quality of the credit portfolio in 2013 and a counter-cyclical nature of the dynamic reserve, the write-back of such reserve pool seems to be more appropriate in the current circumstances. To this end, the effect of the β parameter on the amount of established dynamic reserve in 2013 will be neutralized, resulting in the decrease of the dynamic reserve by over 30% in case of the growth in reserves established under IFRS at the rates comparable with the growth of the loan portfolio.

¹ The α (alpha) parameter was estimated based on the averages about the probability of default (PD) and loss given default (LGD) for a decade. The ratio of non-performing loans to total loans was used to estimate PD. The LGD ratio was obtained by using the IMF's approach and data on the recovery rates from the Doing Business. The β (beta) parameter was determined as the average of the change in the total provisions to the loan portfolio, excluding the data on BTA Bank.

² The smoothing effect of dynamic provisions on net retained earnings was underestimated since the calculation was based on the actual data about the provisions created under the regulatory requirements rather than under IFRS.

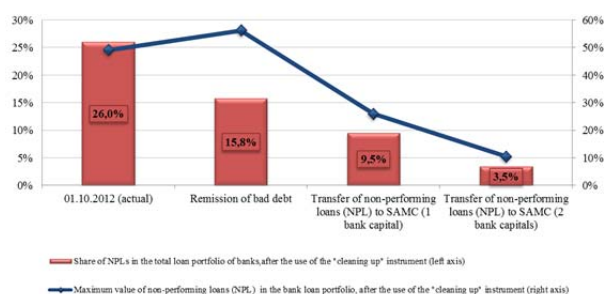
³ Account No.3300 "Account for the Adjustment of Reserves (Provisions)" of the Standard Chart of Accounts in banks, mortgage companies and the Development Bank of Kazakhstan as approved by the resolution of the NBRK's Managing Board dated January 31, 2011 No. 3

⁴ Under an aggregated outcome obtained on the basis of projections of twenty banks participated in the NBRK's survey.

Strategy for problem asset management

The banks' potential of using "classical" instruments for improving their asset quality, including debt restructuring, in terms of their influence on the total level of non-performing loans has been virtually exhausted by now. In order to solve the problem of low asset quality, in 2012 the

Figure 3.1.2.10
Potential for the use of instruments for "cleaning up" balance sheets of banks from non-performing loans (estimate)



Note: Excl. BTA Bank

Source: NBRK

Table 3.1.2.4

Banks' appetite for using the instruments of "cleaning up" their balance sheets from non-performing loans (based on bank estimates)

Indicators	2013
Using the "cleaning up" instruments, as % of current NPL volume:	
Transfer to the PAF	0,7% - 2,0%
SAMC	4,5%
Remission of bad debt	1,8%
Other instruments (transfer to collection agencies, charging to the bank's balance sheet, charging off balance sheet)	7,2%
Using the "cleaning up" instruments, as % of potential volume of instrument use:	
Remission of bad debt	4,0%
SAMC (max. volume- 3 capitals of bank)	2,3%
Assets (recovered to the bank's balance sheet) intended to be transferred to SAMC, as % of due from SAMC occurred at end-2013	63%
The growth in the loan portfolio over the period	12,4%
The increase in non-performing loans over the period	4%
The range in the share of non-performing loans in the 1st group of banks, at end-2013	14,5% – 41,0%
The range in the share of non-performing loans in the 3rd group of banks, at end-2013	1,2% - 37,6%
The share of non-performing loans in total loans of banks, at end-2013	21,5%

Source: estimates presented by 20 largest banks (excl. BTA Bank) based on a survey, NBRK calculations

transferred to SAMC in the amount of two owners' equities of the bank, a share of problem assets would go down to virtually the pre-crisis levels. At the same time, their maximum volume on the balance sheets of banks would not exceed 8-10%.

However, one should expect that banks will still pursue a conservative strategy in 2013 (Table 3.1.2.4). So, according to a conducted survey, banks are willing to transfer to the PLF not more than 2% of non-performing loans. Given the largest "cleaning up" potential in the process of

supervisor introduced several mechanisms of "cleaning up" the bank balance sheets from non-performing loans; under those mechanisms, assets may be (1) transferred to the PLF and to SAMC, and in addition, (2) conditions have been provided for remission of bad debts without the occurrence of any additional tax liabilities for banks. Given the concentration of non-performing loans in banks of the 1st and 3rd groups (96% of the total volume of non-performing loans), the achievement of an "optimal" level in the quality of the loan portfolio in the banking system as a whole is dependent on the extent to which the "cleaning up" instruments would be used by banks in these groups.

Taking into account a possible effect from the use of the bad debt remission instrument by banks that is limited both by the scale of losses and subsequent contraction of the credit portfolio, the instrument of transferring problem loans to SAMC has the best potential for the recovery of the value of problem loans (Figure 3.1.2.10). So, according to a conservative estimate which takes into account the transfer of non-performing loans to SAMC in the amount of only one owners' equity of a bank (a maximum amount of the transfer may include 3 owners' equities of the bank), their system-wide decrease to 9.5% is ensured. Share of non-performing loans in the loan portfolios of banks in the target group (without BTA Bank) would decrease to 20%-26% (a maximum current percentage is 49.1%). Where non-performing loans are

assets transfer to SAMC, the extent of the use of this instrument by the target group of banks (group 1 and 3) doesn't exceed 10% of equity. Alongside with that, over 60% of projected due from SAMC will be generated from assets which have already been recovered on problem loans to balance sheets of the banks. The plans about the remission of bad debt are within the range of 1% - 12% of the potential volume. Despite a decreased level of non-performing loans in the system as a whole (in case of implementation of estimates made by banks), the majority of bank in the target group would retain the existing level of non-performing loans on their balance sheets in 2013. In this connection, the achievement of "optimal" numbers should be supported by determination of target levels, including through the implementation of regulatory instruments of an administrative nature that provide for establishing thresholds for the share of non-performing loans in the loan portfolios of banks.

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

Banks continue maintaining a forced high level of liquidity both because of a significant share of short-term liabilities in the funding structure and limited nature of collaterals which can be used to attract additional liquidity including through borrowings from the NBRK. The absence of a replacement for long-term funding amidst repayment of their foreign liabilities by banks narrows the potential for long-term credits to the economy. In these circumstances, accumulation pension funds and insurance organizations can act as potential investors capable of providing medium- and long-term lending to banks.

From the standpoint of compliance with regulatory requirements, there was no need for the banks to maintain a substantial liquidity volume in 2012. Banks comply with the established regulatory liquidity ratios and minimum reserve requirements more than enough, thus evidencing their low appetite for assuming liquidity risk (Figures 3.1.3.1 and 3.1.3.2).

Figure 3.1.3.1
Bank compliance with minimum reserve requirements

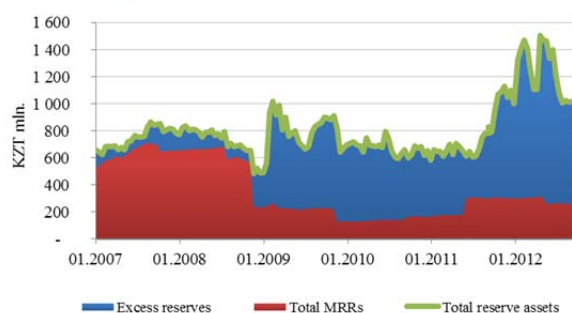
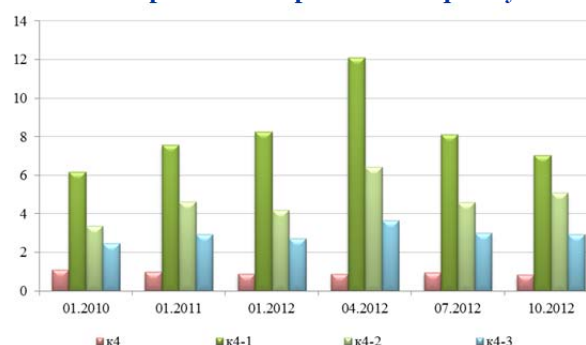


Figure 3.1.3.2
Bank compliance with prudential liquidity ratios



Note:

1) MRRs – minimum reserve requirements – the share of the liability amount which is maintained by the bank in the form of cash and cash on correspondent accounts at the NBRK;

2) $\kappa 4$ – average monthly (AM) highly-liquid assets (HLA) to AM demand liabilities ($\kappa 4=0,3$);

$\kappa 4-1$ – AM HLA to AM liabilities with maturity less than 7 days ($\kappa 4-1=1$);

$\kappa 4-2$ – AM assets with maturity less than 1 month to AM liabilities with maturity less than 1 month ($\kappa 4-2=0,9$);

$\kappa 4-3$ – AM assets with maturity less than 3 months to AM liabilities with maturity less than 3 months ($\kappa 4-3=0,8$).

Source: NBRK

One of the reasons for the existing bank liquidity level is the prevalence of short-term instruments in their funding structure. The share of demand liabilities and liabilities with maturity less than 1 year remains high, reaching 2/3 of bank total liabilities (Figure 3.1.3.3)¹⁸. The ratio of assets and liabilities with maturity less than 1 year is 0.93. Moreover, a rapid growth of the least predictable part of liabilities – demand liabilities – requires appropriate accumulation of highly

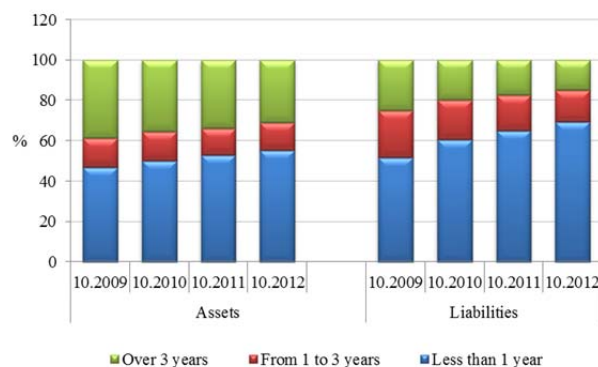
¹⁸ The data presented in this section exclude BTA Bank

liquid assets (Figure 3.1.3.4). As a result, if in 2010 and 2011 banks maintained their liquidity ratio at 0.9 of demand liabilities, at end-September 2012 this ratio reached 1.2.

The highest share of assets with maturity less than 1 year in total assets at end-September 2012 was in banks belonging to groups 2 and 4. This is explained by the need to level the gap position due to a large volume of short-term liabilities of banks in these groups.

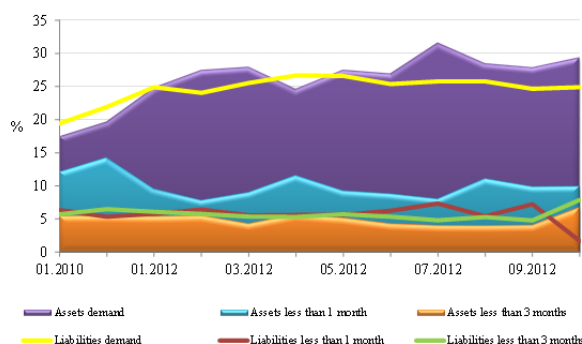
Banks of the 1st and the 3rd groups demonstrated a higher (more than 1) ratio between assets and demand liabilities; this fact is associated with the need to accumulate liquidity to provide for forthcoming payments of external debt (mainly, for banks in the 1st group) as well as the lending policy of banks focused on short-term consumer lending (mainly, among banks in the 3rd group).

Figure 3.1.3.3
Assets and liabilities by remaining maturities



Source: NBRK

Figure 3.1.3.4
Short-term assets/ liabilities to total assets/ liabilities of banks



Source: NBRK

potential additional volume of securities which can be pledged to the NBRK under the reverse REPO transactions amounted to KZT 592.8 bln. or 4.4% of total assets of banks as of 01.10.2012. Excluding short-term notes of the NBRK¹⁹, the potential amounts to KZT 498.3 bln. or 3.7% of total assets of the bank. Should the NBRK accept the overall volume of GSs in the banks' portfolio as collateral on refinancing operations, the share of liabilities to the NBRK in the structure of bank liabilities will reach 3.8%.

This amount is comparable with the maximum volume of liabilities to the NBRK on refinancing operations during the last crisis that was observed in the 1st quarter of 2010 and amounted to KZT 454.8 bln. (3.53% of all liabilities of banks) and was determined by the support of banks which had undergone the restructuring of their liabilities. Provision of liquidity to banks by the NBRK during the most pressing phase of liquidity shortage i.e. in the second half of 2007 – in 2008 was mainly effected against the pledge of correspondent account balances of banks with the NBRK or by entering into swaps which, in effect, distorted the money market conditions.

In the structure of liquid assets there was a reallocation of resources from GSs to liquid assets at correspondent accounts, to demand deposits with the NBRK and other banks. In the system as a whole, during 9 months of 2012 cash and refined precious metals increased by 8.0%, correspondent accounts and deposits with the NBRK – by 14.4%, and correspondent accounts and deposits with other banks – by 3.1%. During the period the volume of GSs decreased by 31.7%.

The decreased volume of GSs in the bank portfolios represents one of the factors that will limit *the banks' potential to attract additional liquidity*, both from the NBRK and in the interbank market. The NBRK enters into reverse REPO transactions with banks only against the pledge of GSs and the bonds issued by the NWF "Samruk-Kazyna" before 01.04.2009 and purchased by banks in the primary market. Therefore, the list of collateral is fairly limited.

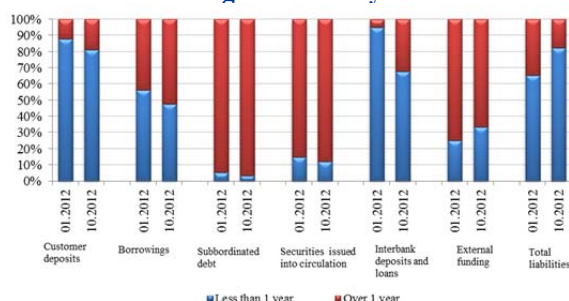
As of 01.10.2012, 22.1% of the bank securities portfolio was under pledge. The share of pledged GSs in the total portfolio of banks accounts for 23.2%, of NGSs – 27.8%. At the same time, under the existing requirements

¹⁹ NBRK's short-term notes depend on the current situation with bank liquidity and the NBRK's policy, are exposed to market fluctuations and ultimately have a zero net effect upon liquidity.

Thus, the issue of possible extension of the list of collateral acceptable for the NBRK when conducting transactions related to the provision of liquidity to banks, in the environment of shortage of financial instruments in the structure of bank assets, in case of a substantial shock, is still urgent. Shares of unencumbered securities of NWF "Samruk-Kazyna" and national companies in Kazakhstan, and good quality securities of foreign issuers remain insignificant. Claims to customers classified as "standard" may have some potential,

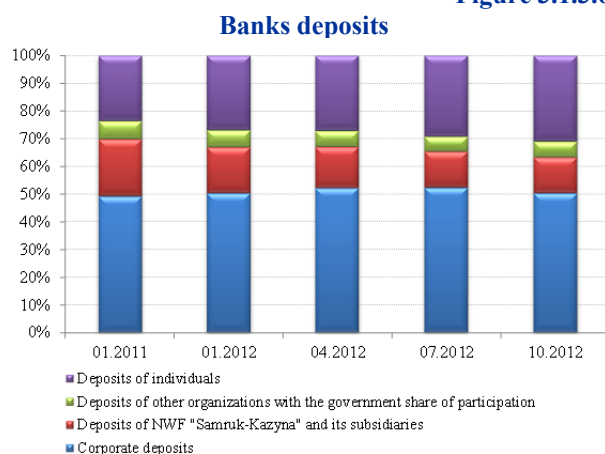
however, there is no market for such instruments in Kazakhstan, thus making their pricing and further circulation virtually impossible.

