NATIONAL BANK OF THE
REPUBLIC OF KAZAKHSTAN

AGENCY OF THE REPUBLIC OF
KAZAKHSTAN FOR REGULATION AND
SUPERVISION OF FINANCIAL MARKET
AND FINANCIAL ORGANIZATIONS

# KAZAKHSTAN
# FINANCIAL STABILITY REPORT

***December 2008***

# Foreword

The National Bank of the Republic of Kazakhstan jointly with the Agency of the Republic of Kazakhstan on Regulation and Supervision over the Financial Market and Financial Organizations (Financial Supervision Agency) publishes annually Financial Stability Report since 2006.

According to legislation of the Republic of Kazakhstan, the Financial Supervision Agency ensures financial stability of the financial market and financial organizations and the National Bank promotes stability of the financial system.

According to Memorandum on financial stability, concluded between Government of the Republic of Kazakhstan, National Bank and Financial Supervision Agency on November 10, 2007:

*"Financial stability is defined as the absence of the disproportions in the economy, which may cause the consequent negative correction of the financial markets, emergence of the systemic crisis and inability of the financial institutions to maintain the smooth financial system operations and business activity of the real sector."*

The following financial stability aspects are evaluated in this Financial Stability Report:

(1) efficient and timely distribution of financial resources between savors and investors;
(2) adequate risk assessment and management;
(3) ability of the financial system to absorb financial shocks without substantial consequences.

This Financial Stability Report is focused on financial market participants and also on audience interested in a problematic of financial stability. The National Bank and the Financial Supervision Agency have set a task to publish the results of researches and analysis of risks, as well as special financial stability researches.

*This Kazakhstan Financial Stability Report has been prepared by the National Bank of the Republic of Kazakhstan, jointly with the Agency of the Republic of Kazakhstan for Regulation and Supervision of Financial Market and Financial Organizations.*

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## Abbreviations:

| | | |
|---|---|---|
| **CIS** | | Commonwealth of Independent States |
| **RF** | | Russian Federation |
| **USA** | | United States of America |
| **IMF** | | International Monetary Fund |
| **ECB** | | European Central Bank |
| **OECD** | | Organization of Economic Cooperation and Development |
| **NBRK** | | National Bank of the Republic of Kazakhstan |
| **MF** | | Ministry of Finance of the Republic of Kazakhstan |
| **MEB** | | Ministry of Economy and Budgeting of the Republic of Kazakhstan |
| **FSA** | | Agency of the Republic of Kazakhstan for Regulation and Supervision of Financial Market and Financial Organizations |
| **SARK** | | Agency of the Republic of Kazakhstan for Statistics |
| **NFRK** | | National Fund of the Republic Kazakhstan |
| **SCPP** | | State Center for Pension Payments |
| **ISMT** | | Interbank System of Money Transfers |
| **KASE** | | JSC "Kazakhstan Stock Exchange" |
| **KDIF** | | JSC "Kazakhstan Deposit Insurance Fund" |
| **ARFC** | | JSC "Almaty Regional Financial Center" |
| **KMC** | | JSC "Kazakhstan Mortgage Guarantee Fund" |
| **CSD** | | JSC "Central Security Depositary" |
| **JSC** | | joint-stock company |
| **STB** | | second-tier bank(s) |
| **APF** | | accumulation pension funds |
| **SM** | | securities market |
| **GDP** | | Gross Domestic Product of the Republic of Kazakhstan |
| **CPI** | | consumer price index |
| **PPI** | | producer price index |
| **FDI** | | foreign direct investments |
| **M3** | | monetary supply |
| **GED** | | gross external debt |
| **LIBOR** | | London Interbank Offered Rate |
| **OIS** | | overnight interest rates swap |
| **GS** | | government securities |
| **MRR** | | minimum reserves requirements |
| **DI** | | Diffusion Index |
| **NPC** | | net percentage change |
| **KZT** | | tenge |
| **ths.** | | thousand |
| **mln.** | | million |
| **bln.** | | billion |

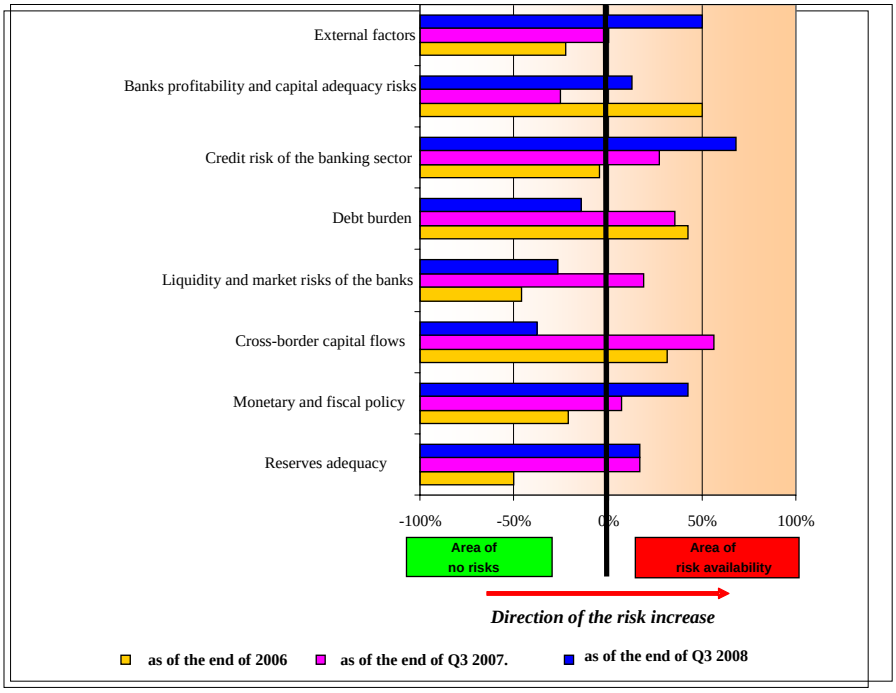
# I. General Conclusions

The results of analysis of the factors that ensure financial stability show the adequacy of assessments of the Kazakhstan Financial Stability Report made in December 2007 regarding the parameters of further development, namely:

- increase of the risks of credit portfolio quality aggravation in the background of the problems of major corporate borrowers, adjustment on the real estate market and burden of the accumulated debt on a financial position of the households as well as inflation costs;
- higher requirements for the banks' profitability in the conditions of liquidity reduction and tightening of the credit policy;
- deterrent effect of reduction in the banks credit activity on the economic growth dynamics;
- assessment of banks capacities of external liabilities redemption and adequacy of the reserves for increasing the banking system liquidity;
- need in revision of the development strategy by the banks.

These conditions were directly reflected in the snapshot of risks to financial stability at the end of the third quarter 2008. In particular, the most essential factor of vulnerability is currently a growth of credit risks, accumulation of the reserves to cover which is putting pressure on profitability and future capitalization of the banking system.

**Map of Risks**




The favorable condition of the world commodity markets and the underestimated effect of import deceleration in the conditions of lower domestic demand contributed to essential improvement of the balance of cross-border flows and allowed retaining the country's reserves without resorting to considerable interventions. At the same time, the degree of reserves adequacy was not evaluated to a full extent under the influence of the unfavorable external factors.

In the perspective, in the conditions of the world economy deceleration, recession of the large economic powers, and instability of the world financial institutions, an unfavorable condition of not only financial but commodity market may result in worsening the risks of further economic growth deceleration in Kazakhstan and financing deficit of the balance of payment which will increase a potential burden on the country's international reserves.

In the background of a decrease in the contribution of traditional factors of economic growth, compensation of private investments and consumption reduction becomes the main goal of the stimulating policy of fiscal expenses. At the same time, in the conditions of budget deficit growth due to the announced increase of the volumes of economy support up to 20% of GDP,

utilization of the National Fund assets and reduction of the potential of the real sector of economy to ensure a steady growth of tax proceeds, the likeliness of rise in sovereign risks is high. Accordingly, the ability of the state to ensure a balance between the sustainable growth rates of state expenses and the need in promoting the economic growth becomes of primary importance.

In spite of the real growth deceleration, the indicators of activity of the real sector, in particular, employment and enterprises profitability have not shown a growth of tension over 9 months of 2008 in the background of a favorable pricing environment. In the conditions of the economic growth deceleration they are likely to be delaying and underestimating the actual adjustment amplitude in the real sector. Reduction of income of the households and enterprises will manifest in full in the conditions of the world prices drop that will additionally intensify a negative effect of the price shock on the export, balance of payment current account and real economic growth in 2009. Also, the growth of competition on the international capital markets between borrowers in the conditions of more moderate supply of financial resources adds to the likeliness of aggravation of new borrowing parameters (term, cost) and the external debt structure.

High liquidity of corporate clients in the foreign exchange and retention of the capabilities of external liabilities refinancing by some banks allowed the banks to maintain their currency liquidity and to sell a foreign currency surplus on the stock exchange. Under these circumstances, the currency market liquidity remained fairly high, and some major transactions of speculative nature could not essentially affect the market behavior. In turn, this allowed the NBK to minimize costs of restricting volatility of a tenge exchange rate by gradually compensating the last year losses at the expense of increase in gold and foreign exchange reserves. High foreign exchange liquidity of customers and supply of dollars by them have also allowed moderating the payment burden with regard to banks external liabilities on the money market rates in the foreign currency. This situation and NBK operations have on the whole stabilized the overall liquidity level on the financial market.

At the same time, in the conditions of constraints of traditional sources of funding, special importance is given to keeping confidence of bank clients and increasing the role of interbank market in order to re-distribute the financial flows. The use of state guarantee mechanisms that are widely used in all the countries can play a determining role in this.

The analysis of reaction of different population groups also shows that small savers whose deposits are subject to guaranteeing are more sensitive to the change in banking sector risks assessment. At the same time, their reaction is evenly distributed in relation to all banks regardless of risk specifics of each separately taken bank. On the contrary, big depositors pay much attention to specific risks of the banks and are sensitive to assessment of risks and scope of state support for separate financial institutions. Accordingly, in the crisis conditions, maximally wide distribution of deposit guarantees can stabilize the reaction of major depositors and deposit base of the banks. In the long-term perspective, the guarantee system shall take into consideration the need in creating incentives for qualified evaluation of separate banks and the overall banking system made by the population.

Inflexibility of the behavior of all market participants determining the situation in the real estate segment creates an uncertainty and lack of clear price guidelines. The reduction of personal income in real terms and crediting volumes on the part of banks, on the one hand, creates pressure of the demand factors on further price reduction. On the other hand, lack of essential additional supply of mortgaged apartments by the banks that do not wish to fix losses, and reduction of the new construction profitability build an essential line of resistance on price levels close to the current ones. Besides, reduction of risks of banks insolvency due to state guarantees in the background of real estate market non-transparency makes unlikely the choice in favor of investments in real estate as an alternative to banking instruments with fixed return. Thus, in view of combination of the

factors in the short-term perspective it is logical to expect retention of low price levels (some possible reduction of the prices in Almaty) and commencement of a gradual recovery of the prices not earlier than the end of the next year. Further on, completion of the construction of the facilities that were started and financed at the expense of state resources, and lack of new projects will move to the forefront a deficit of housing, i.e. the factors of a limited supply.

The price indices reduction of corporate securities of Kazakhstani issuers on the foreign market determined the fall in the main parameters of the Kazakhstani stock market which could not become for the corporate sector an alternative to the bank financing market. The reduction in the value of securities occurred in the entire spectrum of securities, and this reflects an effect of referring by investors of all Kazakhstani assets to one group of risk and 'flight into quality'.

In the background of decline in market capitalization of the banks, the growth of costs for creating provisions due to aggravating quality of the credit portfolio and decrease in the credit activity contribute to reduction in the profitability which puts an additional pressure on the capital adequacy, thereby restricting the banks capability of absorbing potential losses. The reduction of the share of interest income and increase of non-interest expenses did not allow to the banks to fulfill the potential of maintaining profitability at the expense of increasing the interest spread. In spite of the controlled direct FX risk of the banking system, a short position in the foreign currency of bank borrowers bears an essential indirect FX risk (credit risk) depending upon fluctuations of the tenge exchange rate.

A credit risk of the banking system is considerably increasing. At the same time, in spite of the growth of volume of provisions, their real adequacy has not yet been tested because the banks actively pursued the policy on credit restructuring. The economic growth deceleration and financial ratios aggravation of the enterprises of a wider spectrum of the economy sectors will in this background put an additional burden on revenues of the banks. Under their restricted capabilities for expenses optimization, this requires to maintain a higher level of capitalization.

As a result of depreciation of financial instruments that are in the portfolio of the Kazakhstani accumulation pension funds and a negative net income in the second half of 2008, the rate of return of pension assets has essentially reduced which increases a risk of safeguard of pension savings and potential loading on the state budget as to compensation of depositor's losses.

The reduction of internal demand, increase of the assets quality risks and potential threats of the banking system capital adequacy, need in supporting confidence in the domestic financial system set priorities of the anti-crisis program of the Government, NBK and AFN.

In the exceptional conditions of instability, in determining the mechanisms of overcoming the crisis, the state must take into consideration a number of dilemmas, particularly:

1) focus on solving the structural problems, *or* maintaining the current conditions that ensure financial stability;
2) accept fairness of the various assets price levels being formed, *or* their assessment as price distortions that weakly reflect fundamental factors;
3) implement a mechanism of equal costs distribution between all the participants, *or* maximum state support with acknowledgement of a probability of moral hazard;
4) minimize the state costs, *or* maximize potential benefits in the medium-term perspective.

The elements of the anti-crisis program of Kazakhstan show the combination of different priorities:

– measures on stabilization of the economy and financial sphere have until recently been of primarily short-term supporting character and have not been focused on solution of long-term structural factors of vulnerability;

– despite this, the measures turned out to be fairly effective and allowed mitigating a negative impact of the world financial crisis with minimum costs, and this was encouraged by a strong position of the state budget with high oil prices and banks capability of refinancing an essential part of external liabilities;

– if the NBK's policy in terms of discounting the cost of security on refinancing operations was fairly liberal, which conforms to the current world practice, then an expected state's entering the banks capital on the price levels of the stock market, close to minimum, testifies to the fact that the Government considers the current risk assessment to be fair;

– fixation of the minimum price levels of the market of shares for the Government to enter the banks capital supposes equal distribution of costs with the existing shareholders. At the same time, adequacy of costs distribution to risks taken earlier by the existing shareholders ('appetite for risk') depends upon the form, conditions and price parameters for entering the banks capital. Similarly, the issues of buyout by the Stress Assets Fund of the banks problem assets and restructuring issues should be worked over in a maximally effective manner in order to exclude the unjustified competitive advantages of the banks that used the most risky strategy, and to exclude the strife for deliberate default by borrowers for the purpose of getting a possibility of restructuring their liabilities;

– in the conditions of lack of clear benchmarks, correction depth and costs scope, a special attention should be paid to the effectiveness of utilizing state resources, especially by taking into consideration reduction of the budget capabilities and using an 'safety pillow' in the form of NFK.

International experts have acknowledged that in the conditions of instability it is not necessary to speculate too much on the topic of moral hazard. Along with that, it is important to take into consideration the need in minimizing this hazard in the long-term perspective which supposes elaboration of the most effective model of solution of the sector structural problems and subsequent exit of the state out of the system. In addition, the state policy must create sufficient incentives for using the internal sources of the financial system growth.

# II. Macroeconomic Risks and Financial Markets Risks

## 1. Factors of the External Environment

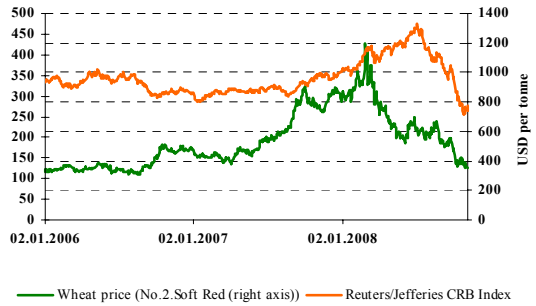
### 1.1 Financial Crisis Typology

***In the background of the financial crisis development, the value of many classes of assets was adjusted downward. Thus, correction of 'assets bubble' in the real estate market and prices for raw materials, metals, semi-conductors and foodstuff have in general created preconditions for stabilizing of the price level in the medium-term perspective. However, a low level of prices for commodities supposes reduction of currency receipts from the sale of mineral products and other raw commodities for the developing countries –their main exporters.***

A sharp growth of commodity prices in 2007 continued in the first half of 2008. Thus, the highest price growth for raw commodities for the last decades was recorded in February 2008 – the dynamics of Reuters/Jefferies[1] CRB index showed a maximum historical surplus in 12% per month. At the same time, increase in price volatility fueled by speculative capital has eventually transformed into a sharp adjustment in the third quarter of this year. This was connected with the necessity of fixing the income, due to reduction of liquidity and the concerns about the world economy growth deceleration. In particular, if the index grew by 30% for the first half of 2008, the reduction for the third quarter was -25% (Figure 1.1.1).

**Figure 1.1.1**

**Commodity Price Indices**




*Source: Thomson Financial Ltd. (DataStream)*

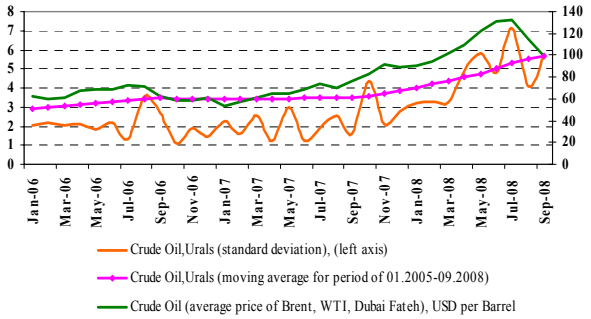
The price of the inflation's main trigger in the developing countries in 2007 – wheat – has also demonstrated the same dynamics. On the whole, the decrease in wheat prices amounted to 40% over the nine months of the current year. The average forecast of independent analysts[2] regarding to the prices for wheat has tended to be downward. Thus, in 2008 and 2009, it is expected that the wheat price will decline to USD346.6 per tonne (in the range of forecasts of 275(min); 411.19 (max)) and USD293.7 per tonne (in the range of (236; 340)) respectively.

The dynamics of the price for Brent crude oil also demonstrated an increased volatility. Although on the whole the price change was only 2% for 9 months of 2008, the quotations dropped from USD145.61 in July to USD93.84 in September and then to USD59.9 in late October 2008. The price adjustment in the second half of the year occurred for a wide range of products; however, from all commodities the petroleum market experienced the greatest pressure of speculative capital. Thus, if for the first half of the year the prices for gold, copper and zinc grew by 12.8%, 19% and 29.7% respectively, the price for Brent crude oil increased by 47.6% (Figure 1.1.2, Figure 1.1.3).

[1] The historical integral index constructed on the basis of 19 raw commodities prices.
[2] The consensus forecast of 10 international organizations and investments banks as of October 31, 2008. Source: RBK Consulting

**Figure 1.1.2**

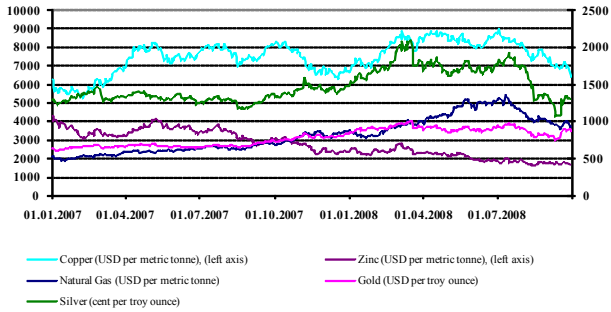
**Energy Supply Prices Volatility**




*Source: Thomson Financial Ltd. (DataStream), IMF*

**Figure 1.1.3**

**Basic Metal and Gas Prices**




*Source: Thomson Financial Ltd. (DataStream)*

The current assessments indicate a low probability of renewal of rapid oil prices'growth in the short-term perspective due to substantial scale of the crisis. However, an impact of main fundamental factors such as rise in the demand for fuel, deficiency of processing capacities and reduction of production may lead to their gradual recovery in the medium-term perspective.

The forecasts on oil prices movements are heterogeneous and are primarily under the influence of such factors as oil supply regulation by OPEC, forecasts on reduction of the world reserves and petroleum production in future, adequacy of petroleum reserves in the USA, oil supply and consumption by the developing countries and the USA.

The IMF forecast on the average price for crude oil for 2009 is at the level of USD68. At the same time, investment bank Merrill Lynch, according to its forecasts made in December 2008, expects more price adjustment to USD25 per barrel due to traditionally low seasonal demand in the first and second quarters of 2009. The forecast range made by independent analysts in September through November 2008 shows substantial spread of expectations for the oil price, unexpectedness of its adjustment amplitude in the third quarter, and at the same time confidence in its further decrease (Table 1.1.1).

**Table 1.1.1**

***Forecasts on the Oil Prices Movement for Different Grades of Crude Oil (USD/bbl)***

| *Name of crude oil* | *Average value* | | *Maximum value* | | *Minimum value* | |
|---|---|---|---|---|---|---|
| | **2008** | **2009** | **2008** | **2009** | **2008** | **2009** |
| WTI | 101.3 | 80.74 | 117 | 125 | 70 | 50 |
| BRENT | 105.52 | 86.13 | 116 | 125 | 93 | 57 |
| URALS | 96.09 | 74.34 | 106.47 | 91.1 | 73 | 57 |

*Source: consensus forecast of the investment banks under the materials of RBK Consulting, the data of Renaissance Capital, IMF, World Bank, informational materials of www.cbonds.ru, www.forexpf.ru.*

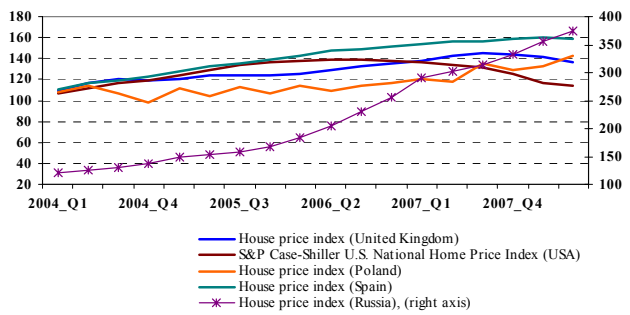
In turn, a gradual adjustment of 'inflated' prices for assets as a consequence of speculative trends was also observed on the real estate markets of different countries throughout the world.

Thus, the indicative index of the US housing market – S&P 500 Case/Shiller house price index – reduced for the first half of 2008 by 8%, and by 17% as compared with the maximum value of the second quarter of 2006 (Figure 1.1.4).

The deepest adjustment of real estate prices has been observed in the developed

**Figure 1.1.4**

**House Price Indices by Countries (2003=100)**




*Source: Thomson Financial Ltd. (DataStream), web-sites of the national statistical agencies*

countries. In comparison with the developing countries, the largest economies experienced the first wave of mortgage crisis to the largest degree as a result of:
- tightening of the terms on lending of mortgage loans;
- decrease of consumers' expenditures;
- economic growth deceleration;
- lack of consumers' confidence in the prospects of housing market, and
- reduction of speculative operations in these markets.

The real estate market trends in the developing countries had different directions. Some countries have experienced decline in the real estate market as a result of restriction of external resources which in the past years were significantly invested in the real estate market. Other countries have so far demonstrated a growth of prices for real estate related to maintenance of the demand for dwellings, overflow of resources from stock markets to the real estate market as result of the world financial crisis and decrease in the volumes of new supply because it has become more difficult for builders to get financing.

***Gradual worsening of the financial and economic conditions as result of increased tension on the world financial market from the beginning of 2008 have became the main factors of the global growth decline. A wide scope of anti-crisis measures taken by state should contribute to changing of the trend for improvement in the medium-term perspective. However, in order to overcome and reduce a negative effect of the financial crisis upon the real economy it may be required a greater volume of financial injections from the government, which actual scale is difficult to assess at the current moment.***

The combination of numerous negative shocks as a result of the global financial crisis development since early 2008 has caused by ascending trend a gradual deceleration and then decline of business activity in many countries of the world.