Figure 3.1.3.5
Funding structure by maturities



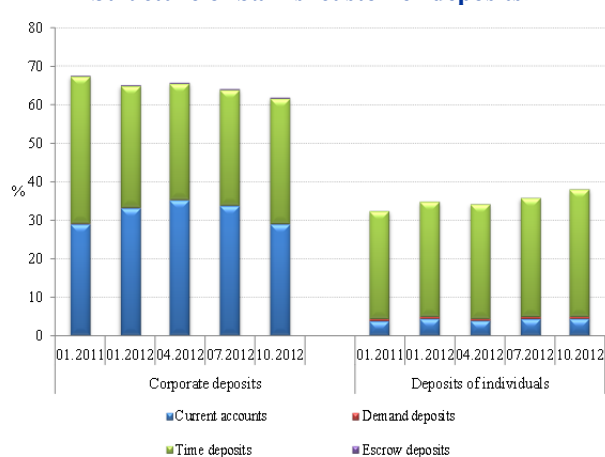
Source: NBRK

Figure 3.1.3.6



Source: NBRK

Figure 3.1.3.7
Structure of banks' customer deposits



Source: NBRK

The structure of bank funding at 01.10.2012 was presented by customer deposits (73.9%), foreign liabilities (14.1%), securities issued into circulation (9.2%), as well as interbank deposits and loans (1.8%) (Figure 3.1.3.5). Shortening of maturities was observed only in relation to foreign liabilities due to repayment of external debt and moderate approach of Kazakh banks to borrowing new, relatively "expensive" foreign monies.

Over 9 months of 2012, the deposits of Kazakh banks has increased by 7.8%. Deposits of corporate entities increased by 2.5%, and deposits of individuals – by 17.8%. Deposits of the quasi-government sector including NWF "Samruk-Kazyna" decreased by 25.3%, which is related to the need to finance scheduled projects by government-owned companies (Figure 3.1.3.6).

Resources allocated under the government programs for economic support remain attractive for end borrowers in terms of interest rates, however, their role in bank funding is still insignificant. As of 01.10.2012, banks drew down on the government programs only 0.6%²⁰ of their total liabilities and 1.6% of their total loan portfolio.

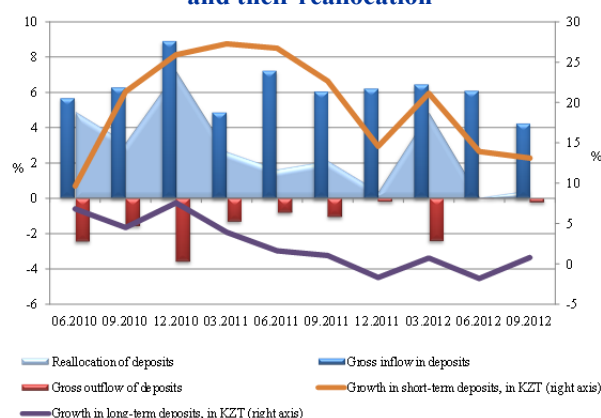
The structure of liabilities to customers is mainly (80.4%) represented by current accounts and time deposits (Figure 3.1.3.7). Customer accounts are mainly short-term. Therefore they cannot be regarded as a stable source of long-term funding for the banks. As of 01.10.2012, households deposits accounted for 28.2% in the structure of bank liabilities. The growth in households deposits was secured by the growth in short-term Tenge deposits (79%)²¹, while long-term deposits decreased by 2% (Figure 3.1.3.8).

²⁰ The calculation of draw-downs by banks under the government programs was made based on the data provided by banks.

²¹ The growth in the 3rd quarter of 2012 versus the 3rd quarter of 2011.

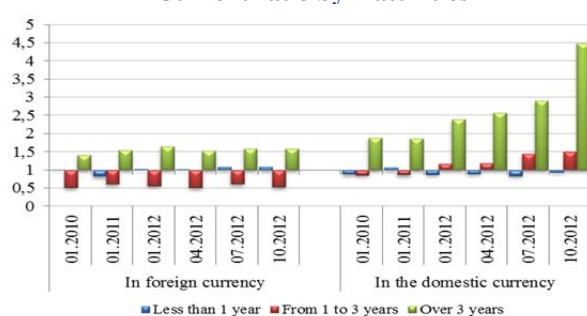
The shortening of deposit maturities occurring now indicates that negative expectations associated with external factors persist among the general public. As of 01.10.2012, in the households deposit mix the share of medium- and long-term deposits accounted for 59%.

Figure 3.1.3.8
Total inflows and outflows of deposits of individuals and their reallocation



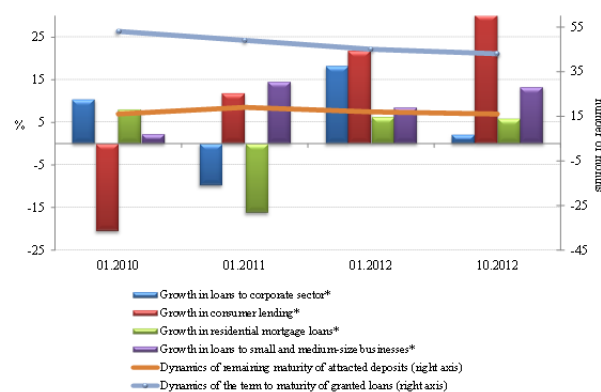
Source: NBRK

Figure 3.1.3.9
Current ratio by maturities



Source: NBRK

Figure 3.1.3.10
Indices of average maturities of granted loans and repayment of attracted liabilities, their effect on the growth rates of lending



Note: * as % to the previous year

Source: NBRK

As a whole, the reviewed period of 2012 was characterized by relative stability of the bank deposit base except for the 1st quarter. The announcement made by BTA Bank in mid-2011 about expected additional restructuring resulted in the increased activity of the population in 2012 to reallocate²² deposits among banks. In the 2nd and 3rd quarters of 2012, the dynamics in reallocation of households deposits was insignificant and was primarily associated with the enhanced interbank competition to raise additional funding by offering higher deposit rates by some banks.

The impact of mismatch between assets and liabilities on the lending policy of banks.

The existing level of coverage of liabilities by assets in the domestic and foreign currencies in 2012 was determined by the following reasons. First, significant excess of long-term assets over long-term liabilities was associated with the shortage of long-term funding sources, both in Tenge and in foreign currency. Second, a significant portion of short-term liabilities forces the banks to maintain a high level of short-term assets to minimize liquidity risk due to continuing instability in foreign financial markets. Third, the level of medium- and long-term coverage ratios in the domestic currency is affected by a restrictive requirements for banks in relation to lending to those customers that do not have foreign exchange proceeds, as well as the willingness of the customers themselves to get loans in Tenge (Figure 3.1.3.9).

An increase in the asset/liability mismatch observed in 2012 and cautiousness of banks about assuming additional risks associated with this fact is a major reason for a gradual change in the structure of lending. At present, average terms of bank loans exceed the maturities of attracted deposits by more than 2.8

²² Flows during period t for a bank i are determined as follows (I – bank's deposits):

$$POS / NEG \text{ flows} = \sum_i^N |g_{it}| * \left(\frac{(I_{i,t-1} + I_{i,t}) / 2}{\sum_{i=1}^N I_{i,t-1}} \right)$$

where g – is the rate of the change in deposits to the prior period weighted based on the bank's share in total deposits. A net flow is determined as the difference between positive and negative flows. Reallocation flows are determined as the sum of positive and negative flows minus net flow on the module.

times. To this end, banks are gradually changing the structure of lending giving preference to short-term consumer lending (Figure 3.1.3.10).

Thus, banks need to employ alternative sources of medium-term lending in order to align the structure of lending and give required impetus to the economic growth.

Potential sources for the growth in medium-term funding of banks. The existing investment market capacity on the part of institutional investors represents a potential source for banks to mobilize additional resources through the issue of debt instruments in the domestic market. Potential demand from APFs for bank securities, based on the current diversification limits²³, risk weights and capital adequacy ratio, is estimated at KZT 616.5 bln.²⁴. In addition, the demand on the part of insurance organizations for new issues of bank bonds based on the current regulatory requirements and the structure of balance sheets of insurance companies is estimated at KZT 167 bln. (Table 3.1.3.1).

Table 3.1.3.1

Potential of institutional investors for purchasing bank bonds

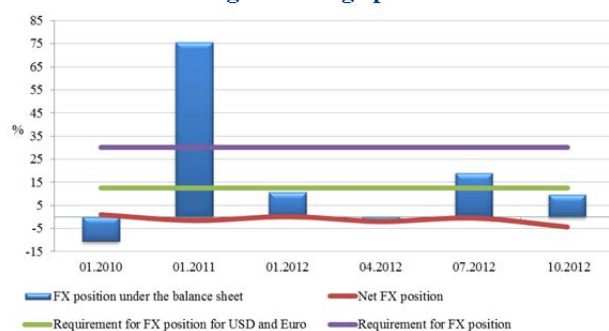
(KZT bln.)

Potential demand from institutional investors	
APFs	616,5
Insurance companies	167,0

Source: NBRK estimate

Figure 3.1.3.11

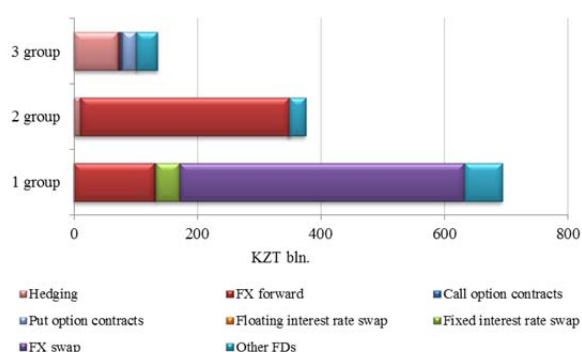
Foreign exchange position



Source: NBRK

Figure 3.1.3.12

Structure of banks off-balance sheet operations with financial derivatives



Source: NBRK

operations on the balance sheet (Figure 3.1.3.11).

Therefore, banks, primarily in the 1st and 3rd groups, maintain a long FX position on their balance sheet, which exceeds the established limits substantially. One of the reasons for such behavior of those banks is due to the expectations about the Tenge depreciation in the financial

However, established regulatory requirements for banks and domestic institutional investors represent the constraints for expansion of medium- and long-term sources of funding. The revision of certain regulatory requirements for investments by institutional investors of their assets in securities of banks will allow them attracting additional medium-term funding through the issue of debt instruments in the domestic market as well as extending the opportunities for investing the resources of accumulation pension funds and insurance organizations. In doing so, expected return on medium-term debt instruments for 3-5 years may be 6.5-8.0% per annum, depending on an issuing bank. Such return is acceptable for pension funds and insurance organizations given the mid-term inflation forecasts and risk matching the "spread" above the return on GSs.

Foreign exchange risk of banks.

Compliance with the existing regulatory requirements for FX position doesn't make difficulties for banks. The calculation of FX position in total for balance sheet accounts and off-balance sheet accounts allows "over-covering" existing foreign exchange risks on the balance sheets with contingent assets or contingent liabilities, and vice versa, when off-balance sheet operations are covered by

²³ Under the existing regulatory limits, the amount of investments by APFs in bank financial instruments must be: 1) not more than 8-10% of pension assets; 2) not more than 35% of a bank's equity; 3) not more than 10% of pension assets in bank affiliates.

²⁴ The calculation of potential demand by the APFs is made on the basis of received monthly contributions of subscribers and surpluses of GSs which are available in the APF's portfolios.

market. Therefore, in order to prevent violations of established limits on net FX position, these banks are actively entering into off-balance sheet transactions with financial derivatives (Figure 3.1.3.12). Forward contracts, foreign currency swaps and interest rate swaps are dominating in the structure of financial derivative transactions.

In order to limit the chances for banks to neutralize foreign exchange risk in their balance sheet by building up a "mirror" position on the off-balance sheet, the need for improving regulatory requirements increases with an aim to control foreign exchange risk present off-balance sheet on net basis by establishing certain limits on the total volume of transactions with financial derivatives.

3.1.4 Capital Adequacy

Stress-testing of Credit Risk

Assessment of bank soundness in case of realization of a negative macro-economic scenario showed that despite a relatively high amount of expected losses, capital adequacy ratios of banks were at an acceptable level at the end of the 3rd quarter of 2012. As compared to the results of other stress-tests, this was affected by the decreased sectoral concentration of the bank loan portfolios. Alongside with that, in case the stress-scenario is realized, as a result of decreased activity of banks the growth rate of lending in the system as a whole may decrease by 1.4% from the baseline scenario, and potential magnitude of the GDP under-growth reaches 0.5% with such down-growth in lending.

In order to assess sustainability of the banking system against negative changes in the macroeconomic environment, the stress-testing²⁵ of capital adequacy of banks was conducted to see how credit risk would change if the scenario assuming a negative oil price shock is realized (Table 3.1.4.1).

Table 3.1.4.1

Stress-testing scenarios

Macroeconomic indicators	Baseline scenarios	Stress scenario
Price of oil - Brent (USD, average for the period)	Minor increase to USD 111 in the 3rd quarter of 2013. ²⁶	Gradual decrease to USD 40 in the 3rd quarter of 2013.
Nominal exchange rate (KZT/USD) ²⁷	depreciation by 3.9%	depreciation by 12.7%
Russia's real GDP (RUR bln., for the period)	growth by 1.5%.	decrease by 1,8%
Kazakhstan's real GDP (KZT bln., for the period)	growth by 5.1%	minor growth by 1.2%
Output in the mining industry	decrease by 1.4%	decrease by 2.5%
Output in the manufacturing industry	growth by 2.1%	decrease by 1.4 %
Output in the construction sector	growth by 9.7%	minor growth by 2.3%
Output in the sector of trade	growth by 12.4%	growth by 9.8%

Source: NBRK

Estimated losses²⁸ in case of implementation of stress-scenario account for about 22% of the regulatory capital in annual terms, which results in the drop of capital adequacy ratios and violation

²⁵ Stress-testing was conducted for 18 banks, whose share of assets accounts for 82.7% of total assets of the banking system and which provide credits to the sectors that are exposed to the shock (industry, construction and trade). Stress-testing was based on the data as of the 3rd quarter of 2012 with the one year forecast period.

Two scenarios in the development of macro-economic situation are reviewed:

-baseline scenario where the current trend of the change in the oil price is reflected;

-stress-scenario with an extreme but probabilistic scenario of the change in the oil price is assumed, supposing the recession of the global economy and a significant drop in the demand for raw materials.

When conducting the stress-testing, the model uses assumptions that assets, capital, loan portfolio, risk-weighted assets, sectoral mix of the loan portfolio and the probability of bank defaults remain unchanged throughout the entire forecasting period.