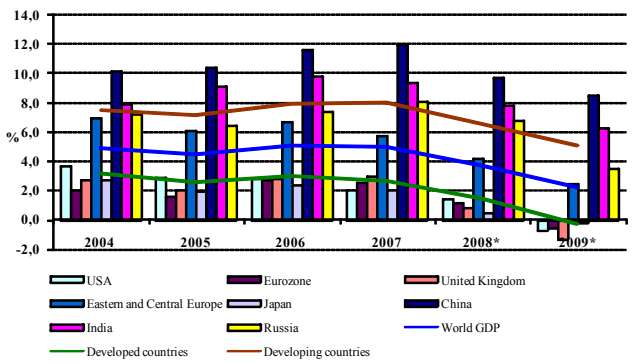
Gradual occurrence of such consequences of the crisis development as:
- reduction of the real estate prices;
- substantial growth of commodities prices at the world market;
- tightening of credit standards;
- decrease of the level of consumer expenditures and investments;
- substantial losses and bankruptcy of financial institutions;
- gradual reduction of the domestic demand and business activity

adjusted downward the world economy development perspectives and increased the deep recession probability of a number of developed economies in 2009 (Figure 1.1.5).

As the events developed in the second half of this year, international financial institutions revised their forecasts of the growth rates of economic development in the countries and regions toward worsening of the world economy development in the medium-term perspective. Thus, according to the IMF forecasts revised on November 6, 2008, a global growth for 2008 will be at 3.7%. At the same time, in 2009 the world economy growth will continue to go down, primarily due to deceleration of economies of the developed countries, and is predicted only at 2.2% (for the developed countries: -0.3%, for the developing countries: 5.1%). The forecasts of analysts of other international organizations and financial institutions for the world economy development in 2009 are in the range of 4.3% to 0.9%, which is on the average at 2.6%. The largest deceleration in 2009, according to the IMF forecasts, is expected in the United Kingdom – its economic growth reduction

**Figure 1.1.5**

**Real GDP Growth of Certain Countries and Regions, (annual % change)**




*Source: IMF*
**- forecast*

is predicted at -1.3%. In turn, the economic decline in the USA, Europe and Japan may be at -0.7%, -0.5% and -0.2% respectively.

The average forecast based on the national sources and other international institutions for 2009 is 0% for the United Kingdom in the range of (-1,9%;3%)[3], 0.9% for the USA in the range of (-1.2%; 2.4%), 0.6% for Europe in the range of (-0.6%; 1.4%), 1.0% for Japan in the range of (0.4%; 1.8%)[4].

Although the economic growth rates in the developing countries have remained higher than the average value of 5.8% that has been recorded since 2000, as the financial crisis is worsening, there is noted a gradual deceleration of their economies. The determining role has a deterioration of the terms for external resources attraction, reduction of international investments inflow and demand from the side of the main export consumers, also decrease in the prices for raw material resources. Thus, IMF predicts the growth of China in 2009 at 8.5% (the average forecast of independent analysts[4] is 8.4% in the range of (7.2%; 9.5%)). However, more new signs of the economic growth deceleration have appeared at the current moment there. Thus, the Fitch international rating agency predicts the reduction of the growth of China to 7.2% in 2009.[5]

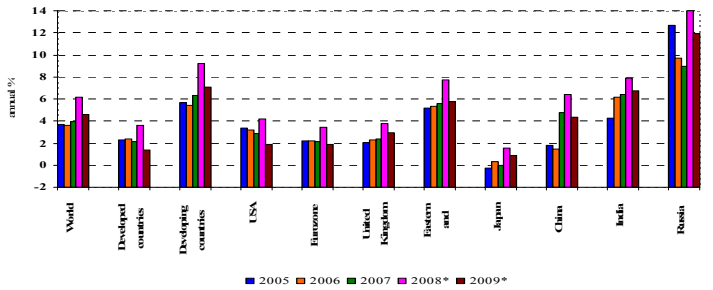
With regard to Russia, the revision of IMF forecasts in November strongly deteriorated the prospects of the country's economic development. Thus, if the forecast for 2008 is at 6.8%, then in 2009 it is expected at 3.5%. The average forecast of international institutions and national agencies for 2009 is at the level of 4.7% in the range of (2.5%; 6.7%).[6] At the same time, according to estimates of the national sources, such sharp reduction will occur under a substantial reduction of oil prices with their long fixation on low levels and reduction of raw materials export.

***The reduction in the second half of the current year of the prices for the commodities – both foodstuff and raw materials, as well as deceleration of the economic growth are weakening a risk of global inflation.***

In the first half of 2008, the threat of stagflation of the world economy seemed to be more than evident in the background of economic growth reduction and high level of inflation as a result of high prices for mineral resources and foodstuff on the world markets. Along with that, in the third quarter of 2008 due to the decrease in economic activity and demand reduction throughout the world as result of deepening of the financial crisis and a sharp turn of the prices on the world commodity markets, the inflation pressure in the world started to decrease which should be expressly seen already in 2009. According to the IMF forecasts, an inflation rate in 2009 will be by 1.5-2% lower comparing to the current year for both the developed countries (1.4% in 2009 versus 3.6% in 2008) and the developing countries (7.1% versus 9.2% respectively), and it should be on the average 4.6% (6.2% in 2008) (Figure 1.1.6).

**Figure 1.1.6**

**Inflation in Certain Countries and Regions (annual % change)**




*Source: IMF*
**- forecast*

[3] Consensus forecast of the Ministry of Finance of the United Kingdom on the basis of polls of 27 international financial institutions. The forecast dates are October 1-9, 2008.

[4] Average consensus forecast of RBK Consulting on the basis of polls of the international financial institutions (October 16, 2008), rating agency Fitch (November 2008),JP Morgan, Financial Market (www.finmarket.ru)

[5] FitchRatings, "Global Economic Outlook", November 2008

[6] Average consensus forecast of RBK Consulting (October 16, 2008), rating agency Fitch (November 2008),JP Morgan, Ministry of Economy of RF

At the same time, according to the estimate of IMF[7], the decrease of business activity may result in an inflation rate in the developed countries lower than the target parameters established by the countries. According to the forecasts, the greatest decrease is expected in the USA as result of a sharp reduction of the domestic demand and consumption where according to the consensus forecast of international organizations[8], an inflation rate should go down from 4.1% in 2008 to 2.5% in 2009.

In turn, in the developing countries inflation will decrease slower as the increase of the prices for the fuel and consumer goods during the price surge in 2007 greatly affected the level of consumer prices.

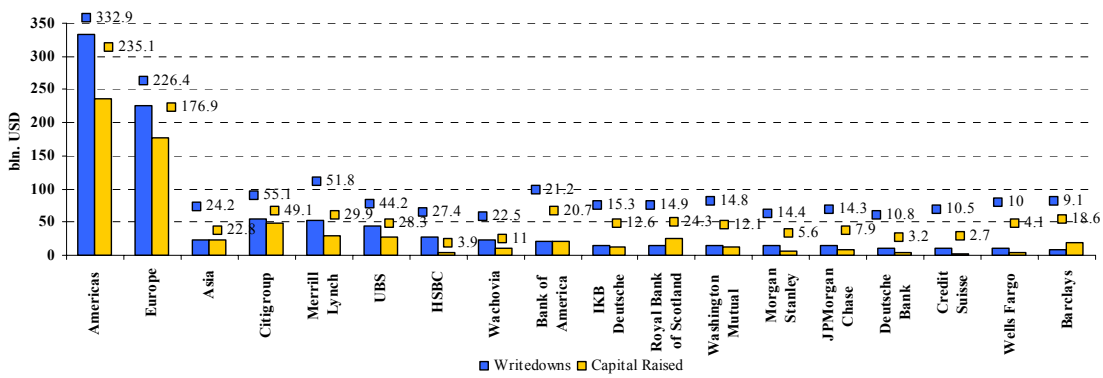
In spite of the forecasts on inflation rate decrease, a threat of its growth remains high in the long-term perspective as result of the macroeconomic policy pursued by the state on weakening the monetary policy in the form of interest rates reduction, injections of substantial funds for the purpose of resisting the financial crisis consequences and probability of currency devaluation in the developing countries.

***A substantial losses and write-offs, bankruptcy of the world largest companies, tightening of credit terms and unavailability of free liquidity on the market have forced to take joint large-scale anti-crisis measures by different countries of the world.***

All the seriousness of mortgage crisis revealed itself from the first announcements of losses by the largest investment banks upon the results of 2007 fiscal year and later in this year (Box 1). It resulted in the need of formation of additional capital for the purpose of covering losses writing off the balance. One of the first financial organizations that declared losses and soon were nationalized by the state were IKB and Sachen LB (Germany), Country wide (USA), Northern Rock (United Kingdom). Thus, as estimated by IMF, for period from the second half of 2007 to September 2008, banking institutions have made write-offs for the total amount of USD580 bln.[9] About 95% of write-offs were made mainly by the institutions of America and Europe and at the less degree by Asian institutions. For the same period, capital injections were approximately USD430 bln. and also were focused on a few large financial institutions of America and Europe (Figure 1.1.7). If at the initial stage of the crisis private investors and various wealth funds acted as main investors in the capital (88%), since this year the situation has changed in favor of state regulators. The capital was increased in different forms such as purchasing additional issues of common and preference shares, both convertible and common, subordinated bonds, assets purchase and other.

**Figure 1.1.7**

**Bank losses, writedowns and capital-raising (bln. USD) as of the end of August, 2008**




*Source: Bloomberg*

[7] World Economic Outlook, October 2008
[8] Consensus forecast according to the data of 30 international institutions as of October 2008. Source : RBK Consulting
[9] Global Financial Stability Report, October 2008

**Box 1**

**Credit Risk and Its Materialization**

Spreading of financial risks all over the world through securitization instruments and their inadequate assessment by financial institutions served as one of the main reasons of considerable losses and bankruptcies of many financial institutions. The credit risk on these complex instruments have a wide institutional distribution with vigorous activity on the world financial market of not only hedge funds, but different financial institutions, including institutions with state participation such as wealth funds. Thus, according to the US Treasury data, the share of investments of foreign official institutions (include monetary authorities and national investment funds) in agency debt securities for period from 2004 to 2007 increased from 34% to 58%. These institutions were responsible for all of the increase in total foreign holdings of long-term U.S. Treasury securities during the June 2006 -to-June 2007 period (about ¾ of the growth fits only agency debt liabilities) (Figure 1.2).

**Figure 1**
**Value of Foreign Holdings of U.S. Long-Term Asset-Backed Securities, by Major Investing Country (as of 31.06.2007)**

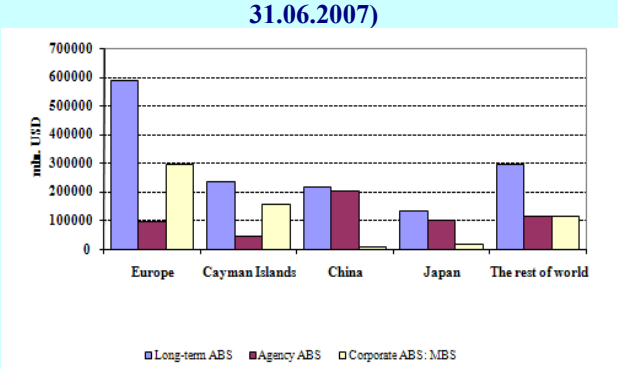
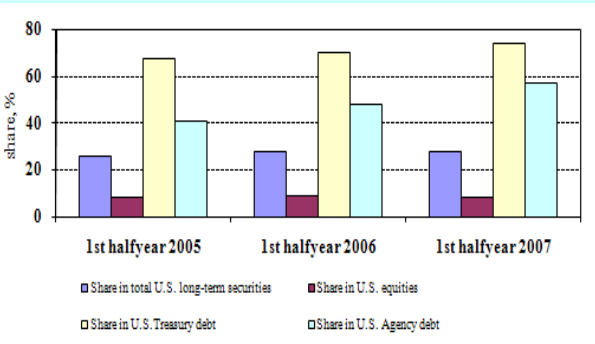



**Figure 2**
**Share of Foreign Official Institutions in Total Foreign Holdings of U.S. Long-Term Securities**



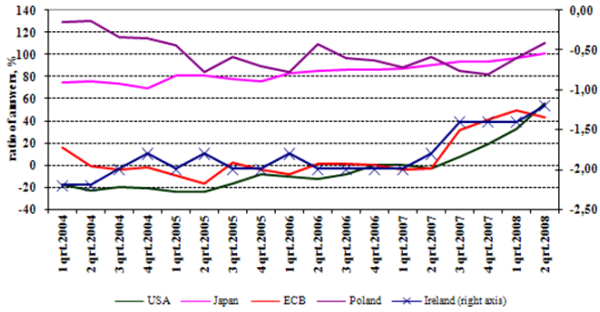

*Source: US Treasury. "Report on Foreign Portfolio holdings of U.S. Securities", April 2008.*

Although this year the largest financial institutions made large-scale write-offs, a high credit risk on investments in the US financial assets, including in government securities, remains high. An active support of the financial market in the form of huge volumes of the financial resources provided by the US Government expands further the imbalance of the US state budget, which in addition to the risk of ownership of secured debt liabilities increase a sovereign credit risk and volatility of the treasury liabilities.