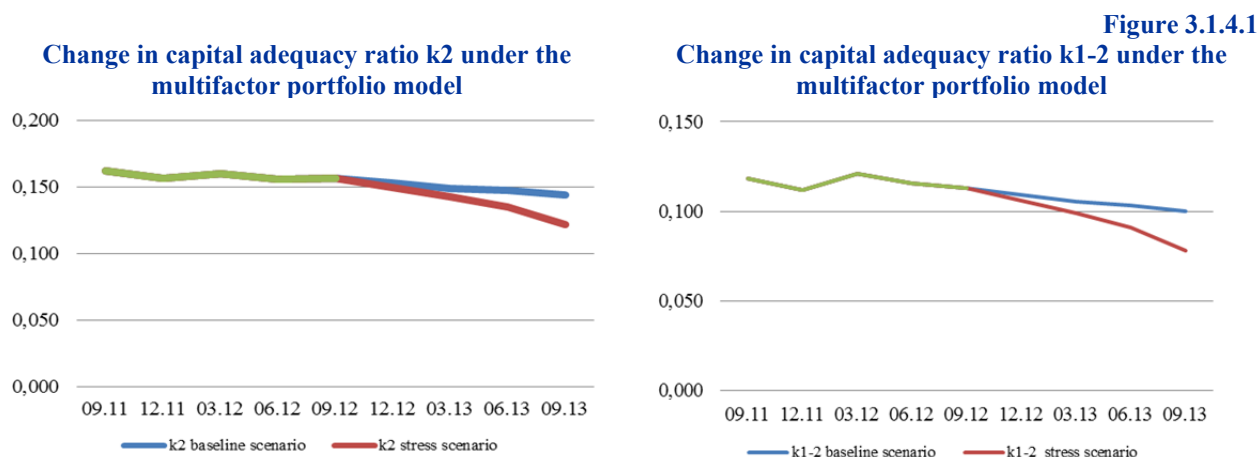
A multi-factor portfolio model designed with participation of the Deutsche Bundesbank (IFO Working Papers No.85, "Methodology of Stress-test for the Kazakh Banking System", April, 2010) is used for the stress-testing. The Model evaluates influence of macro-economic parameters on credit risk of banks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

²⁶ The baseline scenario is based on the consensus forecasts by Bloomberg.

²⁷ The numbers are presented as changes of the 3rd quarter of 2013 to the respective period of the prior year.

of established ratios by certain banks. Out of the sample containing 18 banks, 4 banks violate k1-2 capital adequacy requirement, 3 banks violate k2 requirement and for one bank the value of k2 is approaching down the required minimum ratio.

Generally, if the stress-scenario is realized, capital adequacy ratios in the 3rd quarter of 2013 would go down to 0.122 for k2 (with a minimum ratio of 0.10), and to 0.078 for k1-2 (with a minimum requirement of 0.05) (Figure 3.1.4.1).



Note: calculated for 18 banks
Source: NBRK

The level of recapitalization required to enhance financial soundness of banks is estimated at KZT 68.8 bln. and KZT 16.7 bln. for k2 and k1-2, respectively (Table 3.1.4.2). Therefore, for this sample of banks the required increase in Tier 1 capital will make up 1.6 %, and increase in the regulatory capital – 4.6%. Given a theoretical default of banks which violated their ratios as a result of the stress-scenario on their liabilities in the interbank lending market, required recapitalization including losses of their lending banks increases insignificantly (1.7% of Tier 1 capital or 4.7% of the regulatory capital).

Table 3.1.4.2
Recapitalization level under the stress scenario on k2 and k1-2
(KZT bln.)

		4 qtr. 2012	1 qtr. 2013	2 qtr. 2013	3 qtr. 2013
k2	Accumulated level of recapitalization	0,0	0,0	8,3	68,8
	Capital buffer	466,3	403,0	324,3	202,0
	Total capital buffer in excess of the regulatory minimum	466,3	403,0	316,0	133,2
k1-2	Accumulated level of recapitalization	0,0	0,0	0,0	16,7
	Capital buffer	530,3	467,1	388,4	266,1
	Total capital buffer in excess of the regulatory minimum	30,3	46,1	388,4	249,4

Source: NBRK

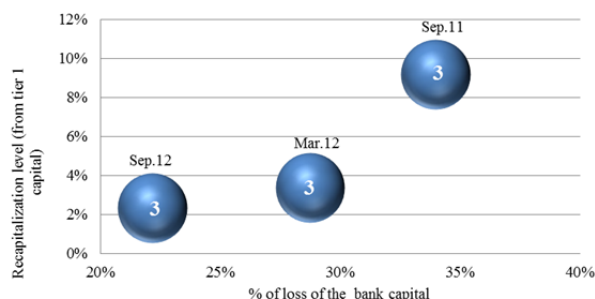
Violations of capital adequacy ratios by banks that borrow in the interbank market do not result in significant losses for their lending banks, and, respectively, in violations capital adequacy requirements by those lending banks. Nonetheless, anticipated losses from realization of the stress-scenario, as a result, might impact negatively activity of banks having pressure on their k2 ratio. When decrease in capital as a consequence of shock results in additional capitalization required for a bank, the bank has to contract lending and accumulate additional capital. In order to analyze this effect results of the model of evaluating banking sector indicators' influence on lending growth during the pre-crisis period were used (Box 4).

²⁸The 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.

According to the estimation output, should the scenario be realized, with the decrease in capital buffer by 1% the growth in lending decreases by 3.6%. Given the elasticity coefficient along with the fixed effect for each bank, the reduced lending growth as a result of the stress-scenario is amounted to 3.2% for the three banks those violating k2 ratio. Given the share of three banks in the banking system, decrease in lending growth of the whole system is estimated at 1.4 pp. Additional

Figure 3.1.4.2

Recapitalization level on k1-1 over time



Note: Performance in 2011 and 2012 differ by the change in the specification of macro-models;

The circle's width shows the number of banks which violated capital adequacy ratio

Source: NBRK

imposing of this effect in the stress-scenario shows that estimated under the stress-scenario GDP growth of 1.2% goes down to 0.7%. Thus, banks' slowdown of the lending activity due to losses risen from the stress-scenario realization ultimately result in dropping the GDP growth out by 0.5 p.p.

Generally, while assessing sustainability of the banking system over time, certain positive dynamics might be seen (Figure 3.1.4.2). This has been affected by the increase of Tier 1 capital and the decrease of certain stress-affected industries' share in the loan portfolio. Also, contrary to previous stress-tests, realization of loss from violation of capital adequacy ratios is

observed only in the last quarter of the estimated period²⁹.

Box 4

The model of evaluating banking sector indicators' and economic indicators' influence on lending growth

Factors affecting growth of loans to economy given by kazakh banks were assessed by employing a pool model with fixed effects³⁰. The measure of bank lending is loans to non-financial sector. To explain bank lending growth the following variables were included in the model:

- regulatory capital requirement changes, in particular, asset-weighted average change of capital requirement (average change);
- variables controlling loan demand changes: (i) percentage changes in lending of each sector, weighted by the share of each bank in this sector (Zit); (ii) difference between overall lending growth and a bank-specific indicator of Zit (Adjusted Z); (iii) residual of the regression of capital requirement change on Zit (Residual Z)³¹;
- GDP growth;
- the meaning of actual capital adequacy ratio (Capital ratio);
- the buffer (surplus of actual capital adequacy ratio over the minimum requirement) (Buffer);
- risk-weighted assets to total bank assets ratio (RISK ratio);
- loans' real interest rate (Real interest rate);
- interest rate spread (SPREAD);
- dummy variable (determining if a size of a bank is in the highest decile) (BIG);
- dummy variable (determining if a bank is a foreign bank subsidiary) (SUB).

Since some indicators affect lending supply not immediately, for the first three variables three lags are included (results 1-5 in Table 1). Time series included data on 27 Kazakh banks from 2006 through 2011.

²⁹ In the updated stress-testing model, the industry was broken down by the mining industry and manufacturing industry, since their share in the Kazakh GDP increased significantly; thus, the estimates are of a better quality. These factors contributed to the improved shock-absorbing capacity of banks.

³⁰ Based on the study conducted by the Bank of England "Does Macro-pru Leak? Evidence from a UK Policy Experiment" (<http://www.nber.org/papers/w17822>), as well as with a methodological support from the author of the study

³¹ In order to exclude the problem of multi-collinearity, the model uses one indicator with the best quality characteristics.

Results of the model show that 1% increase of both capital requirement and the meaning of actual capital adequacy ratio result in decrease of lending growth by 0.92% and 0.26% respectively. The ratio of risk-weighted assets to total bank assets also shows a negative relationship with lending growth. At the same time, GDP growth of 1% leads to increase of lending growth by 4.07%.

In addition, for the crisis period (2006-2008) a pool model with fixed effects was run only for those banks which included in the stress-testing. The Capital ratio variable in the model was replaced by the Buffer variable including three lags (result 6 in Table 1). This model explains decrease of lending growth during the crisis as a result of a shock on banks' capital leading to decrease in buffer. Results show that during the crisis period 1% decrease in capital buffer leads to decrease of lending growth by 3.62%. The variable controlling loan demand shows a positive relation with lending growth.

Table 1

Estimation results³²

	1	3	4	5	6
Average change (summed lags)	0,4708	-0,0651	-0,2384	-0,2973	-0,9292
(probability)	0,21	0,8147	0,5051	0,3648	0,0626
Demand variable (summed lags)	4,9743	2,2379	4,8982	1,3358	1,8891
(probability)		0	0	0,01	0
	Zit	Adjusted Z	Residual Z	Residual Z	Residual Z
GDP growth (summed lags)				4,0783	-11,9096
(probability)				0	0
Capital ratio				-0,2679	-
(probability)				0,1843	
Buffer (summed lags)				-	3,6287
(probability)					0,0715
RISK ratio				-0,4284	-0,3387
(probability)				0,0289	0,5401
Real interest rate				0,0679	0,1121
(probability)				0	0
SPREAD				-0,0503	-0,3050
(probability)				0,2657	0,0235
BIG (dummy variable)				0,4949	1,5450
(probability)				0,0003	0
SUB (dummy variable)				-0,1516	0,0983
(probability)				0,0202	0,6987

Source: NBRK

Basel III Capital Requirements and Relevant Evaluation for the Kazakh Banks

According to assessment made by the NBRK, minimum capital requirements proposed by the Basel III standards do not cover risks pertinent to kazakh banks. Results of the estimation show that banks' capital might be adequate to specific risks if the capital requirements are higher than those recommended by the Basel III standards.

With a view to establish bank regulation in accordance with global practice, at the sessions of the FSC (in 2011) was made a decision to implement Basel III standards (Box 5) into kazakh regulatory practice starting from 2013. At the same time, in order to ensure that capital is adequate to address specific risks for kazakh banks, and to facilitate their sustainability to systemic risks and potential negative factors to a greater extent, higher capital requirements should be set up (Table 3.1.4.3).

³² Results in the model were obtained by using a weighted least squares method.

Table 3.1.4.3

Minimum capital adequacy for the Kazakh banks according to the NBRK's estimate

Capital structure	Tier 1 capital		Tier One capita	Tier two capital	Total capital	Conservation buffer	Total capital incl. conservation buffer	Counter cyclical buffer	Capital buffer for systemic banks
	Fixed capital	Additional capital							
Value for Kazakh banks	7	2	9	3	12	3	15	0-3	1

Source: NBRK

Under the new approaches to regulation, a major portion of bank capital should be represented by Common equity, which absorbs bank losses without significant negative impact on its functioning ("going-concern" capital). In this connection, in order to determine the level of capital adequacy for kazakh banks from the risks standpoint, the most relevant would be an appropriate assessment of the minimum level of Common equity. A bank's common stock, profit and reserves comprise its Common equity. In doing so, Basel III defines bank profit (retained earnings and current period's income) as one of its key components since losses, first of all, results in decrease of Common equity. Therefore, return on risk-weighted assets of a bank (RORWA)³³ can be used as a method of measuring potential losses and in defining required level of capital.

Table 3.1.4.4

Values of RORWA, in %

Reviewed samples	RORWA (10th percentile)	Max	Min
Complete sample (29 banks, for which a complete time series of data was available)	-10,1527	-0,0030	-69,1179
Complete sample excl. outlier	-6,9260	-0,0030	-14,0411
Sample, excl. banks which have undergone restructuring	-8,0330	-0,0030	-41,2652
Sample of 10 top banks	-7,0071	-0,0030	-69,1179

Note: Calculations for the period from Q1 2003 through Q4 2011

Source: NBRK

Table 3.1.4.5

Reduction of k1-2 ratio

	Current value	Value under a stress scenario	Reduced current value
Median	0,1055	0,0595	-0,0335
Average	0,1382	0,0887	-0,0496
Median of large banks	0,0890	0,0495	-0,0410
Average of large banks	0,0928	0,0298	-0,0630

Source: NBRK

an expected level of capital losses occurred due to realization of the stress-scenario. Thus, when the level of conservation buffer is appropriate to the above median value of k1-2 ratio decrease, it means that a bank is sustainable to stress situations.

Furthermore, taking into consideration kazakh banks' specific, a level of the buffer was defined for systemically important banks (systemic buffer). In Kazakhstan from the view of equity and assets the difference between systemically important banks and other banks is not significant. In this connection required level of systemic buffer was taken as the difference between the median of capital ratio k1-2 decrease for large banks and for other banks (the difference was around 1%).

To sum up, the analysis demonstrated that capital adequacy ratios for kazakh banks should be higher than those under the Basel standards. Practice of establishing bank capital requirements according to specific risks that a bank is subject to is also implemented by other central banks (Figure 3.1.4.3).

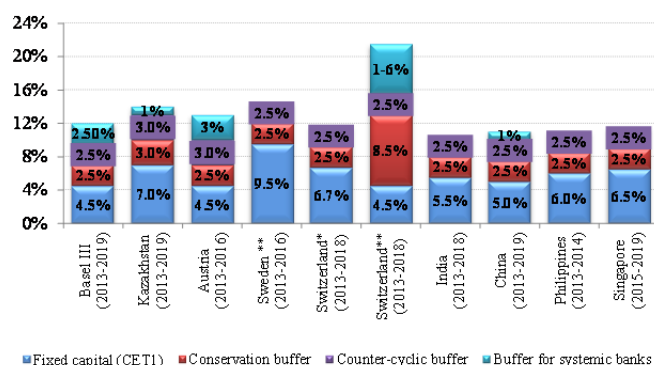
The basis for analysis of RORWA is the left side of its distribution (when a bank incurs losses, and the value of RORWA is negative). The 10th percentile of this distribution might be considered as proxy value for measuring "shocks" to which banks must sustain according to market participants' expectations. The analysis of kazakh banks' RORWA excluding outliers, shows that the level of Common equity should be at least 7% of risk-weighted assets (Table 3.1.4.4).

Further, required level of Tier 1 and Overall capital was set up according to the Basel III restrictions on capital structure (75/25).

Conservation buffer serves as a "safety cushion" for bank capital in stress. Therefore in order to determine its level results of the banks' stress-testing were used. Median of capital ratio k1-2 decrease (Table 3.1.4.5) was considered as

³³ According to the Survey "Calibrating regulatory minimum capital requirements and capital buffers: a top-down approach" conducted by the Bank for International Settlements (<http://www.bis.org/publ/bcbs180.htm>), where a minimal level of Common equity is determined on the basis of RORWA ("Return on Risk-Weighted Assets").

Figure 3.1.4.3
International experience with the implementation of the Basel III Standards



Note: * for all banks

** for systemic banks

the period for implementation of the Basel III standards is given in brackets

Source: NBRK

building up countercyclical capital buffer should ensure required level of lending contraction. Given such designation of countercyclical capital buffer and by using the model of evaluating banking sector indicators' and economic indicators' influence on lending growth, its required level was determined to be at 3%. Back-testing of indicators to determine the period when countercyclical capital buffer should be on showed that the best indicator signaling coming boom is credit-to-GDP ratio which was also recommended to use by the Basel Committee.

Since the establishment of additional capital requirements leads to slowdown of lending growth, it is important to define the level of countercyclical capital buffer that would optimally smooth the cycle, without restraining economic development. Therefore, the size of countercyclical capital buffer for kazakh banks was determined by using assessment of the effect of change in capital requirements on lending.

To evaluate the effect of increased requirements of the minimum level of regulatory capital on banks' lending activity results of the model defining relationship between lending growth and various indicators of the banking sector were used (Box 4). Then required decrease level of lending growth and an appropriate level of capital requirement increase was determined by employing loan-to-deposit ratio (LTD). In order to prevent boom the decrease of average annual lending growth was calculated to be around 16.8%³⁴, given the actual growth of kazakh banks' deposits and the value of loan-to-deposit ratio equal 1.5³⁵. Using the elasticity coefficient derived from the model, the size of the additional buffer required to constrain the rate of lending growth was determined to be at 18.1% (16.8%/0.9292).