***The high level of uncertainty with regard to the financial conditions of borrowers and growth of credit risk forced the commercial banks to raise the requirements for loans granted for both corporate sector and households.***

Thus, according to the questionnaires of commercial banks conducted by central banks of different countries of the world, among the main reasons that entailed tightening of the credit standards were mainly indicated such factors as weak forecasts of economic growth, decrease of the activity on the real estate market, reduction of risk 'tolerance', deterioration of the intrasectoral conditions inside the industries and concern about the level of debt burden on capital (Figure 1.1.8). Tightening of credit requirements in turn resulted in reduction of the lending volumes of domestic economies, and this has an additional negative effect on the level of business activity in different countries (Figure 1.1.9).

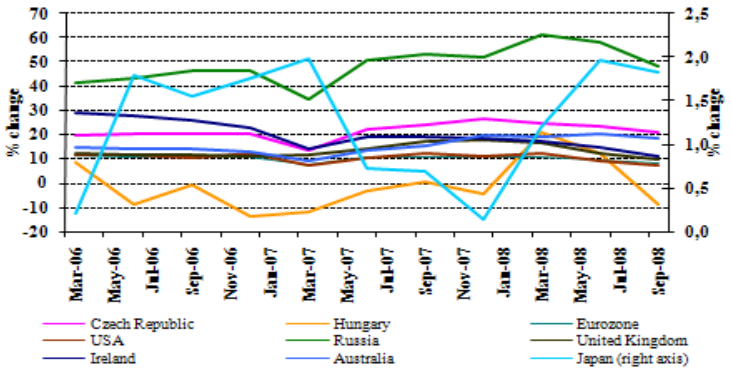
**Figure 1.1.8**
**Balance of Answers of Commercial Banks on a Question of Credit Standards Tightening according to Senior Loan Officer Surveys**




*Note: Positive value indicates a prevalence of respondents' answers to question of credit standards tightening*
*Source: web-sites of central banks, Thomson Financial Ltd. (DataStream)*

**Figure 1.1.9**

**Credits to Economy (Change to Corresponding Period of the Previous Year, %)**

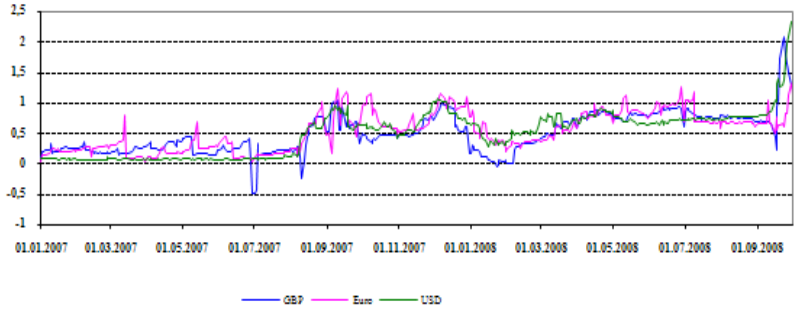



***Uncertainty in the financial sustainability of counter partners and the collateral value, refusal from risky operations has resulted in overall reduction of market liquidity.***

The market of unsecured borrowings with the term of less than 3 months has become very expensive and practically closed. The measures taken by the states, for example, announcement of the guarantees on banks liabilities on the interbank market had only partially solved the problems with improvement of the conditions on the interbank market. Thus, spread of LIBOR-OIS reflecting the risk and liquidity premium to be paid by the banks for granting unsecured and short-term loans essentially expanded in September 2008 (Figure 1.1.10).

**Figure 1.1.10**

**Money Market Spreads**




*Source: Thomson Financial Ltd. (DataStream), Bloomberg*
*Note: the spreads have been calculated as a difference between 3-month LIBOR and 3-month Overnight interest rate swaps*

***General risk aversion became a main trend of the situation development on the stock markets worldwide during 2008. High sensitivity of stock markets to an essential flow of negative news in the background of development of a new stage of the crisis directed the market with an increasing trend to downward, and as a result this run out into the stock markets collapse throughout the world.***

Constant signals about deepening of the crisis and its spreading from the US markets to Europe and other regions of the world, panics at stock markets due to declaring considerable losses and their write-offs, bankruptcy of Bear Stearns in March, nationalization of British bank Northern Rock, record prices for crude oil, nationalization of Fannie May and Freddie Mac agencies in July served as a reason for sharp decline in stock indices. In turn, declaring itself bankrupt by the largest financial institution Lehman Brothers and nationalization of AIG insurance company in October 2008 provoked a mass escape almost from all markets and assets regardless of its level of development and capitalization. This was reflected in record historical decline of indices of the world stock markets (Figure 1.1.11). In comparison with other markets, the Russian stock market has fallen down at the highest extent – by -47% (Table 1.1.2).

**Figure 1.1.11**

**World Stock Indices**

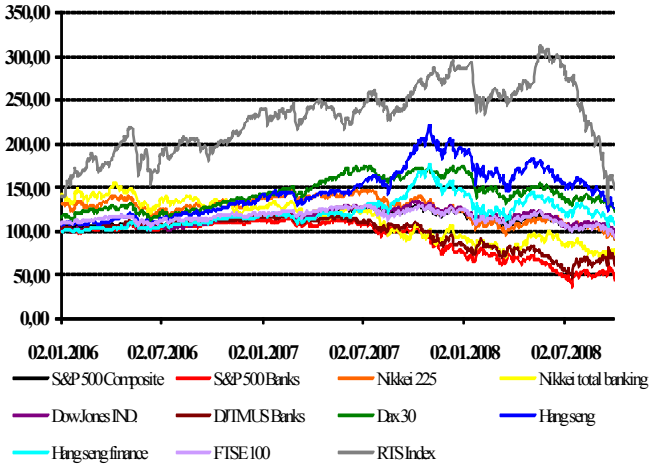



**Table 1.1.2**

**Dynamics of World Stock Indices for 9 months of 2008**

| Index | Country | Index value as of the end of 2007 | Index value as of the end of Q3 2008 | Change, % |
|---|---|---|---|---|
| RTSI | Russia | 2,290.51 | 1,211.84 | -47.09 |
| ATX | Austria | 4,512.98 | 2,767.76 | -38.67 |
| AEX General | Netherlands | 515.77 | 331.45 | -35.74 |
| India BSE 30 | India | 20,286.99 | 12,860.43 | -36.61 |
| Greece General share | Greece | 5,178.83 | 2,856.47 | -44.84 |
| Hang Seng | Hong Kong | 27,812.65 | 18,016.21 | -35.22 |
| S&P500 | United Kingdom | 1,468.35 | 1,166.36 | -20.56 |
| DowJones | USA | 13,264.82 | 10,850.66 | -18.19 |
| Nikkei | Japan | 15,307.78 | 11,259.86 | -26.44 |

*Source: Thomson Financial Ltd. (DataStream), www.rbc.ru*

***Over 9 months of 2008, the FOREX market was most sensitive to the all trends that occurred in the background of financial crisis development and unfavorable future forecasts, as well as anti-crises measures of states.***

The tendency of the US dollar depreciation in relation to the main currencies of the world has remained in the first half of 2008. The main factors that contributed to this tendency were as follows:

- Reduction of the basic interest rate for the purpose of supporting the financial market in the conditions of the expanding crisis;
- Assessments of further reduction of economic activity in the USA; and
- Gradual disclosure of the problems of the largest financial institutions.

Further deterioration of the tendency of the US dollar depreciation has caused gradual decrease by many states of a dollar component in their reserves and refusal from using a US dollar in their settlements.

In the second half of 2008 the US dollar was noted to appreciate in the background of undertaken anti-crisis measures from the side of the US Government with respect of the country's exit from the crisis, reduction of oil prices and growth of the cost of dollar resources on the inter-bank market. The main participants of the FOREX forecast that this trend will remain in the short-term perspective (Table 1.1.3).

**Table 1.1.3**

**Flow Range and Forecasts of Exchange Rate of the Leading World Banks**

| ***Range of actual values*** | **Euro/ US dollar** | **Pound sterling/ US dollar** | **US dollar/ Japanese yen** |
|---|---|---|---|
| 1st quarter of 2008 | (1.449-1.580) | (1.945-2.032) | (97.155-111.345) |
| 2nd quarter of 2008 | (1.536-1.595) | (1.943-1.998) | (100.526-108.262) |
| 3rd quarter of 2008 | (1.395-1.595) | (1.751-2.003) | (104.436-110.491) |
| ***Range of forecast values*** | | | |
| As of the beginning of 2009 | (1.17-1.45) | (1.50-1.82) | (90-110) |
| Average value | 1.3364 | 1.6896 | 101.04 |
| As of the end of the 3rd quarter 2009 | (1.18-1.45) | (1.51-1.89) | (95-116) |
| Average value | 1.3136 | 1.6679 | 107.04 |

*Source: banks forecasts according to the materials of web-sites www.forexpf.ru (as of October 27, 2008), www.quote.ru (as of November 1, 2008)*

***For the purpose of reducing the crisis, the Governments and Central Banks of different countries took various anti-crisis measures. If during the first period of crisis primary the developed countries of the world were the most active states, then the events occurred in this autumn provoked a collapse of stock markets, suspension of trade sessions and resulted in an unprecedented taking of coordinated and urgent anti-crisis measures and stabilizing programs by most countries of the world.***

The package of anti-crisis measures was mainly implemented in such directions as: 1) markets saturation with liquidity; 2) direct funding of financial institutions; 3) capital increase; 4) declaring explicit and implicit guarantees on the liabilities of financial institutions for the purpose of maintenance confidence in the financial systems. The majority of measures are temporary as many states have determined the time horizon (on the average 2-3 years ahead) of their actions until the end of market turbulence (Table 1.1.4).

At the same time, at the initial stage in most cases adoption of a substantial number of anti-crisis measures was perceived by markets negatively, thereby signaling that the countries by taking these measures acknowledge the possible implicit scopes of exposure to the risk of crisis development.