Further, since expected loan loss provisioning is the second factor that restrains supply of lending, the size of received additional buffer was reduced by the ratio of crisis period expected losses³⁶ to risk-weighted assets, which estimated around 14.67%. Given this, required level of countercyclical capital buffer was determined as 3% of risk-weighted assets.

The Basel III standards recommend that countercyclical capital buffer should be on with considering macro-financial environment in which banks operate and on the basis of individual country's decision. To identify the period for accumulation of the counter-cyclical buffer, an analysis of macro-economic ratios and indicators of the banking activity should be performed³⁷.

³⁴ During the period from 2006 through the 1st quarter of 2008 when the average ratio of loans to deposits (1.5) was exceeded

³⁵ Average ratio of loans to deposits during the entire cycle

³⁶ The level of expected losses was determined in line with the calculations of PD, LGD, and EAD for the period of crisis. Non-performing loans were taken as PD, LGD was determined according to the calculations made by the IMF as part of the Doing Business rating for Kazakhstan, and EAD corresponds to the loan portfolio of banks.

³⁷ According to the studies conducted by the Bank for International Settlements (No.317, "Counter-cyclical capital buffers: exploring options", <http://www.bis.org/publ/work317.pdf>) in order to define the period when the counter-cyclical buffer should start to be

Higher requirements to Common equity is set up by a number of countries (namely, Switzerland, China, India, Singapore and Philippines). Moreover, tighter requirements are set for systemically important banks. In Switzerland, for instance, Common equity requirement for systemically important banks including conservation buffer and a progressive surcharge (systemic buffer) reaches 19% of a bank's risk-weighted assets. In addition, besides higher capital adequacy ratios, most of countries establish a shorter transition period than Basel III recommends.

In order to prevent "overheating" of the economy during an active growth phase and to ensure strengthening banks' financial condition in the pre-crisis period

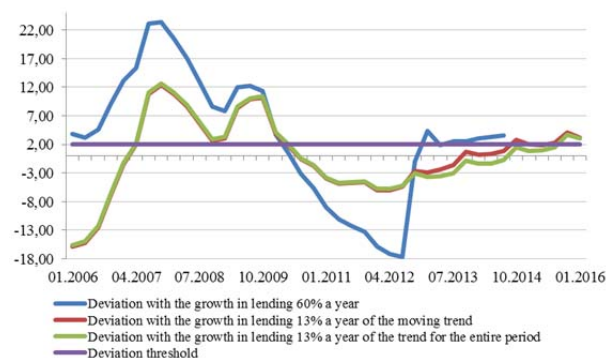
The back-testing of various indicators that may signalize about the coming period of active growth and recession of kazakh economy proved that credit-to-GDP gap (deviation of credit-to-GDP ratio from its trend) performed best. In the back-testing different smoothing parameters (lambdas) were used (Table 3.1.4.6). Lambda equal 400000 and 125000 demonstrated the most

Table 3.1.4.6
Results of the back testing of credits to the economy to GDP

Value of lambda (λ)	Threshold	Value of the noise/signal coefficient	Signal period
1600	1,39	0,35	for 3 quarters
25000	1,40	0,17	for 5 quarters
125000	1,90	0,15	for 7 quarters
400000	2,23	0,15	for 7 quarters

Source: NBRK

Figure 3.1.4.4
Deviation of credits to the economy to GDP from the trend



Source: ASRK, NBRK

counter-cyclical capital buffer before 2016.

In addition, for thorough defining the period when countercyclical capital buffer should be accumulated will be used other selected indicators, which performed well in signaling coming boom of the economy. For example, external debt to GDP ratio, money supply to GDP ratio, bank liabilities to GDP ratio, loan to deposit ratio, as well as share of short-term external debt in GDP and bank assets growth.

Assessment³⁸ of banks' ability to comply with suggested requirements showed that at present Kazakh banks are not ready to concurrently ensure required minimum capital as well as more stringent quality of its instruments. To do this, banks need additional capitalization of KZT 324 bln. (5.1% of risk-weighted assets³⁹), including capitalization overall capital level amounts to KZT 143 bln. (2.7% of risk-weighted assets) and capitalization of conservation buffer amounts to KZT 181 bln. (2.8% of risk-weighted assets).

accumulated, it makes sense to use the deviation from the ratio of credits to the economy/GDP from its long-term trend determined with the help of the Hodrick-Prescott filter. In the use of the Hodrick-Prescott filter the definition of the value of the smoothing parameter of the lambda (λ) plays a critical role. For quarterly data, the value of the lambda equal to 1600 is recommended, however, in the study conducted by the Bank for International Settlements various values were used, and for the purposes of more exact determination of a business-cycle the best result was obtained with the lambda being equal to 400000. Also, the counter-cyclical buffer is recommended for implementation when a deviation from the trend overpasses a certain threshold, thus signaling about the occurring boom. According to recommendations of the Basel Committee, such threshold should be fairly low so that banks have time required to accumulate the buffer before onset of the crisis, and fairly high so that accumulation of the buffer doesn't fall on the normal times. As a result, the Bank for International Settlements determined that when the ratio of credits to the economy/GDP deviates from its trend by more than 2 pp, the counter-cyclical buffer should start being accumulated.

³⁸ The calculation was made on the basis of information provided by 23 banks, as of 01.07.2012.

³⁹ The amount includes risk assets of only those banks that require additional capitalization to ensure compliance with minimum capital requirements.

At present, under Basel III both perpetual financial instruments (including preferred stock) and banks' subordinate debt do not qualify⁴⁰ for inclusion into capital but are recorded in regulatory capital of banks under the existing requirements.

At present, approximate volume of instruments to be excluded from regulatory capital accounts for about 3.6% of risk-weighted assets or 24% of the Overall capital level of banks having such instruments in their capital structure. Since such instruments are excluded, banks would need additional capital in order to comply with minimum capital adequacy ratios. If a bank doesn't issue new instruments (complying with the Basel III criteria) to replace the excluded instruments, a bank's income would serve as an alternative and the most available source of capitalization for a bank.

The Basel standards also regard contingent capital⁴¹ as an additional source of capital for systemically important banks. For instance, contingent convertible bonds have in their terms of issue a compulsory condition to write-off or convert them into common stock when the trigger event has occurred. The trigger in this case is decrease of a bank's capital ratio to the level approximating the regulatory minimum, i.e. the write-off or conversion of the contingent capital is done before the point of a bank's insolvency.

Banks' poor willingness to concurrently ensure minimum capital level and tighter criteria of instruments' quality require the need for a gradual implementation of new capital adequacy requirements in Kazakhstan. Therefore a two-stage schedule for introduction of new requirements developed and agreed upon with banks. The schedule provides the banks with a certain time frame to substitute the excluded instruments or to accumulate appropriate level of profits.

Given the time-frame for implementation of the Basel III standards as determined by the Basel Committee, the following stage-by-stage schedule for implementation of new requirements was determined (Table 3.1.4.7):

I stage: during five years (2013-2017) exclusion of instruments not complying with the Basel III standards, and implementation of the conservation buffer;

II stage: during three years (2016-2018) a gradual increase in capital requirements.

Breaking the Schedule into two stages significantly simplifies the transition of banks to new capital requirements since the first stage suggests actually decreasing minimum capital requirements comparing with existing requirements. In addition, during the period when non-qualifying instruments would be excluded (until 2017), the banks would have no need for additional capitalization. Therefore, at the first stage banks would have a significant capital buffer (extra capital), which would be narrowing during the second stage as the capital requirements gradually increase (Figure 3.1.4.5).

In its turn, the limit on use of bank's profits in case of non-compliance with the requirements to conservation buffer will allow a bank to accumulate the available income during the first stage thus mitigating the bank burden for compliance with higher requirements at the second stage. Therefore, banks needing additional capitalization would have to ensure the profitability level in line with the Implementation schedule for the new requirements.

⁴⁰ The main Basel III criteria which limit the possibility of accounting for perpetual financial instruments and subordinated debt within the capital, are: (1) the need to get an approval from the regulator for repurchase; (2) discretionary right of the bank to cancel dividends/payments at any moment in time; (3) absence of a possibility to increase interest rates on the instruments, inability to demand the acceleration in payouts on the instruments; (4) loss absorbency through conversion into shares (bail-in), or through an appropriate write-off mechanism; (5) establishing a certain minimum deadline (5 years), after which the instrument may be recalled at the bank's initiative.

⁴¹ Issue of contingent capital is an expensive thing since pricing of such instruments is determined by such factors as the probability of a trigger event occurrence, losses of holders as a result of conversion, as well as the demand on the part of investors for instruments which may be converted into shares. To this end, the issue of contingent capital is more attractive for banking groups that have a fairly high capital level at the time of the issue (there are practical examples of such issues by banks CreditSuisse, Rabobank and the Bank of Cyprus, as well as Lloyds Banking Group). Good capitalization of a bank indicates a low probability of a trigger event occurrence thus making the instrument more attractive for investors while providing an additional "safety cushion" for systemic banks.

Table 3.1.4.7

Schedule of introduction of new capital requirements

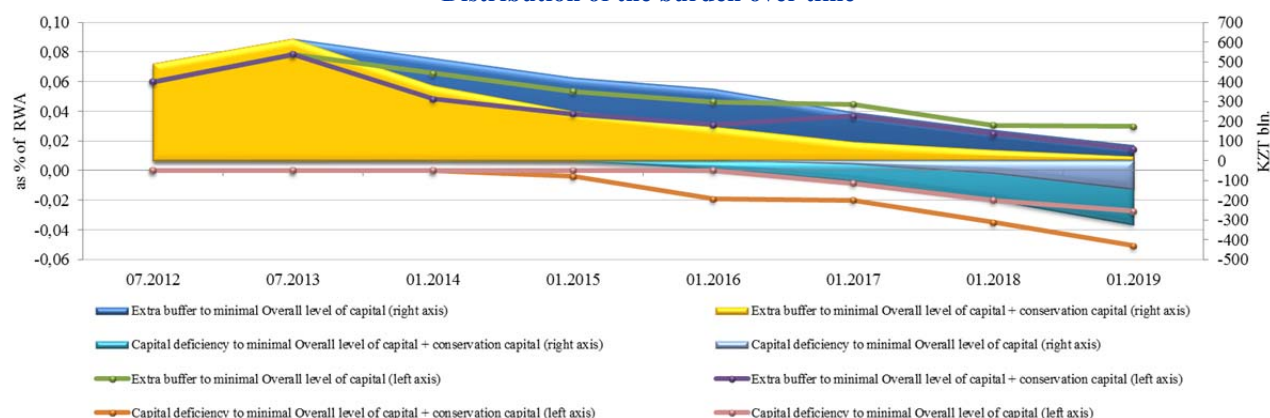
Implementation deadlines	01.07.2013	01.01.2014	01.01.2015	01.01.2016	01.01.2017	01.01.2018	01.01.2019
Minimum requirements							
Minimal fixed capital (CET1)	5%	5%	5%	5,5%	6%	6,5%	7%
Conservation buffer (for all banks/ for systemic banks)	0%	1%	2%	3,0%	3%	3,0%	3%
	2,5%	2,5%	2,5%	3%	3,0%	3%	3%
Minimal tier 1 capital	6%	6%	6,25%	6,5%	7,0%	8,0%	9%
Minimal Overall level of capital	7%	7,5%	8%	8%	9%	10%	12%
Minimal Overall level of capital + Conservation buffer	7%	8,5%	10%	11%	12%	13%	15%
	9,5%	10%	10,5%	11%	12%	13%	15%
Countercyclical buffer	0%	0%	0%	0-3%*			
Capital buffer for systemic banks	0%	0%	0%	1%			
Gradual exclusion of instruments not qualifying for Basel III from capital		Exclusion within 5 years					N/A

Note: *countercyclical buffer is implemented depending on a financial cycle

Source: NBRK

Figure 3.1.4.5

Distribution of the burden over time



Note: *RWA - Risk Weighted Assets

Source: NBRK

Also, the Implementation schedule of the new requirements provides different approaches to systemically important banks and the rest of the banks in terms of the implementation deadlines and the level of conservation buffer. For systemically important banks, conservation buffer will be set at 2.5% of risk-weighted assets from 01.07.2013 since the limitation on the distribution of earnings is already in force as part of early warning system. At the same time, when the requirement for conservation buffer for all banks reaches the level of 3% of risk-weighted assets, systemic buffer will start working (from 01.01.2016).

Box 5

The Basel III Standards

Effects of the global financial crisis in 2008 predetermined necessity of reforming existing bank regulation standards as well as implementing new approaches to capital adequacy requirements. In December 2010, the Basel Committee published new bank capital requirements – the Basel III standards. The reforms are aimed at improving banks' ability to absorb shocks occurring as a result of financial and economic stresses and involve (1) more stringent requirements for quality and structure of capital, (2) increasing minimum requirements of bank capital level, and (3) minimizing pro-cyclicality of regulation.

Structure of the capital according to Basel III consists of two capital tiers and capital buffers (conservation, countercyclical and systemic). Tier 1 capital consists of Common equity and Additional tier 1 capital. Tier 1 capital is a "going-concern" capital, that is it absorbs losses allowing a bank to continue its normal operation in the foreseeable future. In its turn, Tier 2 capital is a

"gone-concern" capital, i.e. if a bank does not meet obligations of Tier 2 capital instruments resulting default and losses lead to a bank's insolvency and may become the ground for its liquidation.

Given the specifics of capital tiers, the new standards imply tighter requirements to its proportions. Contrary to the Basel II standards 75% of overall capital, at minimum, should consist of Tier 1 capital, and Tier 2 capital should not exceed 25% of overall capital level. In its turn, within Tier 1 capital Common Equity should account at least for 75%, and the remaining part (25%) includes instruments of Additional tier 1 capital.

As for the capital composition, Basel III established more stringent requirements to the quality of instruments. In particular, Common Equity should only consist of common stock, retained earnings and reserves. In addition, instruments may be included in Additional tier 1 capital and Tier 2 capital only if they comply with the Basel III criteria. If they do not comply with the criteria, they are subject to a gradual exclusion from the capital.

The minimum requirement for Common equity is set at 4.5% of risk-weighted assets, Tier 1 capital should be at least 6% of risk-weighted assets, and the Overall capital level of a bank should not be less than 8% of risk-weighted assets.

According to Basel III, capital buffers should be built up from the instruments comprising Common equity. Conservation buffer expands Common equity additionally increasing the requirement by 2.5% of risk-weighted assets and is built up in order to help banks to sustain stress. In case if a bank doesn't comply with the conservation buffer requirement, a limit should be imposed on a bank's distribution of its profit.

To create protection against potential losses which may occur in future as a result of building up systemic risk during the time of excessive growth (boom) in lending, the Basel Committee recommends to set countercyclical capital buffer. Countercyclical capital buffer might be expanding conservation buffer during the period of boom and may be set at the level of 0-2.5% of a bank's risk-weighted assets. Similar to conservation buffer, non-compliance with the requirements for countercyclical capital buffer results in limiting distribution of a bank's profits.

Also, the Basel standards require building up of an additional buffer for systemically important banks. The size of such buffer is determined individually for each bank depending on the importance of this bank for the system, within the range between 1 and 2.5% of risk-weighted assets.

3.2 Risks of the Non-Banking Sector

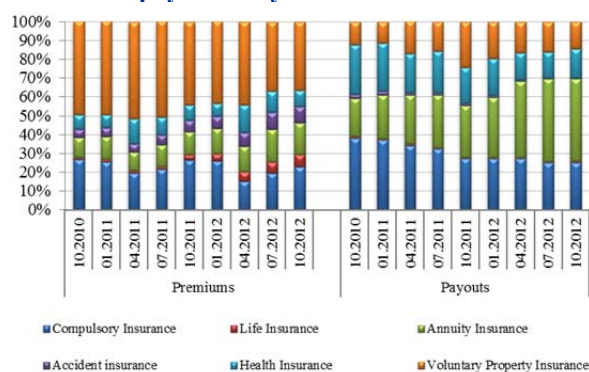
3.2.1 Insurance Sector

In 2012, concentration of risks in the insurance sector was observed in the life insurance. Moreover, measures which were taken by regulatory didn't allow to improve the re-insurance business fundamentally. Investment activities of insurance organizations were mainly exposed to the risks effect to the domestic stock market. Furthermore, the activity of stock market was low and impeded adequate evaluation of securities by insurance organizations.

In the area of insurance, concentration of financial risks is observed in the annuity insurance class (Figure 3.2.1.1). As of 01.10.2012, the structure of insurance annuities was represented by retirement annuities - 81.4%, annuities under casualty insurance - 17% and voluntary annuities - 3%. During 9 months of 2012, annuity payouts under retirement security contracts increased by 1.5 times, and under CIAA – by 30%.

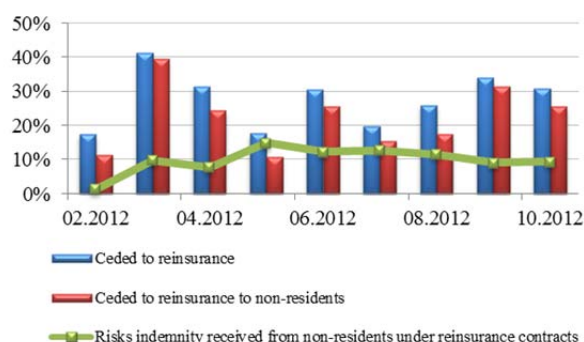
The growth rates in the market of annuity insurance are associated with heightened interest in such classes of insurance due to the appearance of welfare mentality among the population, that is proved by the following facts. First, the growth in the demand for retirement annuities was associated with the tendency of the population to "cash out" pension savings via insurance organizations. Such situation doesn't raise serious concerns in terms of increasing social risks while the major portion of the pensions of the population is carried out from the solidarity component and pension savings are insignificant due to the youth of the accumulation pension system. At the same

Figure 3.2.1.1
Structure of premiums and insurance indemnity payments by insurance classes



Source: NBRK

Figure 3.2.1.2
Reinsurance Structure



Source: NBRK

insufficient solvency margin may potentially result in the inability to meet their payment obligations under valid contracts in future.

The increase in the requirement for the minimum amount of the guarantee fund by the regulator may be insufficient because of an undervaluation risk of insurance reserves in terms of absence of integrated full base of insurance loss statistics.

In the existing situation, financial risks of life insurance companies could be minimized by establishing stringent requirements to lump sum payments depending on the size of pension savings or the employment record of an individual at the time of the retirement annuity purchase and actual damage caused to the annuitant in case of compulsory casualty insurance. In doing so, creating a sound competitive environment with uniform requirements for all parties to this insurance class will also allow minimizing the above risks for life insurance companies.

As of 01.10.2012, foreign reinsurance still prevails in the structure of reinsurance (83%), that is characterized by a large outflow of insurance premiums (26% of all premiums) and a small indemnity of risk (9% of all insurance premiums paid) (Figure 3.2.1.2). Such situation indicates the existence of a risk of low quality or "imaginary" reinsurance. Under the existing laws of the Republic of Kazakhstan, an insurer remains fully liable to an insurant under the insurance contract

time, in case of a significant lump sum payout at the beginning, the amount of subsequent payouts under a deferred annuity would not be in line with the minimum retirement benefit amount. Thus resulting in a dramatic increase in the insolvency risk for life insurance companies in future. Second, during the period from 2006 to 2011, there was a sevenfold increase in the cumulative number of cases of occupational diseases, of which 73% have although chronic but mild forms of diseases. At the same time, an insured event under a chronic occupational disease doesn't occur accidentally, probability of occurrence and detection of a disease depends only on the will and wish of the suffered party, thus creating conditions for fraud. In addition, the amount of indemnity under mild forms (groups 3 and 4) of occupational diseases is inadequately high versus the payouts to those employees who got serious job injuries as a result of an accident and to dependants of deceased workers.

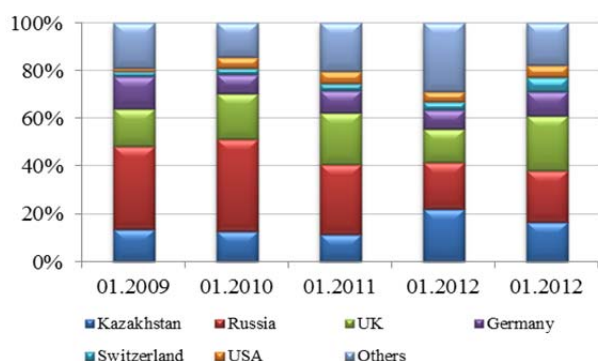
For controlling the risk of insolvency in future, life insurance organizations need to pay a special attention for margin capacity in accordance with growth in the number of concluded annuity contracts. Since, if the existing growth rates in the activity persist,

made between them; this results in additional burden on the capital from insurance companies when they reinsure risks.

At the same time, high risks in the oil and gas sector, energy sector and mining industry in

Figure 3.2.1.3

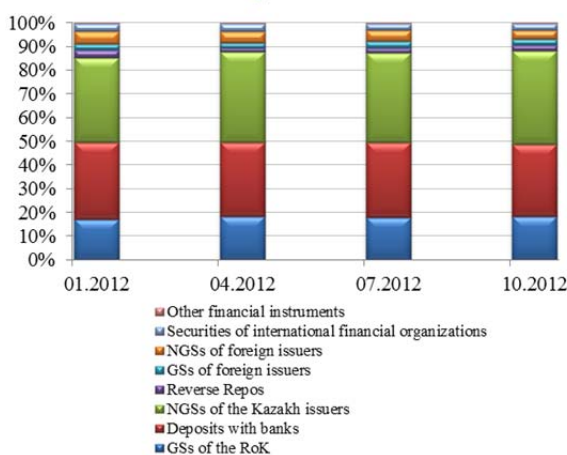
Re-insurance structure by country



Source: NBRK

Figure 3.2.1.4

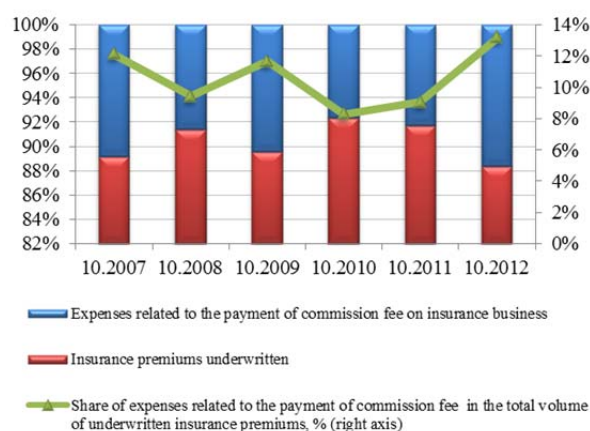
Structure of the investment portfolio of insurance organizations



Source: NBRK

Figure 3.2.1.5

Dynamics of expenses related to the payment of commission fees on the insurance business



Source: NBRK

Kazakhstan that have the largest share of collected insurance premiums cannot be insured by the domestic reinsurance companies because of their insufficient solvency. When it comes to such risks, there is an intrinsic need to have them reinsured by foreign companies with good financial soundness and solvency.

The major partners for the domestic insurance organizations in the reinsurance market are Russia (19.4%) and Great Britain (21.1%) (Figure 3.2.1.3). The share of the Russian reinsurers decreased as compared to 2011 due to tightened rating requirements and established limits for insurance premiums ceded to reinsurers.

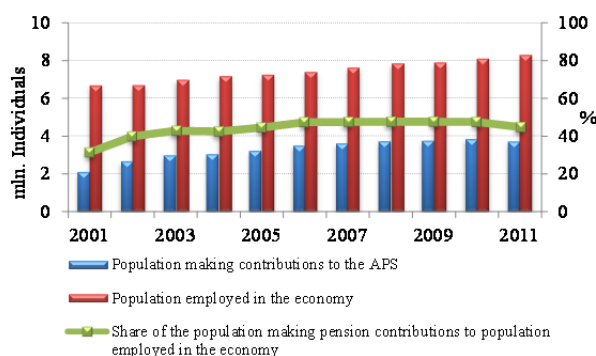
Investing risks of insurance organizations are related to the concentration of business in the local stock market. The main part of investments falls on NGSs of issuers in the Republic of Kazakhstan – 36.6%, bank deposits – 32.1%, and GSs – 17.7% (Figure 3.2.1.4). Low activity of the stock market as well as its low diversification represent the key vulnerability factors and affect investment returns of insurance companies. There is still a high level of risk associated with inadequate evaluation of securities due to the absence of active market.

Despite restrictions imposed by the law, the amounts of commissions of insurance agents are not decreasing; this is evidenced by operating expenses of insurance organizations (Figure 3.2.1.5). Such situation is indicative of possible abuses in the provision of intermediation services for realization of insurance contracts and the activities of insurance agents, including increased risks of insurance assets stripping through insurance agents and dumping. It is possible to reduce the level of such risks by further tightening the requirements for insurance agents including by limiting the amounts of commissions paid under compulsory and voluntary lines of insurance.

3.2.2 Accumulation Pension System

Low coverage of the population by making compulsory pension contributions, insufficient amount of pension savings after reaching the retirement age, decrease in the replacement ratio with the decrease in the volumes of retirement benefit payments from the solidarity part of the retirement benefit, and insufficient investment activity of accumulation pension funds in the short run, still represent the major problems in the accumulation pension system.

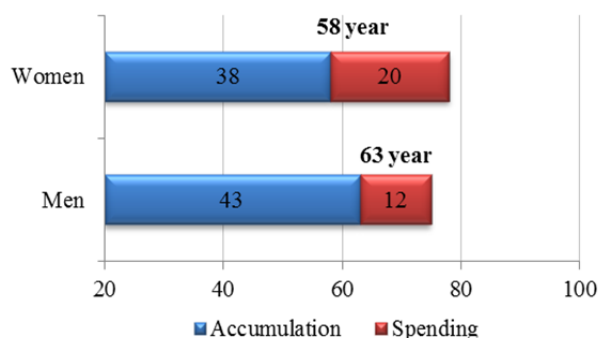
Figure 3.2.2.1
Coverage of the population by the accumulation pension system



Source: ASRK, MLSPP, NBRK calculations

in respect of improving the tax administration, including tax incentives for the population to make voluntary pension contributions, introducing the system of mandatory overall declaration of income and increasing the level of employment among the population by creating new jobs for all age groups. The following factors affect the amount of retirement benefit when reaching the retirement age: 1) accumulated period of employment during which monthly pension contributions were made; 2) the increase in life expectancy over the last 12 years by 3.5 years; 3) slowdown of birth rates while aging of the "baby-boom" generation; 4) provided by the laws gradual decline of the solidarity component in the retirement benefit at retirement age. So, such specifics of

Figure 3.2.2.2
Average time for accumulation and spending of accumulated retirement benefit by men and women



Source: ASRK, NBRK calculations

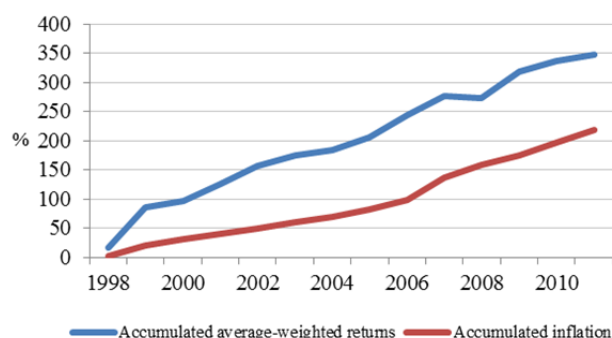
demographical and socio-economic aspects negatively affects the actual amount of savings. Moreover, the level of pension savings among women is affected by additional factors thus making women more socially unprotected comparing to men after reaching the retirement age: 1) period of employment in women is by 5 years shorter than in men; 2) when women have maternity leaves, their employment record for accumulation of pension is reduced by additional 3-9 years on average; 3) life expectancy in women is generally by 6 years longer than in men (Figure 3.2.2.2).

Given the above, the increased effectiveness in addressing the following aspects becomes more important: 1) expanding coverage of the population with the accumulation pension system, 2) providing necessary conditions by the government to ensure the on-going nature of the employment record and relevant monthly allocations of pension contributions by the active age population, 3) gradual alignment of the retirement age for men and women. In addition, the following factors would contribute to the increase in the amount of pension savings: further development of the mandatory professional contributions system; encouraging people's interest in making voluntary pension contributions; improving approaches to the payment of the demogrant; creating conditions for the development of corporate pension schemes and family annuities.

Social and demographic aspect.

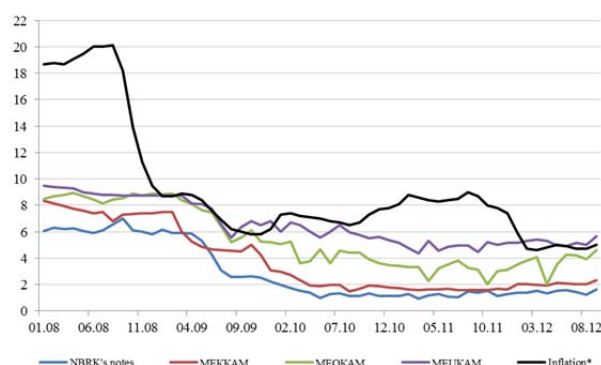
In the accumulation pension system the risk of insufficient coverage of the population with the accumulation pension system still exists. So, the share of participants in the pension system makes less than a half of the employed population (Figure 3.2.2.1). The reasons for a low coverage are a great part of the self-employed in the economy and the unemployment. In this situation, with a view to expand the coverage of the population with the accumulation pension system it becomes more important that the Government of the Republic of Kazakhstan develops administrative measures

Figure 3.2.2.3
Dynamics of returns on pension assets and the inflation



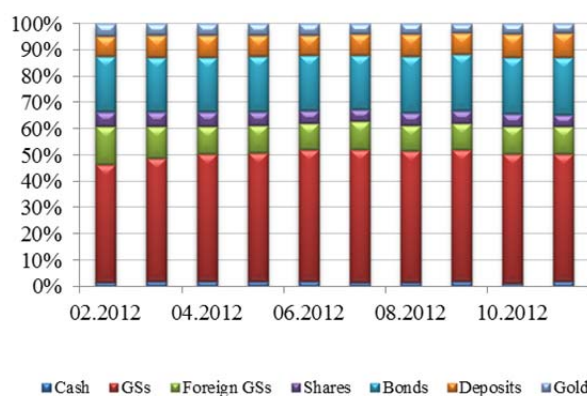
Source: ASRK, NBRK

Figure 3.2.2.4
Dynamics of the effective yield of major types of GSs and the inflation



Note: *as % to the respective month of the prior year
Source: ASRK, MFRK, NBRK

Figure 3.2.2.5
Structure of moderate investment portfolio



Source: NBRK

investments in more profitable instruments of local and foreign issuers.