**Table 1.1.4**

**Measures on Ensuring Financial System Stability**

| Ways of solution | Form |
|---|---|
| **Problem: Squeezing of the financial markets liquidity** | |
| Increase of operations volume and terms as to classic instruments of refinancing | Short-term REPO operations (less than 1 month) |
| | Long-term REPO operations (over 1 month) |
| New forms (instruments, programs) of refinancing | Refinancing operations on special terms |
| | Auctions on granting/placement of credits/deposits in USD, including unsecured |
| | Agreements about SWAP currency operations in USD and foreign currency between central banks |
| | SWAP operation with USD and other currency |
| | Unsecured credits (including subordinated) through state banks, deposits of the Central Bank and Government |
| | Schemes of exchange (buyout) of non-liquid assets of the banks to liquid assets |
| Change of the conditions on the refinancing operations of the central bank | Expansion of the list of collateral |
| | Expansion of the list of counteragent organizations at the expense of brokers, dealers, credit organizations and investment banks, insurance companies and other organizations |
| | Decrease of the norms for reserves requirements |
| Reduction in the cost of the resources of central bank and credits to the economy | Decrease of the key interest rates |
| Other form of providing liquidity to the banks | Increase of interest rates on deposits in the central banks, payment of interest rates on deposits or deposit certificates |
| **Problem: Reduction in confidence to the financial system** | |
| Increase of guarantees on deposits of commercial banks | Increase of a maximum amount of compensation on guaranteed deposits |
| Announcement of guarantees on liabilities of the banks and other financial institutions | Guarantee of the Government or Central Bank on different types of financial liabilities (interbank, external loans, deposits) both existing and new attractions |
| **Problem: Capital adequacy to risks** | |
| Capitalization increase to the level adequate to potential risks | Recapitalization (buyout and subscription to the new or available volumes of shares and subordinated debt) |
| | Forced nationalization of financial institutions |
| Address support | Granting credits as a lender of the last resort to financial institutions by the government or central banks |
| Improvement of the assets quality | Problem assets buyout |
| Comprehensive solution of the problems with funding, liability guaranteeing, assets buyout and temporary management | Creation of specialized institutions/funds on support of financial institutions |
| **Problems: Increase of financial markets volatility** | |
| Restriction of speculative operations on the domestic markets | Prohibition on conducting short sales throughout the market or according to a restricted list of securities, requirements for information disclosure |
| Increase of the Central Bank resource base on meeting the demand for foreign currency | IMF credits |
| Stabilization of the price parameters of the market | Interventions on domestic currency markets |
| | Interventions on organized securities markets |

*Source: NBRK on the basis of publications, press releases of central banks, mass media*

## 1.2. Developing Countries – Risks Transformation

***Although direct costs (losses and bankruptcies of the largest financial institutions) of the US sub-prime crisis have until now been borne by the developed countries, the tendency of risks reassessment with regard to the developing countries has intensified in the direction of deterioration in response to the worsening of borrowing conditions, decline in the world prices in the background of credit boom adjustment.***

The main risks of the developing countries are in the first place related to restriction of access to external financial resources in the form of tightening of requirements for borrowers, increase of the cost of attracting new resources and servicing the current liabilities.

A negative effect was at the highest degree experienced by those developing countries where a high economic growth was based on the favorable conditions for attracting the resources from external markets and high prices for raw commodities. Thus, the level of external debt in some developing countries have reached the value more than 100% to GDP, where the most part of the external debt primarily is the short-term debt.

In the light of emerged negative consequences of the financial crisis for the developing countries, an observed capital ouflow, high share of short-term external liabilities, active support of domestic financial markets creates certain risks to the foreign exchange reserves adequacy of the developing countries (Figures 1.2.1-1.2.4).

**Comparative Parameters of Developing Countries Vulnerability**
**(as of 2 quarter 2008, annualized)**

**Figure 1.2.1**

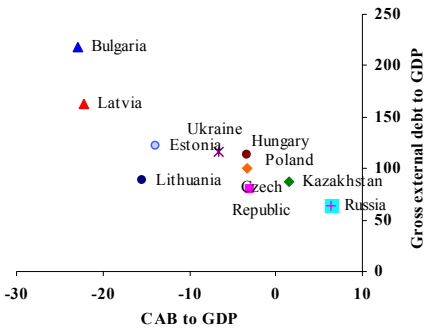



**Figure 1.2.2**

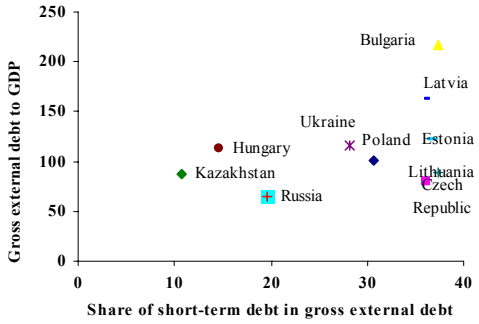



**Figure 1.2.3**

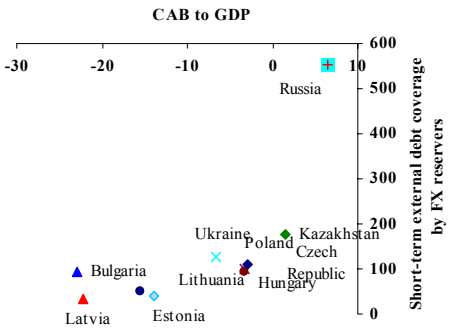
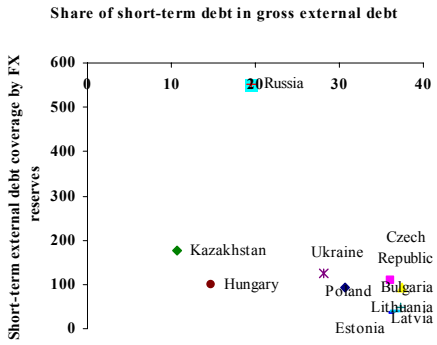



**Figure 1.2.4**




*Note: Displacement to extreme top and to lower corners of diagrams reflects higher risk*
*Source: Thomson Financial Ltd. (DataStream), web-sites of central banks and national statistic agencies*

In turn, a high deficit of the current account, restricted capabilities of financing external positions, deterioration of the assets quality due to reduction of borrowers' creditworthiness, and on the whole negative forecasts on economic growth were reflected in lowering by international rating agencies (S&P, Moody's and Fitch) of credit ratings and forecasts of future ratings on sovereign liabilities of the countries (Table 1.2.1).

**Table 1.2.1**

**Ratings of Countries on Long-term Liabilities in Foreign Currency**

| **Country** | **As of October 31, 2008** | | |
|---|---|---|---|
| ***Rating agencies*** | ***Moody's*** | ***S&P*** | ***Fitch*** |
| Poland | A2/Stable | A-/Stable | A-/Stable |
| Czech Republic | A1/Positive | A/Stable | A+/Stable |
| Hungary | A2/Stable | BBB+/Negative | BBB+/Negative |
| Bulgaria | Baa3/Stable | BBB/Negative | BBB/Negative |
| Russia | Baa1/Positive | BBB+/Negative | BBB+ |
| Ukraine | B1/Stable | B/Negative | B+/Negative |
| Kazakhstan | Baa2/Stable | BBB-/Negative | BBB/Negative |

*Source::Bloomberg*

Decoding:

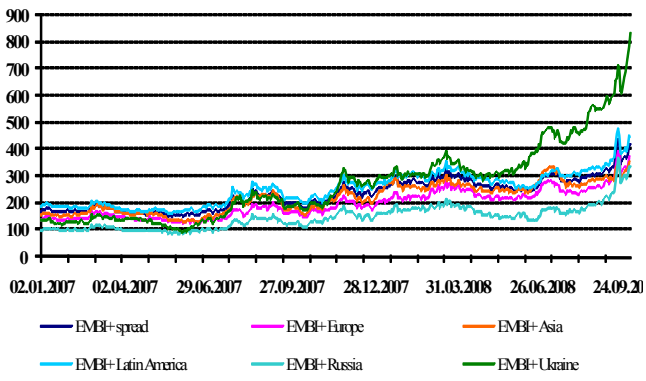
| | | |
|---|---|---|
| Rating increased | Rating increased/forecast improved | No changes |
| Rating decreased | Rating decreased/forecast worsened | Rating decreased/forecast Stable |
| Rating unchanged | Rating unchanged /forecast worsened | Rating unchanged/forecast improved |
| Rating unchanged /forecast Stable | | |

The position of international rating agencies toward any country or its issuer continues to unreasonably serve as a main benchmark for international investors. Revision of credit ratings together with the factors of worsening of the conditions for the developing countries rise a risk of default of an issuer for investors (Figure 1.2.5.). Thus, from the beginning of the year, the rise in index EMBI+spread continued to indicate a negative assessment by international investors of a relative level of risk of the developing countries.

At the same time, it is necessary to note that the risk assessment on the developing countries is relatively distributed, and this may be observed by spreads of credit protection on sovereign debts of the developing countries. Thus, the difference in perceiving the risk by a group of Central and East European countries and CIS countries is assessed on the average at 600 basis points (Figure 1.2.6)

**Figure 1.2.5**

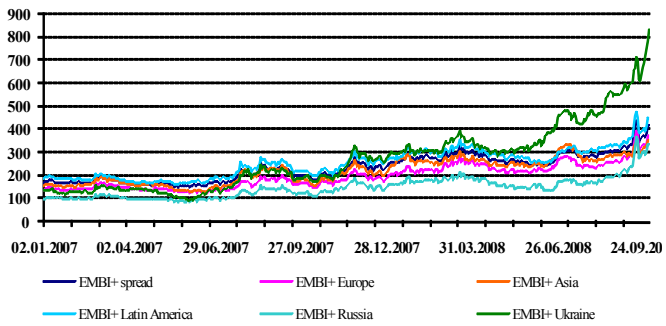
**EMBI+spread by Countries and Regions**




*Source: Thomson Financial Ltd. (DataStream)*

**Figure 1.2.6**

**Spreads on Sovereign 5-year Credit and Default Swaps of Developing Countries**

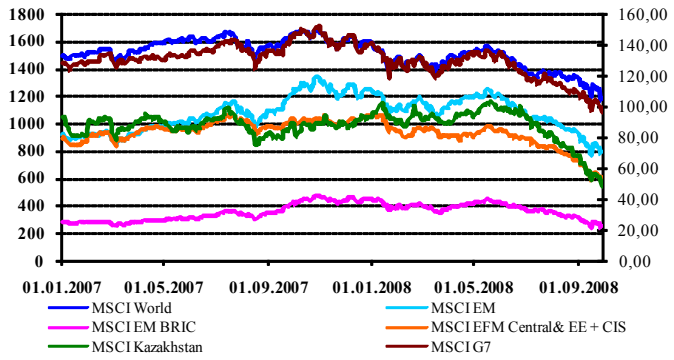



*Source: Thomson Financial Ltd. (DataStream)*

Although at the world stock markets it is observed depreciation of the value of securities of both developed and developing countries due to the fact that the developing countries are viewed as the most risky area of investments, the amplitude of price falls of the markets is almost always more significant in relation to the latter (Figure 1.2.7). As far as securities of Kazakhstani issuers are concerned, re-balancing of portfolios, negative expectations as to financial sector stability and uncertainty of companies' revenues in relation to reduction of the world prices resulted in the fact that the prices for shares fell to almost minimum historical values. Over the period from the year-start through late October 2008, drop in prices for the shares of Kazakhstani issuers at the London Stock Exchange was for JSC Kazkommertsbank by -43%, JSC Halyk Savings Bank of Kazakhstan by -78.1%, Kazakhgold – 85% (Figure 1.2.8).