Second, shortage of funding sources for banks resulted in the growth of interest rates on bank deposits, thus increasing the attractiveness of such type of investment for APFs. Moreover, for APFs bank deposits are not subject to revaluation therefore they are less exposed to market risks.

Third, the reduced credit ratings for the Eurozone countries by rating agencies at the beginning of 2012 limit the growth in the share of pension assets invested in financial instruments of non-resident issuers denominated in the Euro.

Investment activity of accumulation pension funds

In 2012, the level of return on pension assets was still affected by consequences of the global financial crisis. In this connection, in the short- and mid-term there are still negative returns on pension assets, however, given a long-term nature of the pension system, since its functioning in 1998 the level of returns on pension assets was higher than the level of accumulated inflation (Figure 3.2.2.3).

Negative real profitability of pension assets in the short- and mid-term were caused by negative real yields on GSs of the Republic of Kazakhstan. Thus, nominal yields on GSs during the last 5 years were generally lower than the inflation rate, except for GSs indexed to inflation (Figure 3.2.2.4).

As of 01.11.2012, the structure of the moderate investment portfolio was more diversified as compared to the conservative investment portfolio and was represented by financial instruments issued by the MFRK and NBRK, banks, non-residents of the Republic of Kazakhstan, including other states. As a consequence, such portfolio is exposed to higher volatility and degree of impact by market risks, especially price risk, foreign exchange risk and interest rate risk (Figure 3.2.2.5).

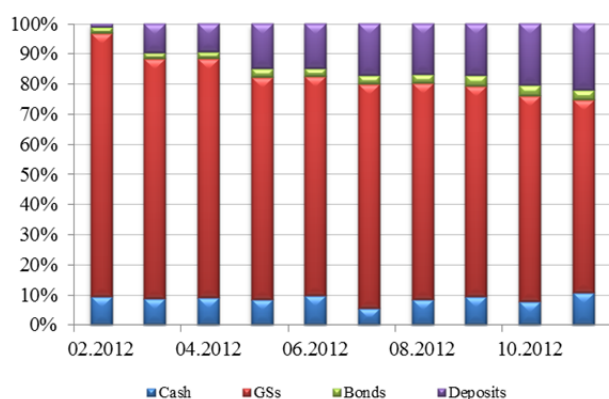
At the same time, the structure of the moderate investment portfolio was affected by the following factors. First, liberalization of regulatory requirements in respect of investment limits including GSs, lead to a gradual contraction of demand for GSs on the part of APFs, decrease in the value of GSs and a notable growth in yields on medium- and long-term treasury obligations by 1.5-2 pp on average from the beginning of 2012. Also, easing of regulations in respect of the calculation of capital adequacy with regard to reducing the adjustment factor and risk weighting ratios for some assets, helped reduce the pressure on the APF's capital and increase the percentage of

Fourth, observed high volatility in the market of refined gold was the reason for reduction of its percentage in the moderate investment portfolio of most APFs. The percentage of equities and bonds of local issuers didn't change significantly during 2012.

The above factors allowed ensuring a return on the moderate investment portfolio of 26.1%⁴² of pension assets in the moderate investment portfolio.

Figure 3.2.2.6

Structure of conservative investment portfolio



Source: NBRK

portfolio falls on GSs. However, given that from mid-2012 interest rates on GSs started to grow, and the value of such GSs held in portfolios began to decrease, APFs began investing available resources in alternative and more profitable financial instruments including bonds and bank deposits. A high share of cash in the conservative investment portfolio is driven by an ongoing need to make retirement benefit payments, since the conservative investment portfolio consists of pension accumulations of people of retirement age. Thus, the conservative investment portfolio is characterized by the presence of exceptionally high reliable financial instruments, with GSs, bonds of NWF "Samruk-Kazyna", deposits with banks and cash, among others. The conservative investment portfolio, under its structure, is less exposed to dramatic fluctuations and volatility, therefore income from accrued coupon interest and revaluation of financial instruments from the beginning of 2012 accounted for 8.9% of pension assets in the conservative investment portfolio, as of 01.10.2012.

At the same time, as of 01.11.2012, APFs built up a reserve against potential losses from depreciation of securities accounting for 32.8% of total equity of APFs, where 80% were built up from securities of issuers which defaulted earlier and the restructuring procedure was performed. Based on the restructuring, the percentage of investments paid back by such issuers is minor.

High volatility of financial instruments comprising investment portfolios of APFs is affected not only by the market factors but also by the price manipulations by interested investors with less liquid securities. Such manipulations make impact at the time when investment portfolios of APFs are evaluated. Enhanced diversification of the investment portfolios of APFs allows minimizing such risk. Moreover, a persisting problem of low liquidity in the local stock market leads to the absence of the uniform market price for illiquid securities and impossibility of their assessment based on the KASE's Assessment Methodology. Such problem increases the need in the introduction of the approach to determine a uniform pricing of securities.

In contrast to the moderate investment portfolio, the structure of the conservative investment portfolio and the list of eligible financial instruments are more regulated and restricted since regulation of the conservative investment portfolio is primarily based on the principles of ensuring the safety of pension assets rather than generating maximum possible returns on investments. In this connection, during 2012, the investment policy in relation to the conservative investment portfolio of APFs was based on investments into highly reliable, liquid and less volatile financial instruments only (Figure 3.2.2.6). The largest portion of investments in the conservative investment

⁴² Return on the moderate investment portfolio includes returns on accrued coupon interest and revaluation of financial instruments

Changes in the development of the institutional infrastructure of the accumulation pension system.

An institutional infrastructure of the accumulation pension system which would be functioning in future depends on the results of reforms. In doing so, an ultimate decision will be made by the Government of the Republic of Kazakhstan together with the NBRK.

At the same time, active discussions about reforms in the accumulation pension system are restrained by the demand for shares of APFs.

A major problem currently encountered by APFs is increasing real returns on pension assets in the long run. To this end, further reforms in the operation of APFs should provide for:

1) change in the prudential regulation of APFs intended for defining responsibility of APFs in case their returns are lower than the minimum established level (benchmark);

2) extending the list of financial instruments held for investment funded with pension assets (including as part of the PPP⁴³);

3) establishing mechanisms of effective hedging of foreign exchange risks;

4) changing the requirements for investment declaration of APFs, since the investment declaration should contain a detailed description about financial instruments, countries/regions, and economic sectors where an APF plans to invest pension assets as well as expected return on such investments;

5) establishing a collective body (Risk Committee), which would define the list of issuers for investment of pension assets, evaluate counterparts under transactions with financial derivatives as well as on transactions in the international markets where APF may perform transactions funded with pension assets, determine an acceptable pricing range for each illiquid security in order to perform transactions funded with pension assets;

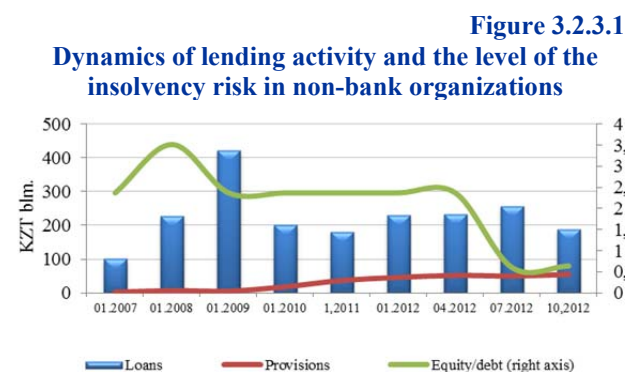
6) Optimizing the procedure for calculating and charging by APFs of a commission from pension assets and an investment return.

3.2.3. Other Financial Organizations

Other financial organizations continue to lower their activity in the financial market due to materialization of existing risks as well as slow recovery of this segment of the financial market from recessionary .

In 2012, the number of organizations engaged in certain types of banking operations, mortgage companies as well as of brokers-dealers⁴⁴ was decreasing, both because of their license revocations in connection with regular violations of prudential requirements established by the laws of the Republic of Kazakhstan and as a result of voluntary return of the license.

Organizations Engaged in Certain Types of Banking Operations



Source: NBRK

In 2012, the activities of organizations engaged in certain types of banking operations (hereinafter - non-bank organizations) demonstrated gradual increase in lending activity associated with implementation of strategic projects for the development of agricultural sector of the Republic of Kazakhstan (Figure 3.2.3.1).

The share of the agricultural sector accounted for 80% its total loan portfolio, thus increasing the level of exposure of the non-bank sector to concentration risks. In this connection the non-banking sector became more sensitive to the price volatility in the global market of

⁴³ PPP - public-private partnership

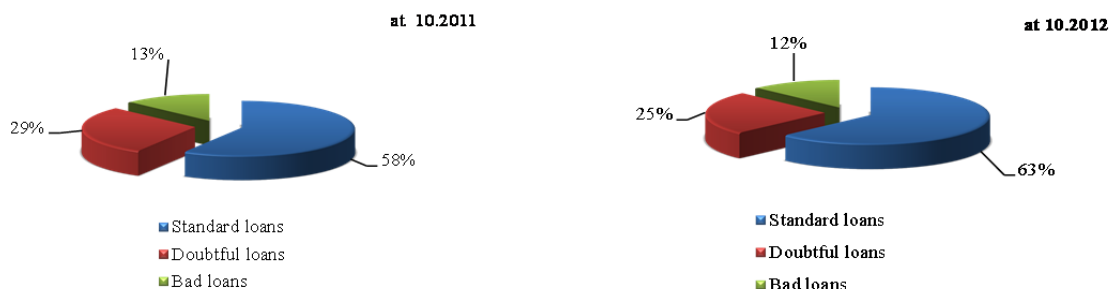
⁴⁴ In this section information about brokers-dealers is presented only in respect of non-bank organizations.

agricultural products, indicators of gross output in the agro-industrial complex and their dependence on natural, seasonal, transport, counterparty as well as legislative conditions.

At the same time, participation in the implementation of strategic projects allowed non-banking organizations to build up their total loan portfolio by 17.7% and decrease the level of bad debt to 12.5% of the total loan portfolio during 9 months of 2012 (Figure 3.2.3.2). In doing so, the creation of an adequate level of provisions helped to preserve control over insolvency risk.

Figure 3.2.3.2

Change in the quality of the loan portfolio of non-bank organizations



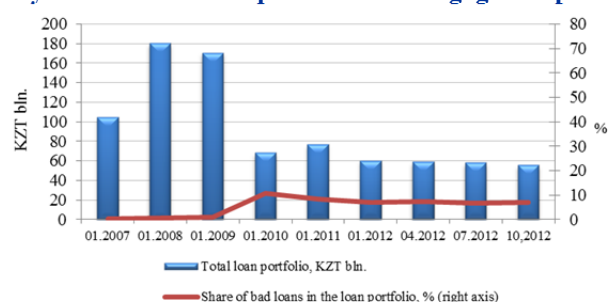
Source: NBRK

Mortgage Companies

In 2012, business activity of mortgage companies was slowing down under the impact of the situation in the real estate market. One mortgage company had to surrender its license because of

Figure 3.2.3.3

Dynamics of the loan portfolio of mortgage companies

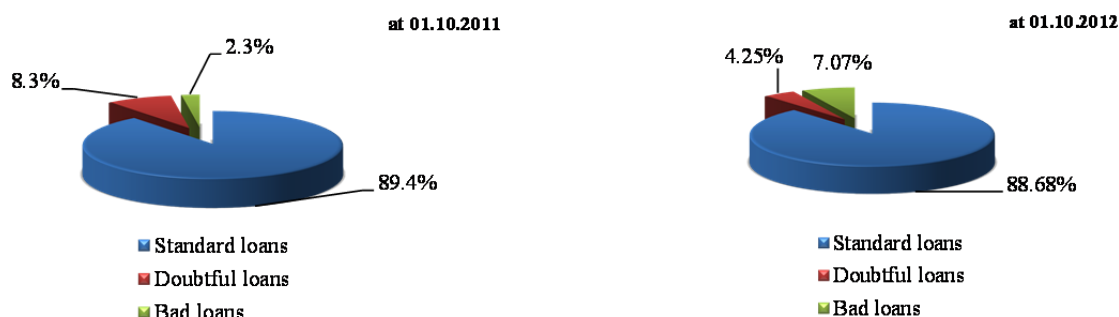


Source: NBRK

regular violations of provisions of the existing laws of the Republic of Kazakhstan, as a result, the number of mortgage companies reduced to 3. As a result, during 9 months of 2012, the loan portfolio decreased by 7.8% (Figure 3.2.3.3) and the percentage of bad loans increased from 2.3% to 7.0% (Figure 3.2.3.4). As of 01.10.2012, the total loan portfolio of mortgage companies accounted only for 0.5% of the total loan portfolio of banks, thus indicating insignificant influence of mortgage companies on the operation of the financial sector as a whole.

Figure 3.2.3.4

Change in the quality of the loan portfolio of mortgage companies



Source: NBRK

Brokers-Dealers

A slow recovery of financial organizations from the crisis as well as low liquidity of the stock markets continued having a negative impact on the institutional structure and financial performance of brokers and dealers in the securities market. So, in 2012 six licenses were

surrendered on a voluntary basis and one license was revoked for the violation of the laws (Table 3.2.3.1).

Table 3.2.3.1
A number of brokers-dealers
(non-bank organizations)

	07.2011	01.2012	10.2012
Broker-dealers of non-bank organizations, of which:	47	44	37
Category 1	39	36	28
Participants of RFCA	5	5	4

Source: NBRK

A numerical reduction of brokers-dealers, respectively, leads to worsening of their financial ratios – the operation of brokers-dealers in the securities market remains unprofitable. As of 01.10.2012, uncovered loss increased by 5.6% as compared to 01.10.2011 (Table 3.2.3.2).

Table 3.2.3.2
Key financial ratios for brokers-dealers of non-bank organizations, KZT mln.*

Items	01.2011	01.2012	10.2012	Change for 9 mon.2012, %
Assets	6 688	5 900	3 171	-46.3
Liabilities	1 237	511	686	34.2
Capital of brokers-dealers	5 451	5 389	2 485	-53.9
Authorized capital	4 551	4 908	1 937	-60.5
Retained earnings (uncovered loss)	-375.2**	-	-396.2	- 5.6

Note: * - incl. brokers-dealers-participants of RFCA

** - as of 10.2011

Source: NBRK

Investment Funds

The reason for slowing activity of investment funds in 2012 is low liquidity of stock markets, decreased interest of the population in investing, and transition of the population to less risky forms of savings such as bank deposits. At the same time, the major portion of assets of incorporated investment funds is represented by buildings, structures, facilities under construction and reconstruction, which constitute 62% of the total investment portfolio and which should be fully replaced by financial instruments by 01.01.2013, in line with the requirements of the law (Figure 3.2.3.5).

A major portion of assets belonging to mutual funds consists of equity investments in legal entities which are not joint stock companies (91% of the total investment portfolio), which is indicative of the increase in the concentration risk related to that. The portion of investments in real estate in the total portfolio of mutual funds as of 01.10.2012 decreased to 0.9% as compared to 5% in the respective period of 2011; this is also related to the tightening of requirements to investments in real estate (Figure 3.2.3.6).