**Figure 1.2.7**

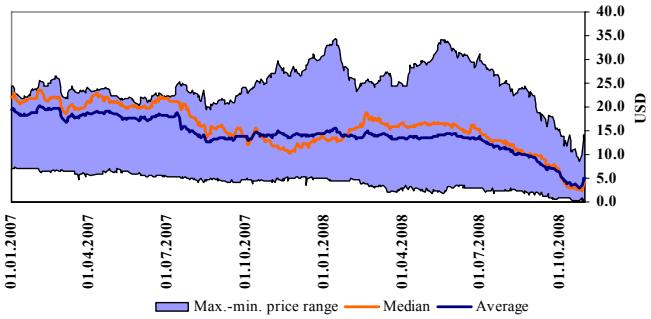
**MSCI Subindices by Regions**




*Source: Thomson Financial Ltd. (Datastream), Bloomberg*

**Figure 1.2.8**

**Equity Prices of Kazakhstan's Issuers at the London Stock Exchange**




Issuers' list formed by Alliance Bank, Halyk Savings Bank of Kazakhstan, Kazkommertsbank, Kazakhgold, Kazakhstan Kagazy Plc, Kazmunaigaz, ShalkiaZinc

*Source: Thomson Financial Ltd. (Datastream), Bloomberg*

# 2. Macroeconomic Environment and Economic Conditions in Kazakhstan

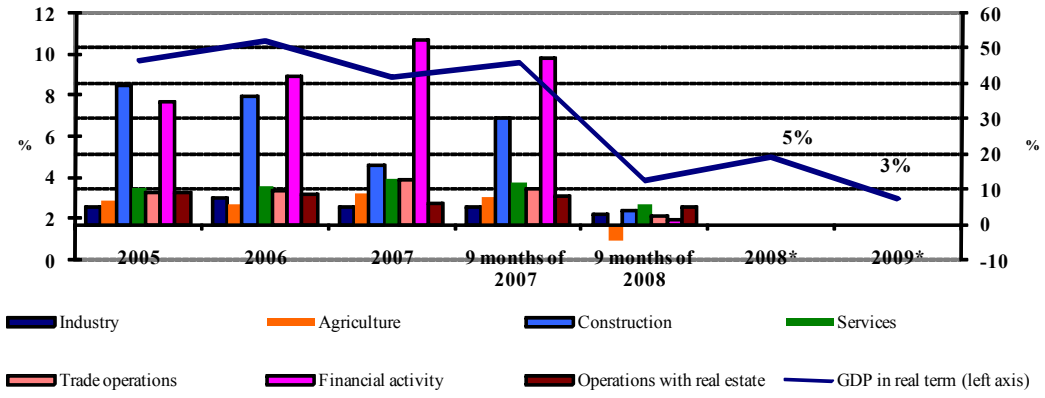
## 2.1. Factors of Economic Growth

***Slowdown of credit activity and reduction of the domestic demand directly affected an essential deceleration of the economic growth of Kazakhstan. High dependence of economy sectors supporting the domestic demand upon the resources of commercial banks made the real sector vulnerable to the risks of financial system which reflects a systemic character of threats to financial stability.***

The economic growth of Kazakhstan is determined by sustainable development of main sectors of the economy. If earlier the growth of economy historically was largely supported by the oil and gas sector, then in 2005-2007 the growth focus changed to the construction industry which provided about 10% of the country's GDP growth, and also to the financial activity. As a consequence of credit activity deceleration this year, the most pronounced deceleration of real economic growth have occurred in the sectors which in the past years demonstrated a rapid growth and took advantage of the best terms of resource attraction. By the results of 9 months of 2008 the real growth of economy was by 2.5 times lower comparing to the similar period of the last year and amount to 3.9% (9.6% for 9 months of 2007). Slowdown of the economic growth touched upon not only construction and financial activity but agriculture and manufacturing industry as well (Figure 2.1.1). Maintaining of positive growth has been provided mainly by mining industry (5%), its weight in GDP comparing to the same period of the last year increased from 14.9% to 20.6%. At the same time the disproportions marked in the past remain in the industry (Box 2).

**Figure 2.1.1**

**GDP Real Growth Rate and its Sectoral Breakdown**



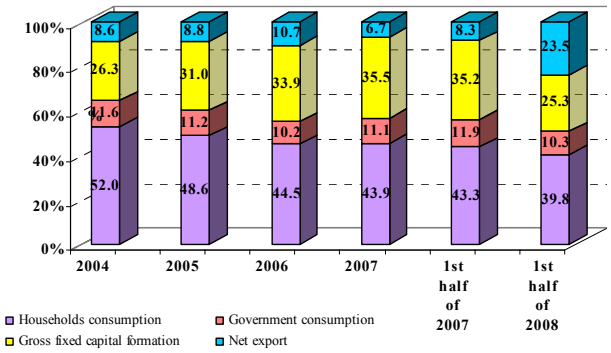

*Source: SARK*
** forecast of MEB*

In turn, the GDP growth in recent years has mostly been provided by high growth rate of expenditures on final consumption of households and gross capital formation. In turn this increase was provided among other things due to a high level of credit activity. The influence of lending of the economy on the real GDP growth is assessed on a rather high level.

In the conditions of gradual deceleration of business activity, the gross capital formation has been considerably decreased. Thus, as of the first half of 2008, the gross capital formation in the nominal terms decreased by 13.6% with a relevant reduction of its share in GDP by 9.9% percentage points (Figure 2.1.2).

**Figure 2.1.2**

**Demand side (expenditure approach to GDP),%**




*Source: SARK*

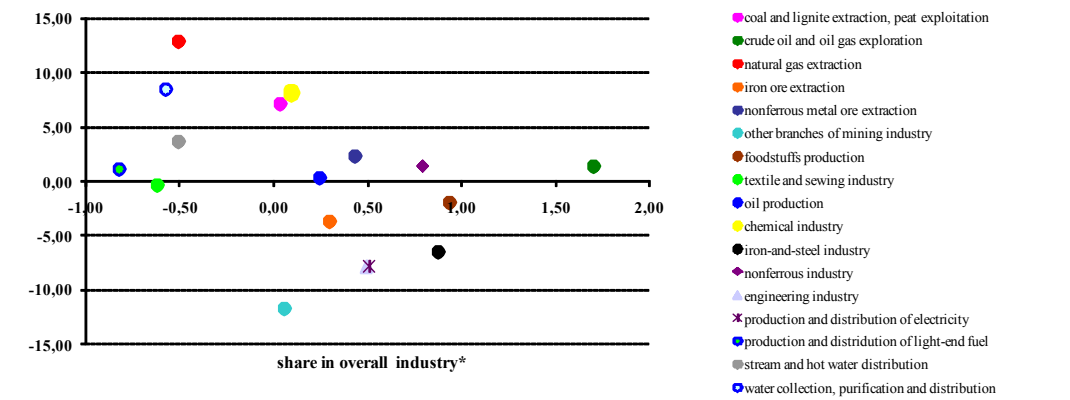
**Box 2**

**Maintaining Disproportions in the Industry of Kazakhstan**

Today in the main branch of economy – industry – it is observed a considerable spread of growth rates of the branches. It indicates a presence of disproportions between the branches' contributions and their overall efficiency. Thus, the greatest contribution traditionally remains with petroleum which has the largest share, while its growth rates in comparison with other branches are on an average level. Despite of a low share of some branches, the efficiency of their activity is considerably higher than of the 'leading' branches. It creates certain opportunities for increasing their contribution to the overall economic growth and diversification of the economy. On the other hand, a risk of deceleration of the sectors with a low share should not have an essential negative effect on the overall result of industry (Figure 1).

**Figure 1**

**Industrial Production**
**(Deviation of y-o-y % growth from Average Value on Industry, as of the end of September 2008)**




** the share in each branch in the industry was taken in the form of logarithm*
*Source: NBRK, SARK*

One of the threats of the economic growth decrease in the medium-term perspective seems to be an inequality of slowdown in all sectors of Kazakhstan. Simultaneous economic decline both of the traditional sectors of economy as a result of a negative impact of the low level of the world raw material prices and the sectors with a low share in the gross product as a result of the domestic demand decrease may lead to essential deceleration of the economy.

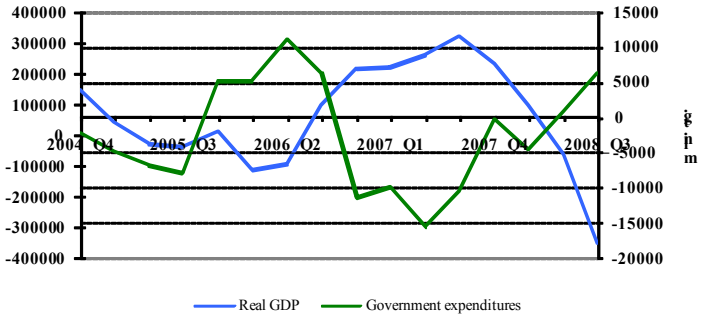
Taking into account all risk factors, the economic growth can be slowed down by 3% in 2009.

***This year the policy of state finances management was directly aimed for mitigating the consequences of the financial crisis. An increased role of the state in stimulating and supporting of the domestic production is an essential step toward solving imbalances of funding. Along with that, the scale of adjustment and social liabilities of the state may essentially increase a burden and reduce sustainability of state finances.***

From the beginning of this year, the problems of economic activity deceleration have required from the state a more active use of the budget receipts that have increased due to favorable export price conditions. This active use of the budget receipts is necessary in order to maintain and stimulate the growth of domestic economy (Figure 2.1.3). Thus, by the results of 9 months of current year, the budget receipts increased by 23% comparing to the similar period of the previous year due to corporate income tax and customs duties and amounted to16.6% of GDP in annual term. At the same time, rapid growth rates of state expenditures that amounted to 27.3% have expanded imbalance of the state budget in the conditions of the need in pursuing an active counter-cyclical policy.

**Figure 2.1.3**

**Government Expenditures and Real GDP (deviation from long term trend*)**



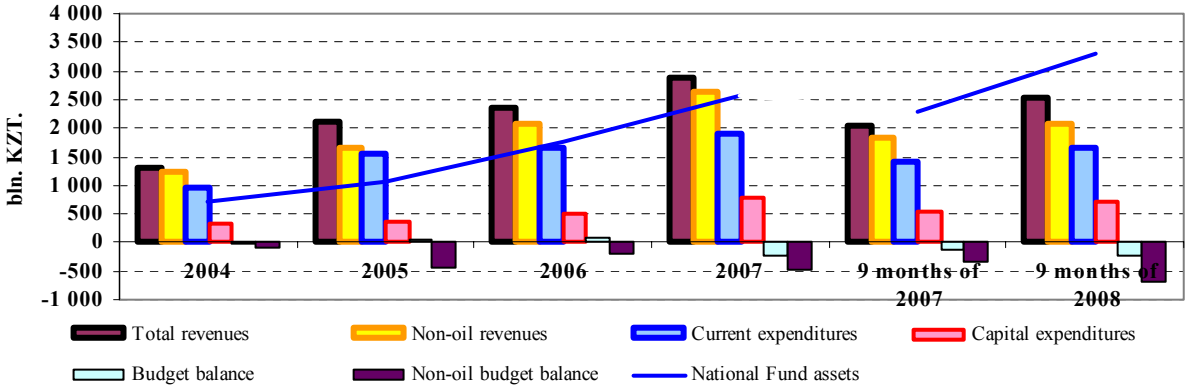

*Source: NBRK, SARK, MF*
*Note: the trend is calculated by means of the Hodrik-Prescott filter*

At the same time, in the structure of expenditures the budget credits have increased significantly by 9 times comparing to the same period of the previous year. Consequently, upon the results of 9 months, the balance of state budget has formed with a deficit at 2% of GDP versus 1.3% for 9 months of 2007 (Figure 2.1.4).

There has been indicated a growth rate of expenditures for agriculture and power engineering in the sectoral structure of state expenditures by the current expenses. By capital expenditures, the expenditures for education, social security and agriculture have increased considerably, that displayed increased activity carried out by the state with regard to food security and protection of socially vulnerable population (Figure 2.1.5 - 2.1.6).

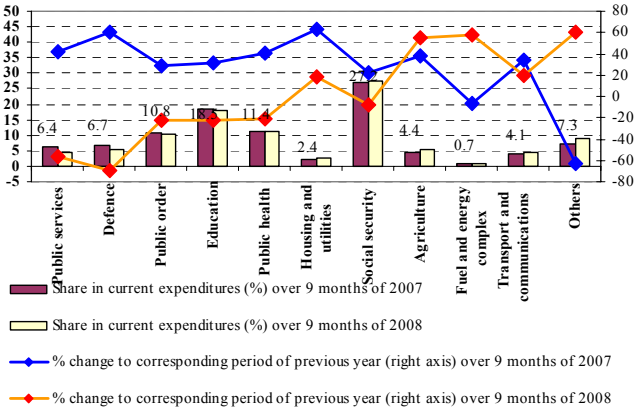
**Figure 2.1.4**

**The Republic of Kazakhstan State Budget Execution**



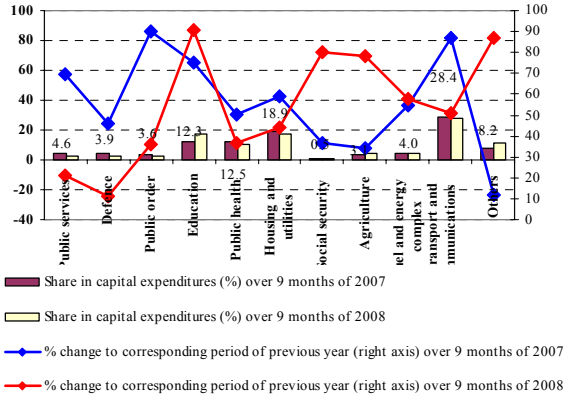

*Source: MF*

**Figure 2.1.5**
**Sectoral Breakdown of Current Expenditure for 9 Months of 2007 and 2008**




*Source: MF*

**Figure 2.1.6**
**Sectoral Breakdown of Capital Expenditure for 9 Months of 2007 and 2008**




*Source: MF*

Being adequate to threats for the sustainable economic development, at the same time providing of the countercyclic policy by the Government may require from the state taking the higher risks of budget imbalance in the conditions of possible reduction of tax proceeds to the budget.