Figure 3.2.3.5
Investment portfolio of stock investment funds
as of 01.10.2012

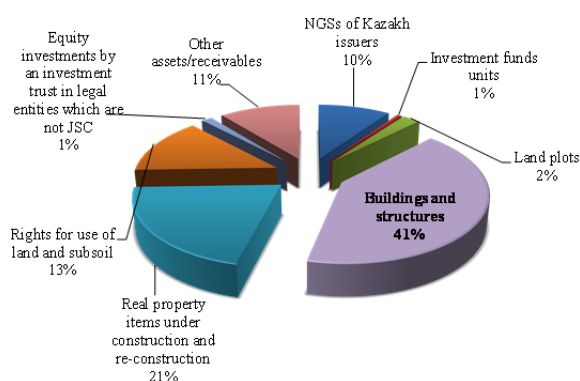
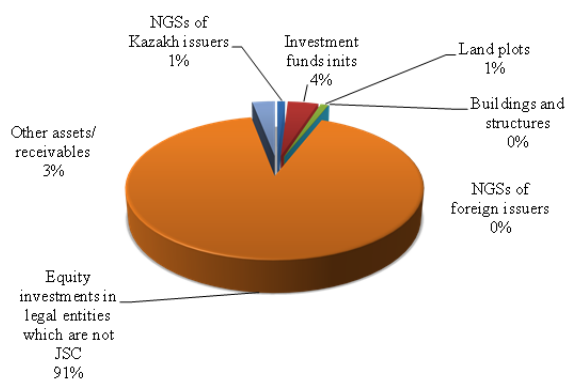


Figure 3.2.3.6
Investment portfolio of mutual funds
as of 01.10.2012



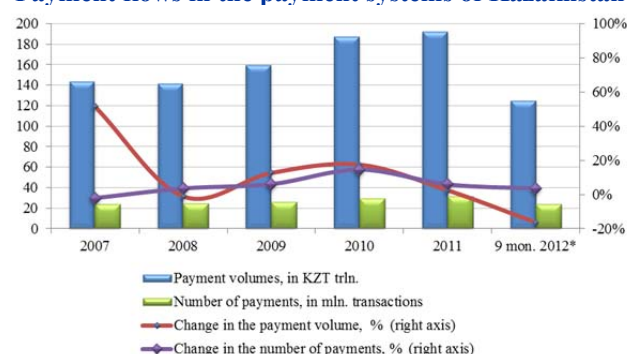
Source: NBRK

3.3. Payment Systems

In 2012, the NBRK continued its effort to further develop the Kazakh payment systems and improve regulations in the area of payments and money transfers. There are positive trends of the growth in the number of payments and liquidity of the payment systems users, thus generally demonstrating an effective development of the systems and ensuring mitigation of liquidity risk and systemic risk.

3.3.1 Development of Payment Systems in Kazakhstan

Figure 3.3.1.1
Payment flows in the payment systems of Kazakhstan



Note: * 9 months of 2012 as compared to the respective period of the previous year

Source: NBRK

In 2012, the NBRK made a purposeful effort to arrange, coordinate and monitor the actions of the payment system operator and of all payment system users in relation to fine-tuning and testing of the software and managing customer relations as part of preliminaries for the transition to unified identification numbers of individuals and corporate entities.

Based on the KISC, an electronic money system was launched that allows making payments for goods and services via the Internet with the help of electronic money issued by the Kazakh banks - participants of the system.

Table 3.3.1.1

Payment volumes broken down by types of payment purposes

Item	9 months of 2011		9 months of 2012		Change	
	in KZT bln.	as % of total volume	in KZT bln.	as % of total volume	in KZT bln.	as %
FX transactions and transactions with precious metals	19 385.8	13.0%	18 720.3	15.0%	-665.5	-3.4%
Deposits	34 818.4	23.3%	20 112.7	16.1%	-14 705.7	-42.2%
Loans	1 241.6	0.8%	1 428.2	1.1%	186.6	15.0%
Securities, bills and certificates of deposit issued by non-residents of RK	107.3	0.1%	155.6	0.1%	48.3	45.0%
Securities and bills issued by residents of RK	66 030.6	44.3%	52 451.4	42.1%	-13 579.2	-20.6%
Goods and intangible assets	7 812.8	5.2%	9 187.1	7.4%	1 374.3	17.6%
Services	5 705.9	3.8%	6 903.2	5.5%	1 197.4	21.0%
Other payments*	14 103.4	9.5%	15 741.3	12.6%	1 637.9	11.6%
Total	149 205.8	100.0%	124 700.0	100.0%	-24 505.8	-16.4%

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

Source: NBRK

In 2012, the growth trend of the number of payments in the payment systems of Kazakhstan remained, however, the payment volumes decreased as compared to the previous year (Figure 3.3.1.1). Thus, during 9 months of 2012, 23.5 mln. of transactions totaling KZT 124.7 trln. were transferred through the payment systems of Kazakhstan. In doing so, 97.6% of the total volume of non-cash payments in the country and 37.7% of the total number (8.9 mln. of transactions totaling KZT 121.7 trln.) were transferred through the ISMT⁴⁵, a systemically important system of the country oriented at large and top-priority payments on the financial sector operations. In the ICS⁴⁶, where retail payments for small amounts below KZT 5 mln. are processed, 62.3% of the total

⁴⁵ ISMT – Interbank System of Money Transfers.

⁴⁶ ICS - Interbank Clearing System.

number of all non-cash payments in the country and 2.4% of their total volume (14.6 mln. payment documents totaling KZT 3.0 trln.) were processed.

As a whole, as compared to the respective period of 2011, the number of payments in the payment systems increased by 3.5% (by 804 200 transactions), and the payment amounts decreased by 16.4% (by KZT 24.5 trln.). Decreased payment volumes were mainly caused by the 42.2% decrease in the amount of payments on deposit operations and transfers of customer monies as well as by payments related to operations with securities and bills issued by residents of the Republic of Kazakhstan by 20.6% (Table 3.3.1.1).

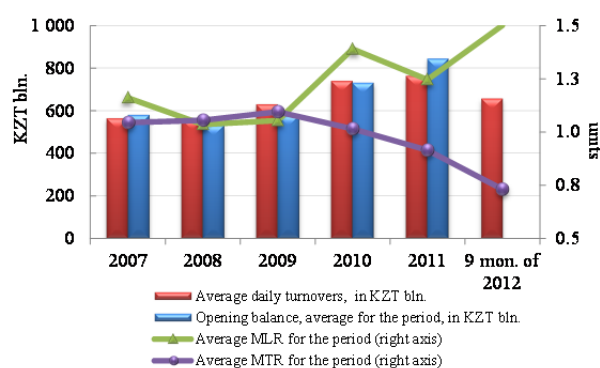
3.3.2 Liquidity Risk and Systemic Risk

NBRK and the payment system users monitor and control user positions in the systems on an on-going basis, in order to manage liquidity risk⁴⁷ and systemic risk⁴⁸, which may have a significant impact on the stability of the country's financial system.

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.

In 2012, there was an increase in the liquidity position of the users.

Figure 3.3.2.1
Liquidity ratios in the interbank system of money transfers (ISMT)



Source: NBRK

During 9 months of 2012, an average daily liquidity volume of the payment system users (opening balance in the ISMT⁴⁹, through which payments are made by the users) amounted to KZT 900.6 bln., having increased by KZT 74.8 bln. (9.1%) versus the respective period of 2011 (Figure 3.3.2.1). Generally, an average daily liquidity volume of the users in the ISMT is by 36.9% higher than the average daily amount of payments (KZT 657.8 bln.), which is indicative of an adequate liquidity provision of the system users enabling them to make payments.

With a view to manage liquidity risk and systemic risk, the NBRK also calculates MTR⁵⁰, MLR⁵¹ in the ISMT on a daily basis and analyzes their compliance with the established ratios⁵². On average, during 9 months of 2012, the MLR in the ISMT was 1.50, and the MTR – 0.73, thus corresponding to the ratios at which liquidity risk and systemic risk are considered to be minimal.

In addition, an analysis is performed 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 9 months of 2012, 2 510 payment documents amounting to KZT 208.1 bln. were recorded in the queue, where 92 payment documents in the amount of KZT 20.3 bln. were rejected (recalled) due to insufficient liquidity accounting for 0.001% of the total number and 0.02% 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.

⁴⁷ Liquidity risk is a payer's risk caused by its inability to discharge its obligations under the money transfer.

⁴⁸ 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.

⁴⁹ User's opening balance is a cash amount that a user transfers from its correspondent account to the position in the system.

⁵⁰ Money Turnover Ratio (MTR) is a ratio of debit turnover in ISMT to the system's liquidity.

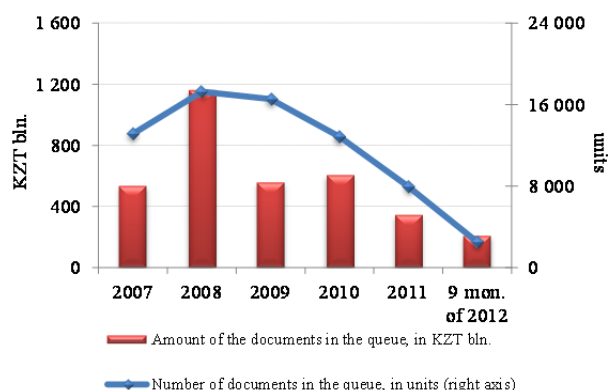
⁵¹ Money Liquidity Ratio (MLR) is a ratio of the system's liquidity (opening balances of all users) to the sum of debit turnover in ISMT and rejected (recalled) payments in the ISMT.

⁵² To regulate the liquidity risk, the following corridors of the liquidity ratio limits and money turnover have been set in the system: MLR upper limit >1.5 at MTR <0.5; MLR lower limit <0.5 at MTR >1.5.

Figure 3.3.2.2

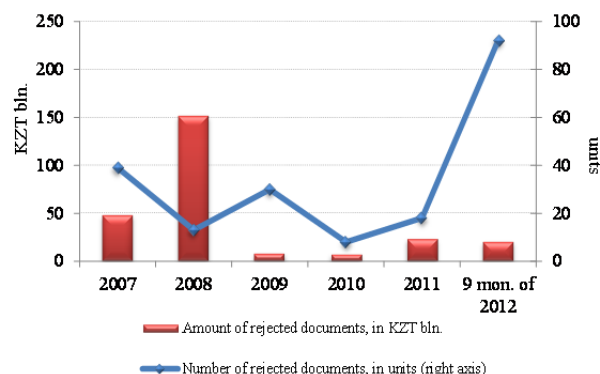
Queue of payment documents and payments rejected by interbank system of money transfers (ISMT)

Payment documents registered in the queue



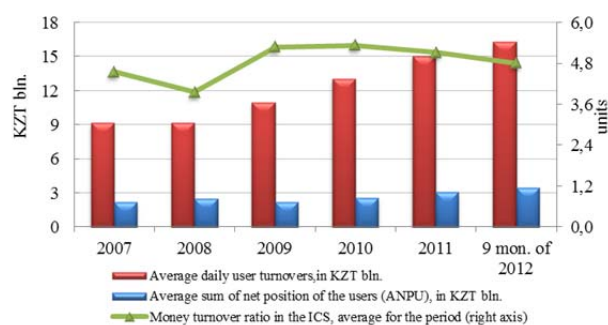
Source: NBRK

Rejected payment documents



Source: NBRK

Figure 3.3.2.3
Liquidity ratios in the interbank clearing system (ICS)

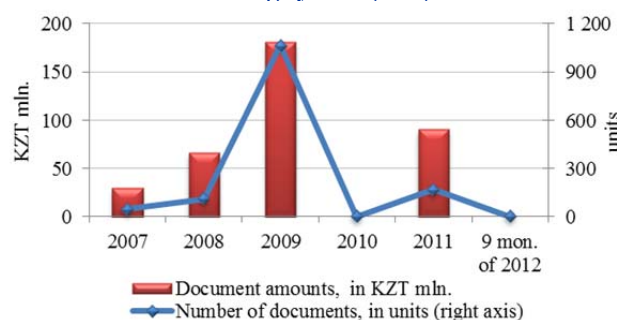


Source: NBRK

To manage liquidity risk and 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 9 months of 2012, the average daily money turnover ratio in the ICS was equal to 4.8, which 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 KZT 3.5 bln. (0.5% of the amount of average daily turnover of the users in the ISMT); this contributes to reduction of the liquidity risk when calculating the net position through the ISMT.

During 9 months of 2012, there were no payment documents rejected because of insufficient liquidity (Figure 3.3.2.4).

Figure 3.3.2.4
Cancelled payment documents in the interbank clearing system (ICS)



Source: NBRK

3.3.3 Operational and Technical Risk

To manage operational risk⁵³, the payment system operator and payment system 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. For managing technical risk⁵⁴, such methods as the use of the backup center, user inspection and continuous monitoring of the hardware and software complex of payments system, were applied.

To permanently maintain the backup center of the payment systems fully operational, during 9 months of 2012, the KISC twice transferred the payment systems to the software and hardware complex of the backup center; the payment systems were run on the basis of the backup servers from 26.03.2012 to 30.03.2012 and from 11.07.2012 to 18.07.2012. Also, as part of the payment systems supervision (oversight), during 9 months of 2012 the NBRK had conducted 7 inspections

⁵³ Operational risk is the risk of errors that can be made by the user's personnel while performing their duties.

⁵⁴ Technical risk is the risk of defects and errors in the hardware and software and telecommunication.

of banks for the safety of workplaces of the payment system users (approval of payments and software reliability) in compliance with the requirements of the Instruction No.95⁵⁵.

Maintenance of high coefficient of uninterrupted operation (operability) of the payment systems (UOC)⁵⁶, 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. Generally, during 9 months of 2012 the average monthly operability coefficient of ISMT was 99.98% and that of ICS – 99.99%, which corresponds to the established goal and characterizes the efficiency of the payment systems operation.

3.4 Financial System Regulation and Risk Management

3.4.1 Improving Regulation of Financial Organizations

In 2012, the NBRK elaborated and adopted a number of amendments to the legal framework aimed to improve regulation of financial organizations, enhance their transparency, ensure further recovery of the financial system and stimulate its development in the post-crisis period. A set of amendments to the regulatory framework was made based on the assessment of risk and vulnerability factors for the financial system.

Banking sector. Consequences of the global financial crisis in the form of a bulk of non-performing loans in the banking system of Kazakhstan are still relevant in 2012. With a view to solve the problem of low quality of the loan portfolio in the banking sector, the NBRK adopted several regulations aimed to provide an opportunity for banks to clean up their balance sheets from toxic assets by means of their transfer to the PLF and SAMC.

In 2012, for cleaning up banks' balance sheets purpose from problem assets, the PLF carried out its activities in the form of a pilot project in cooperation with banks, under which a mechanism of a transfer (repurchase) of problem loans is developed. Necessary legal framework for the PLF was adopted in the 2nd – 3rd quarters of 2012. Relevant rules and requirements govern:

- the procedure of the PLF activities;
- the procedure for evaluation of doubtful and loss assets acquired by the PLF;
- the procedure for doubtful and loss assets management;
- requirements for doubtful and loss assets to be acquired (already acquired) by the PLF;
- the procedure for attribution of PLF's earnings to earnings subject to tax exemption.

In its turn, the regulatory framework that determines how SAMC should carry out their activities includes the list of adopted regulations which establish:

- the procedure for issuing and revoking the approval for opening of a SAMC by a bank or a bank holding company;
- the procedure under which SAMC carry out their activities, the time frame for management of acquired doubtful and loss assets as well as their requirements;
- the procedure for attributing assets provided by banks to SAMC to the doubtful and loss assets category as well as the procedure for provisioning (reserving) against such assets;

⁵⁵ Instruction with 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 of the State Enterprise "Kazakhstan Interbank Settlement Center of the National Bank of the Republic of Kazakhstan», approved by the resolution of the NBRK's Managing Board of November 28, 2008 No. 95.

⁵⁶UOC - 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).

- the procedure for charging earnings receivable by SAMC to earnings from activities provided for by the laws of the Republic of Kazakhstan on banks and banking business.

Besides, the mechanism for cleaning up the bank balance sheets provides for terms and conditions of remission of bad debt without the occurrence of an additional tax liability of banks. Initially the remission mechanism was supposed to be limited in time till the end of 2012. However, its duration was extended till the end of 2013 with a view to preserve the integrity of the cleaning up mechanism and encourage banks to use the proposed instruments more actively.