***A gradual decrease of inflation pressure is observed in the country in the background of deceleration of the economic growth rates, reduction of money supply and consumer demand constraints.***

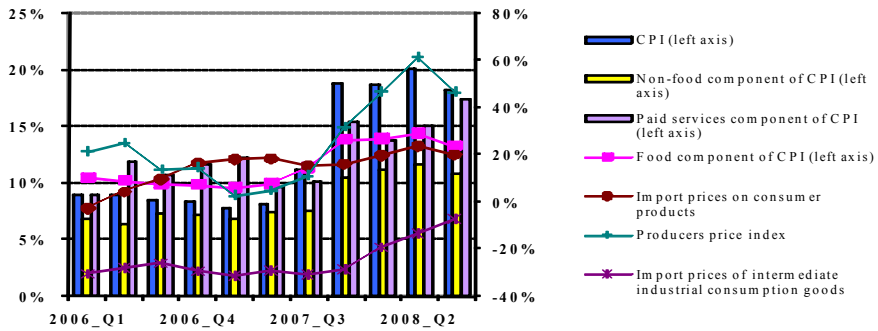
Due to both internal and external factors, inflation in economy by the end of the third quarter of current year has started to decrease gradually. Different price indices specify the deceleration of the price growth. Thus, upon the results of the third quarter, the inflation level on the basis of the CPI has decreased to 18.2% in annual term from the maximum value of 20% observed in June and July of the current year (Figure 2.1.7). It has been occurred due to decrease in the prices for foodstuff. In particular, reduction of the prices for commodity exchange goods on the world markets, especially for food (wheat, rice, vegetable oil), deceleration of credit activity of STB (second-tier banks), domestic consumer demand and business activity of the real sector have influenced to stabilization on the internal prices.

The price reduction for imported foodstuff by 6.4% comparing to the same period of the previous year also affected the reduction of the pressure on inflation.

Reduction of the prices of enterprises manufacturing industrial products almost by 15% in September-October 2008 may also affect the consumer price dynamics at the end of 2008 – beginning of 2009.

According to the NBRK forecasts it is expected decline of an inflation rate to 10% in annual term by the end of the first quarter of 2009 under the assumption that the former main factors of influence will remain relatively unchanged.

**Figure 2.1.7**
**Price Indices (% year-on-year)**




*Source: NBRK, SARK*

## 2.2. Macroeconomic Factors of Vulnerability

For the purpose of comprehensive monitoring of the economy and identifying main factors of risk, a system of macroeconomic vulnerability indicators was built (Table 2.2.1). This system covers selected (key) indicators of the public finance sector, financial and external sectors, and indicators of reserves adequacy that signal about vulnerability of sectors of the economy[10].

**Table 2.2.1**

**System of Macroeconomic Vulnerability Indicators[11]**

| Risk behavior[12] | Indicators | Format | Threshold level[13] | Value for the 3rd quarter 2007 | Signal | Threshold level[14] | Value for the 3rd quarter 2008 | Signal |
|---|---|---|---|---|---|---|---|---|
| | **Public Finance Sector** | | | | | | | |
| ↑ | Balance of the state budget/GDP | absolute value | -1.7% | -0.5% | no | -1.5% | -2.9% | **yes** |
| ↑ | Public debt/GDP | absolute value | 20.7% | 9.3% | no | 20.1% | 9.5% | no |
| ↑ | Public expenditures/GDP | absolute value | 24.6% | 22.6% | no | 25.4% | 24.4% | no |
| | **Financial Sector** | | | | | | | |
| ↑ | Inflation | % year-on-year | 11.0% | 11.2% | **yes** | 10.8% | 18.2% | **yes** |
| ↑ | Monetary multiplier | % year-on-year | 22.3% | 2.4% | no | 20.8% | 28.3% | **yes** |
| ↑ | Money supply | % year-on-year | 70.4% | 46.7% | no | 70.4% | 31.4% | no |
| ↑ or < 0 | Credits to the economy/GDP | % year-on-year | 5.42% | 18.21% | **yes** | 7.20% | -10.91% | **yes** |
| ↓ | Deposits of STB (in real terms) | % year-on-year | 20.9% | 33.3% | no | 21.8% | 15.9% | **yes** |
| | **External Sector** | | | | | | | |
| ↑ | Balance of current account/GDP | absolute value | -4.1% | -7.6% | **yes** | -4.1% | 6.4% | no |
| ↓ | ( FDI + balance of current account)/GDP | absolute value | 4.6% | -2.0% | **yes** | 4.4% | 12.2% | no |
| ↑ | Capital outflow[15]/External trade turnover[16] | absolute value | 7.2% | 11.2% | **yes** | 7.3% | 6.6% | no |
| ↑ | Real effective exchange rate | deviation from the trend | 2.17 | 0.32 | no | 3.36 | 1.19 | no |
| ↓ | Terms of trade | % year-on-year | -8.5% | 5.3% | no | -9.1% | -7.3% | no |
| ↑ | Gross external debt/GDP | absolute value | 74.9% | 97.1% | **yes** | 79.3% | 81.6% | **yes** |
| ↑ | Gross external debt/ Export of goods and services | absolute value | 156.7% | 198.2% | **yes** | 159.7% | 137.0% | no |
| | **Reserves Adequacy** | | | | | | | |
| ↓ | International reserves / Import | absolute value | 2.0 | 4.1 | no | 2.1 | 4.2 | no |
| ↓ | International reserves / Short-term external debt[17] | absolute value | 0.44 | 0.61 | no | 0.45 | 0.54 | no |
| ↓ | National fund / Government expenditures | absolute value | 26.5% | 82.9% | no | 27.1% | 89.1% | no |
| ↑ | Forthcoming payments and households' deposits[18] / Gross international reserves[19] | absolute value | 153.3% | 88.7% | no | 148.2% | 87.9% | no |

*Source: NBRK, ASRK, MF*

***The macroeconomic vulnerability indicators show rise in factors of risk in the public finance sector against the background of adjustment on the credit market and deceleration of deposits growth.***

Worsening of the budget balance/GDP ratio is affected by the growth of government expenditures in the framework of anti-recessionary measures on ensuring stability of the social and economic development of the country. The advanced growth of government expenditures and budget deficit expansion has already been noted upon the results of 9 months of 2007. At the same time, currently the budget deficit is not considerable and is generated in the conditions of low level of the public debt. Further rise in government expenditures without an appropriate growth of government revenues may result in increase of vulnerability of the public sector. Moreover, in the issue of public finances it is important to take into consideration deceleration of the economic growth rates, possible reduction of tax revenues, and uncertainty in budget revenues from oil sector and risk of ineffective use of state resources.

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[10] Comparison of the actual value of the indicator with the threshold shows the presence or absence of vulnerability signal.

[11] The indicators which contain data over a period of time, for example, the state budget balance, current account, etc. are calculated year-on-year and may differ from the official data.

[12] Behavior of the risk shows the direction of indicator deterioration in comparison with the threshold level: « ↑ » - exceeding of the indicator value over the threshold level gives a signal of vulnerability; « ↓ » - the indicator value which is lower than the threshold level gives a signal of vulnerability; « ↑ or < 0 » - the indicator value which is higher than the threshold level or less than « 0 », gives a signal of vulnerability.

[13] The threshold level is calculated as an average value for 2000-2005 adjusted to one standard deviation. According to the early warning indicators system, a time lag for determining the indicator signal should be from 12 to 24 months.

[14] The threshold level is calculated as an average value for 2000-2006 adjusted to one standard deviation.

[15] Errors and omissions plus short-term capital.

[16] Export plus import of goods and services.

[17] Calculated as a sum of short-term external debt and long-term external debt service.

[18] Calculated as a sum of forthcoming payments on the gross external debt and households' deposits in foreign currency.

[19] Calculated as a sum of gross international reserves (without gold) and the assets of the National Fund.

***An adverse impact of external factors which reveals itself mostly in the financial sector creates a risk of implicit capital flight.***

By the end of the third quarter of 2008, four macroeconomic indicators out of five give signals that risk factors increase in the financial sector. From the fourth quarter 2007, the monetary multiplier substantially increases. Worsening of this indicator was largely due to money supply growth as a result of increase in external assets of the banking sector and increase in repayments of external liabilities. The money supply growth in the third quarter 2008 comparing to the corresponding period of the previous year was 31%, out of which contribution of STB was 27%. In addition, a certain contribution to the monetary multiplier increase was made by reduction of growth rates of money base as a result of reducing reserve requirements by NBRK in order to maintain liquidity.

On the other hand, the fundamental factors of inflation such as low productivity of industrial sectors, low competition in some markets of goods and services continue to determine prices in the economy. Accordingly, in spite of some stabilization of the world markets and reduction of inflation pressure in the third quarter of 2008, there remains a risk of high prices.

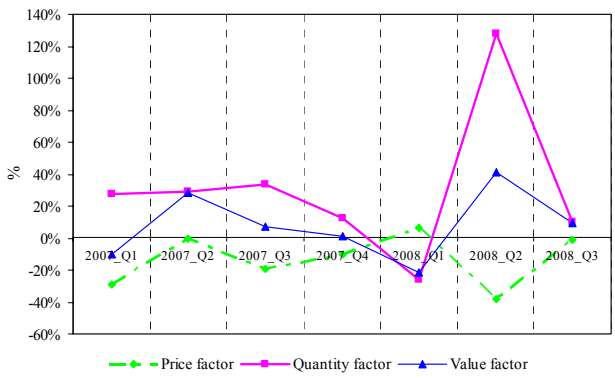
A share of credits in GDP and change in deposits in real terms characterizing a level of development of the country's financial system also indicates vulnerability of the economy. If formerly the risk factors increased due to excessively high rates of economy crediting, then, from the second quarter 2008, the risks are materialized through reduction of credits to economy caused by scarcity of the domestic resources in the conditions of decreasing external funding.

***Favorable trends on the world commodity markets have reduced a degree of vulnerability of the external sector of the economy, however, considerable amount of the accumulated external debt and necessity of its servicing are long-run structural factors of risk of unbalanced capital flows under price fluctuations.***

Mitigation of risk factors in the external sector is explained by the improvement of the current account of the balance of payments due to high world prices for raw commodities and decreasing of goods import growth rates. Slowing down of import growth rates has been noted since third quarter of 2007. It is obvious that during this period quantitative factor was prevailing (Figure 2.2.1), i.e. the reduction of domestic demand.[20]

**Figure 2.2.1**

**Factors of Import Dynamics**
**(% change to previous period)**




*Source: NBRK*

At the same time, the drop in the world oil prices has already affected worsening of terms of trade in the third quarter 2008. In future, this may reduce a capital inflow to the country. At present the risk of capital flight is not essential. Moreover, whereas increase in overdue payments, advance payments and conversion of assets into a cash foreign currency are consequences of financial markets turbulence, these parameter greatly depends on re-estimation by agents of the country's economic risks. Moreover, a persistent factor of risk is a high share of the accumulated external borrowings. Repayment and service of external liabilities require considerable financial resources.