In 2012, the NBRK took additional measures of an administrative nature, with a view to encourage banks to do more dynamic actions to clean up their balance sheets from non-performing loans. In particular, the thresholds for the percentage of non-performing loans in the bank loan portfolios are introduced (from 01.01.2013 – not more than 20% and from 01.01.2014 – not more than 15% of the loan portfolio); in case of their violation early response measures provided for by the laws would be taken in relation to a bank and/or its shareholders.

The NBRK, within the framework of preventive measures aimed at indirect limitation of foreign participation and leveling competitive environment in the banking sector of Kazakhstan, introduced amendments to some legislative acts of the Republic of Kazakhstan related to regulation of the banking business.

With the view to reduce the probability of an "overflow" of risks pertinent to parent companies to their bank subsidiaries (group risk) and eliminate certain advantages for banks with foreign participation that use the guarantees of their high-rated parent banks, certain legislative amendments initiated the adoption of standards that provide introduction of restrictions in relation to the use by resident banks of the Republic of Kazakhstan of the guarantees and sureties of their parent banks, bank holding companies as well as their affiliated entities, when providing credits to economic entities.

In 2012, the legal activities were also aimed at further enhancing the transparency of the banks' operations, mitigating risks within a financial group and harmonizing the regulatory framework with the international standards. With this view, appropriate amendments to the regulations were made that suggest:

- identifying the list of related parties of a bank conglomerate;
- mitigating risks associated with mutual investment of resources of the group of related corporate entities within the bank conglomerate;
- establishing requirements to shares (participation interests) acquired by banks, subsidiaries of banks or a bank holding company;
- preventing operations performed for "doubtful" purposes by entities with non-transparent ownership structure, that may significantly decrease the soundness of banks;
- determining the methodology for identifying the factors that would cause deterioration in financial position of a bank conglomerate, as well as the procedure for applying early response measures against the bank conglomerate.

In turn, long-term legislative initiatives should be identified to ensure financial soundness and competitive capacity of the banking sector in the environment of integration; such initiatives have to be focused on harmonization of the laws with international standards, particularly, with the Basel III standards.

Implementation of the Basel III standards requires conceptual changes in the existing regulatory framework in relation to the capital requirements; this, in its turn, causes the necessity of a gradual transition to new requirements. To that end, in 2012 the Schedule for introduction of new requirements was developed and reconciled with banks. Such Schedule covers a similar transition period of the Basel Committee on Banking Supervision – from 2013 to 2019, however, this Schedule is divided into two stages. At the first stage, instruments which cannot be a part of the capital under the Basel III requirements will be excluded, and at the second stage the capital requirements will gradually increase. As a result, banks are given time to replace the instruments excluded from capital or to accumulate profits, with a view to increase their equity.

Apart from that, the year of 2012 was marked by legislative amendments regarding the taxation procedures of provision deductions according to requirements of regulator. These amendments implicate the deduction of banks' expenses from provisioning under IFRS and dynamic provisions from 2013. The abovementioned achievements comply with the trends of maximum approximation of the regulatory practice to international standards in order to ensure competitiveness of the financial sector in the environment of integration processes.

Insurance sector. In 2012 the most significant legislative amendments to the regulatory framework governing the activities of the insurance sector were the transition by insurance companies to the general taxation treatment (payment of corporate income tax from net profit) and the transfer of casualty insurance to life insurance companies.

The change in taxation approach was fostered by expiration of the period of preferential tax treatment which facilitated the formation and strengthening of insurance companies. In addition, the existing regulatory framework based on the international standards of computation of insurance reserves, and functioning of the institute of professional actuaries contributed to aforementioned change in taxation approach.

The transfer of the above insurance class to life insurance companies was pre-determined by the end of the transition period related to the need for all organizational and technical efforts to be made by life insurance companies to introduce a new class of insurance, as well as by achieving an adequate capitalization level to cover corresponding liabilities.

At the same time, the amendments to the insurance legislation regarding limitation of payouts on professional diseases as part of the casualty insurance in order to mitigate insolvency risks of insurance companies, still represent a challenge.

Other changes made to the legislation were mainly focused on improving the regulation of the reinsurance business of insurance organizations and risk management systems and internal control as well as on enhancing control over insurance intermediaries by setting requirements for insurance agents.

The adopted changes in the regulation of the reinsurance business motivate insurance companies to transfer risks to foreign reinsurers with the A and above rating, establish requirements to risk insurance in the domestic market and provide for the procedure for placement of insurance risks in the domestic reinsurance market when risks are transferred to reinsurers - non-residents of the Republic of Kazakhstan rated below A-. In addition, legislative amendments increase the minimum established level of retention.

An anticipated positive effect from adopted amendments is associated with the provision of more effective control over capital outflow due to the limitation on the use of grey schemes in reinsurance.

Requirements for certification and the register-keeping were introduced for insurance intermediaries. Certification system for the agency business is mainly intended for reducing the number of frauds in this area.

Relevant regulations were passed to improve risk management and internal control systems, that:

- establish a limit (of 10%) for investments in related parties within an insurance group;
- provide for the approval procedure for reorganizations, both to insurance (reinsurance) organizations and insurance holding companies;
- provide instructions for voluntary liquidation of insurance (reinsurance) organizations;
- enhance requirements to the risk management and internal control systems in an insurance group.

Pension sector. The President of the Republic of Kazakhstan, in his message at the beginning of 2012, expressed the need in finding solutions to classical problems of the accumulation pension system (such as low profitability of pension savings, lack of good quality financial instruments for investment purposes, the use of assets of accumulation pension funds to

finance large infrastructure projects) to reform the pension system of Kazakhstan for the first time since the existing model had been implemented. Stakeholders (such as the NBRK, MLSPP, MFRK, and FIAK) make an effort to draft proposals, align their positions and devise an appropriate plan with a view to further improve the functioning of the retirement security system.

At the same time, as part of the current regulation of the pension sector, amendments related to enhancing the stability of the pension system as well as protection of interest of contributors and investors represent top-priority areas in this regulatory framework. With this view, a set of changes passed in the 4th quarter of 2011 – 3rd quarter of 2012, suggests:

- making amendments to some legislative acts of the Republic of Kazakhstan related to the prudential regulation of accumulation pension funds, associated with the introduction of the conservative and moderate investment portfolios of APFs from January 1, 2012 and extension of the deadline for implementation of the aggressive investment portfolio until January 1, 2015r;

- introduction of necessary amendments to the Rules on the accounting of pension savings on individual pension accounts of contributors (beneficiaries) of APFs in connection with the split of the APF portfolios into the moderate portfolio and conservative portfolio;

- procedure for approval for reorganization of APFs (by way of merger), as well as the procedure for the transfer of pension assets and liabilities of an APF under reorganization is provided for;

- establishing requirements for internal policies and procedures of APFs and PAMC on risk management and internal control, and in respect of limits to risk tolerance;

- defining the procedure for entering into retirement security contracts at the expense of compulsory pension contributions, voluntary pension contributions and voluntary professional pension contributions in and outside the offices of APFs;

- regulating the requirements for large participants in APFs and PAMC in respect of an ongoing and immediate compliance with the required level (value) of capital adequacy ratio of APFs/PAMC;

- establishing the procedure for application of restricted enforcement actions by the authorized agency in respect of an APF and/or an entity having the characteristics of a large participant or a large participant of an APF.

In addition, to solve the problems of low returns of the pension assets, and the lack of investment instruments, two stages of mitigation in the regulatory burden on the investment activity of pension funds were implemented. The first stage involves the extension of the list of instruments eligible for purchase; the second stage involves mitigating the burden on capital to allow investments of pension savings in more profitable financial instruments, including in the foreign markets and banks.

Securities market. To ensure further stimulation of the development of this segment of the financial market by attracting new issuers and investors to the stock market and to extend the number of good quality instruments, the NBRK favored amendments to the regulatory framework that suggest:

- determination of the procedure for clearing operations in the securities market;

- determination of the procedure and conditions for acknowledgment of corporate entities and individuals as qualified investors, as well as the procedure for record-keeping of entities acknowledged as qualified investors;

- identification of the list of financial instruments eligible for purchase with the funds of qualified investors;

- managing and reducing the level of credit risks and ensuring protection for investors against the actions of those brokers that perform their duties in an unfaithful manner;

- identification of circumstances and conditions of transactions performed by banks with GSs and NGSs in the secondary market, as well as with derivatives in unorganized securities market;

- counter-acting manipulations in the securities market and establishing the government securities market which will function in a safe way.
- possibility of including foreign issuers in the official listing of the special trading platform of the regional financial center provided they comply with the established requirements;
- liberalization of requirements for providing access to the stock exchange for the Islamic securities.

In addition, in 2012 a simplified procedure for the access of the PLF's bonds to the official listing of the stock exchange (as well as a simplified procedure of the state registration of the bond issue) and the procedure for the access of the PLF's bonds to the official listing of the special trading platform of the regional financial center, were formalized. Such amendments extend the list of traded financial instruments with debt securities of the PLF. The issue of these securities is required to finance PLF's core operations related to repurchase and management of bank problem loans.

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

In 2012, 12 sessions of the FSC on ensuring financial stability and developing the financial market of the Republic of Kazakhstan were conducted; their agendas included various aspects of functioning of different segments of the financial market. The most significant decisions of the FSC include:

- identifying the areas of the pension system reforms involving a gradual increase in the retirement age for women; expanding the coverage of the population with the accumulation pension system, including the self-employed; developing the system of compulsory professional contributions funded by the employers; improving the accumulation pension system in terms of expanding investment opportunities of accumulation pension funds; updating of the customer database of APFs by optimizing personal pension accounts of contributors.
- working-through the key aspects in terms of equalizing competitive conditions for Kazakh banks in respect of additional advantages of banks with foreign participation when using the guarantees from high-rated parent companies. Also, expanding capacities of Kazakh banks in the markets of other countries including blank loans to Kazakh bank subsidiaries provided that the volume of assumed risks is limited, and recognition of collaterals registered abroad, with a certain discount reflecting the risks of incomplete information about such security and legal risks;
- introducing a new concept of provisioning (reserving) by banks based on the models of realized (IFRS) and expected (dynamic provisions) losses. As part of the concept, parameters for creation of dynamic provisions by Kazakh banks were defined;
- identifying actions required to implement the most recent recommendations of the Basel Committee on Bank Supervision (Basel III) into practice in Kazakhstan. Working groups were established to address this issue, involving all stakeholders and experts. As a result, ratios of capital adequacy, conservation buffer, counter-cyclical buffer and capital buffer for systemic banks were determined. Also, the Schedule of a step-by-step and complete implementation of new capital standards was designed;
- defining approaches to the bank funding and subsequent crediting of the economy with the funds of APFs and insurance organizations received as a result of a medium-term bond emission;
- designing capabilities related to the improvement of the system of compulsory casualty insurance of employees while on duty, further actions to establish the mechanism of balanced system of coverage for losses related to occupational diseases.

In addition, among the problems in the functioning of the financial market, the following aspects were addressed at the sessions of the FSC:

- improving some of the aspects in the operation of life insurance companies;
- eliminating shortcomings in the existing methodology for calculation of compulsory contributions to the Insurance Indemnity Guarantee Fund;

- developing the institute of Insurance Ombudsman;
- improving supervision of risk management and internal control systems of banks.
- measures aimed to reform the organizational market in the Republic of Kazakhstan.

Based on the outcomes of the sessions, a number of working groups was established to develop a consolidated position of government authorities and representatives of the financial sector. Participation of interested government authorities and the financial market in the FSC's sessions allows providing necessary conditions to make the most balanced decisions on the matters of financial sector development.

IV. Appendices

Financial Soundness Indicators of Kazakhstan ¹

Appendix

(as percentage)

	2009 ²	2010 ²	2011 ³	6 mon. of 2012 ³	9 mon. of 2012 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)	4.3 (17.4)	4.5 (17.6)
Tier-1 capital to risk-weighted assets	-9.3 (14.1)	13.8 (13.2)	13.2 (13.0)	1.6 (13.4)	1.6 (13.2)
Capital to total assets	-8.5 (11.5)	10.9 (18.8)	10.2 (13.8)	3.1 (13.5)	3.5 (14.2)
Past due loans over 90 days net of specific provisions to capital	-52.2 (39.3)	60.2 (27.1)	78.2 (37.9)	159.0 (38.1)	142.9 (37.2)
Capital to total liabilities	-7.8 (13.0)	12.3 (16.4)	11.3 (16.0)	3.2 (15.6)	3.6 (16.6)
<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)	30.9 (20.8)	30.9 (21.5)
Provisions to total loans	31.5 (20.7)	30.9 (21.8)	32.1 (24.6)	36.0 (24.4)	35.8 (24.3)
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)	80.6 (66.5)	80.6 (67.5)
Foreign currency loans to total loans	57.2 (54.2)	50.2 (46.8)	44.2 (38.5)	41.1 (35.1)	39.2 (32.9)
<i>Profitability Ratios</i>					
Return on assets (ROA) ⁴	-24.1 (0.2)	12.0 (5.9)	-0.1 (1.3)	-6.6 (0.9)	-6.3 (1.5)
Return on equity (ROE) ⁴	-1192.5 (1.9)	843.9 (51.2)	-1.0 (10.3)	-100.7 (6.7)	-92.8 (10.7)
Interest margin to total income*	92.9 (10.0)	16.4 (72.8)	71.1 (69.7)	74.1 (63.5)	70.4 (64.3)
Non-interest expenses to total income*	145.4 (99.6)	21.1 (47.1)	67.6 (50.9)	325.5 (43.3)	218.5 (43.3)
Personnel expense to non-interest expense*	1.0 (1.4)	26.3 (34.1)	31.3 (35.2)	6.9 (38.8)	9.4 (38.5)
Spread between reference rates on deposits and loans* ⁵	509.2 (745.9)	393.6 (635.4)	453.8 (581.5)	461.9 (592.0)	453.0 (576.4)
<i>Liquidity Ratios</i>					
Highly-liquid assets to total assets	19.2 (20.3)	21.2 (22.8)	21.0 (22.0)	20.9 (22.4)	18.0 (19.2)
Highly-liquid assets to short-term liabilities ⁶	53.1 (64.9)	63.3 (64.8)	57.3 (59.4)	54.5 (59.0)	47.4 (52.6)
Customer deposits to total loans (excl. interbank loans)	67.2 (82.1)	76.7 (88.8)	76.0 (85.8)	79.0 (89.5)	75.6 (85.1)
<i>Market Risk Sensitivity</i>					
Net FX exposure to capital	177.3 (1.3)	-3.2 (-3.7)	-1.3 (-0.1)	-289.7 (-1.4)	-273.8 (-4.7)
Other Financial Corporations⁷					
Assets to total assets of the financial system	19.9	23.4	25.5	26.3	27.1
Assets to GDP	16.9	16.8	15.9	16.5	17.2

	2009	2010	2011	6 mon. 2012	9 mon.2012
Corporate Sector					
(large and medium-size enterprises)					
Return on assets (ROA)	11.3	14.7	17.1	17.1	16.1
Return on equity (ROE)	29.8	39.6	44.7	42.7	39.8
Total liabilities to capital (leverage)	1.7	1.6	1.6	1.5	1.4
Net FX exposure to capital	-55.1	-61.1	-5.4	-52.1	-49.1
Current liquidity ratio	1.3	1.4	1.4	1.4	1.4
Households Sector					
Debt of households to GDP	15.2	11.2	9.6	9.4	10.0
Debt of households to disposable income	27.5	22.1	22.3	21.1	21.3

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 Temir Bank.

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.