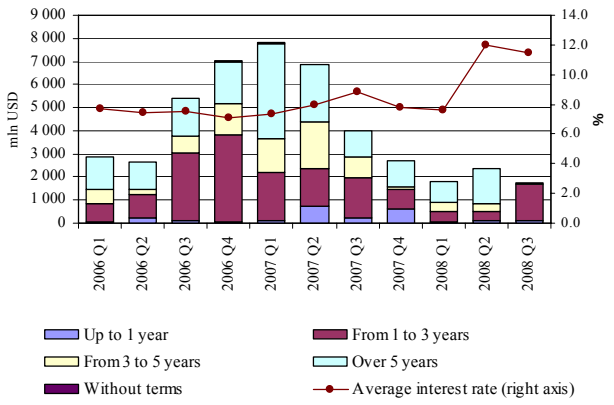
The experience of financial crises that have occurred over the past decades shows that the main sources of countries' vulnerability are also maturity, currency and interest rates structures of foreign loans. In this connection, the factor of structural risk of a debt burden is a high share of bank loans denominated in foreign currency (over 90%), and considerable increase in average interest rate of foreign loans in 2008 comparing to 2007 (Figure 2.2.2). At the same time, along

[20] A sharp growth of import in the second quarter can be explained by realization of the deferred demand in the background of stabilization of economic expectations

with stabilization of the LIBOR dynamics, a growth of average interest rates of foreign loans is determined not by the capital cost increase as by a high level of risks and uncertainty on the capital markets. The high interest rates of foreign loans also affected the growth of share of the loans at fixed rates in the first and second quarters of 2008 comparing to the corresponding periods of 2007 (Figure 2.2.3). This trend probably can be explained by some stabilization of risk expectations by creditors who preferred to fix high interest rates and ensure high earnings yield on the lent money.

**Figure 2.2.2**

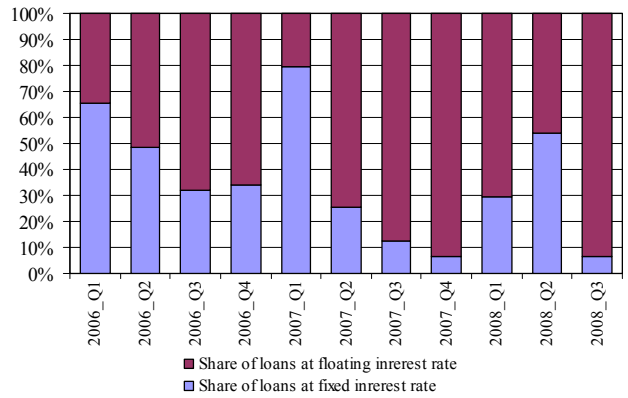
**Maturity Structure of Foreign Borrowing by Banks and Interest Rate**




*Source: NBRK*

**Figure 2.2.3**

**Breakdown of Banks' Foreign Borrowing by Interest Rates**




*Source: NBRK*

***The indicators of reserve adequacy are within the acceptable limits relative to their historical levels; however, they are inadequate according to benchmarks recommended by the world practice.***

By the end of the third quarter of 2008, gross international reserves of NBRK covered 4.2 months of import, although for the countries with limited access to capital markets IMF recommends to maintain reserves in 6 months of import. This indicator reflects the country's ability to support its current level of import if all other inflows cease. The most useful indicator of reserve adequacy which characterizes the country's ability to meet its external obligations within a year if there is no new financing is the ratio of reserves to short-term external debt which is recommended to maintain not less than 1. By the end of the third quarter of 2008, this indicator was 0.5. It should be noted that the gross international reserves do not comprise the assets of the National Fund which can be considered as 'safety pillows' and if necessary can be partially used to stabilize the economy. In spite of the recommended benchmarks, it is complicated to determine an adequate level of international reserves that would guarantee sustainability of the economy of Kazakhstan because the adequate level of international reserves was not assessed in the real conditions under the influence of external factors (Box 3).

**Box 3**

**Balance of Payment Forecast**

Upon the results of 2008 it is expected that surplus of the current account of the balance of payment will slightly reduce. Deterioration of the current account in the fourth quarter will occur due to fall in oil prices and other main export goods, decrease of external demand and slowdown of ferrous and non-ferrous metals production and their export. In 2009 this trend will continue if oil price is about USD 50 per barrel, rise in crude oil and gas condensate supply mainly due to increase in production at the Tengiz field will partially compensate losses of oil export value. However, in consideration of the predicted decrease of ferrous and non-ferrous metals supply and with slight increase in goods import pro rata the expected real GDP growth by 3%, surplus of the trade balance will decrease by more than 3 times. As a result, a deficit of the current account may reach 6% of GDP in 2009. This deficit will be funded partially by increased net direct investments (basically due to rise in financing of the North-Caspian project) and capital inflow to new infrastructure projects with participation of investors of the countries that are less exposed to the liquidity crisis.

At the same time, taking into consideration the expected needs of residents in servicing of external debt about USD 17 bln., the total balance of payment may be formed with a deficit.

In 2010, with an expected oil price increase up to USD 60 per barrel and recovery of ferrous and non-ferrous metals supply at the level of 2008, a deficit of the current account may remain 2-3% of GDP. Also, the total deficit of the balance of payment will be less that can be also financed by international reserves of NBRK.

Moreover, in the assessment of the factors determining capital flows it should be taken into consideration a number of uncertainties of the present situation:

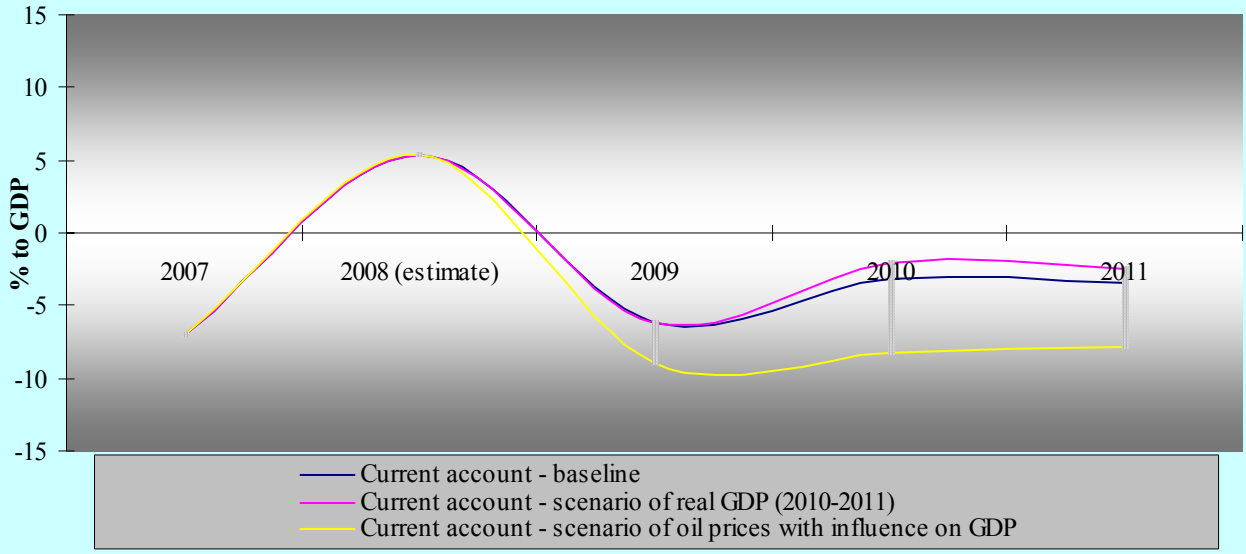
1) uncertainty of the depth of domestic economic growth deceleration, including an impact on it of the economic situation of main trading partners;

2) uncertainty of the maximum amplitude of oil price adjustment and its reverse effect on increasing deceleration of the real growth.

If in the first case decrease in demand influence mostly on import, then decrease in oil prices to USD 40 per barrel and decrease in ferrous and non-ferrous metals export will increase the current account deficit to 8-9% of GDP in 2009 in spite of a possible drop in goods import. Under unchanged expectations regarding direct investments (which is necessary to maintain production at the Kashagan field in 2013), some decrease in capital inflow for some projects and increased deficit requires additional funding through the reduction of the accumulated assets of the National Fund. It will help to maintain adequate level of international reserves of the NBRK. If the oil price remains at this level, the similar situation with the balance of payment is possible in 2010.

**Figure 1**

**Balance of Payment Determinants**




| | 2008 (estimate) | 2009 | 2010 | 2011 |
|---|---|---|---|---|
| Export (% change) - baseline | 48% | -31% | 20% | 2% |
| Export (% change) – scenario of real GDP (2010-2011) | | -31% | 20% | 2% |
| Export (% change) – scenario of oil prices with influence on GDP | | -43% | 2% | 1% |
| Import (% change) – baseline | 18% | 2% | 11% | 7% |
| Import (% change) – scenario of real GDP (2010-2011) | | 2% | 9% | 6% |
| Import (% change) – scenario of the oil prices with influence on GDP | | -4% | 3% | 1% |
| Reference data: | | | | |
| FDI (% to GDP) | 4% | 8% | 4% | 3% |
| Real growth of GDP in % (range of scenarios) | | 2-3% | 2-5% | 2,3-5,5% |
| Oil price, USD/bbl | | 40-50 | 40-60 | 40-60 |

*Source: NBRK*

## 2.3. Corporate Sector

***Deceleration of business activity may increase a burden on the liquidity of the corporate sector with further effect on decline in profitability of enterprises. A negative balance position in the foreign exchange makes the corporate sector at a great degree vulnerable from the point of view of the risk of insolvency in case of reduction of currency proceeds from export and negative changes of the national currency exchange rate. This risk is a little bit compensated by a high liquidity of enterprises in the foreign currency.***

The financial and economic indicators of the corporate sector due to a great influence on the total results of activity of the export-oriented enterprises in 2008, at the first sight, did not reflect the influence of credit activity and domestic demand slowdown (Table 2.3.1).

**Table 2.3.1**

**Main Indicators of Financial Stability of the Corporate Sector[21]**

| | *Aggregate indicators* | | | *Large and medium enterprises* | | | *Small enterprises* | | |
|---|---|---|---|---|---|---|---|---|---|
| | *2006* | *2007* | *2Q 2008[22]* | *2006* | *2007* | *2Q 2008[22]* | *2006* | *2007* | *2Q 2008[22]* |
| ***Total Indicators:*** | | | | | | | | | |
| **Assets/GDP, в %** | 0.21% | 0.24% | - | 0.15% | 0.15% | 0.16% | 0.06% | 0.09% | - |
| **Income from sale of products and provision of services, %** | 122.4% | 137.3% | 133.1% | 127.9% | 121.7% | 175.1% | 114.9% | 160.7% | 89.5% |
| **Cost value of sold products, %** | 119.8% | 145.2% | 108.3% | 131.0% | 130.0% | 125.7% | 107.4% | 165.9% | 91.5% |
| ***Indicators of Return and Effectiveness[23]*** | | | | | | | | | |
| **ROA** | 17.7% | 16.2% | - | 21% | 20.4% | 24.6% | 9.6% | 7.9% | - |
| **ROE** | 49.7% | 46.2% | - | 49.3% | 48% | 56.7% | 52% | 38.7% | - |
| **Profitability** | 21.6% | 19.8% | 23.4% | 29.6% | 30.1% | 33.4% | 8.8% | 7.2% | 9.5% |
| ***Indicators of Debt Load*** | | | | | | | | | |
| **Ratio of debt burden** | 0.64 | 0.66 | - | 0.58 | 0.57 | 0.57 | 0.79 | 0.80 | - |
| **Leverage** | 1.77 | 1.90 | - | 1.38 | 1.33 | 1.31 | 3.86 | 3.95 | - |
| ***Indicators of Liquidity*** | | | | | | | | | |
| **Ratio of current liquidity** | 1.10 | 1.31 | - | 1.06 | 1.45 | 1.48 | 1.18 | 1.18 | - |
| **Ratio of quick liquidity** | 0.89 | 1.05 | - | 0.83 | 1.12 | 1.15 | 1.00 | 0.98 | - |
| ***Indicators of Turnover*** | | | | | | | | | |
| **Assets turnover** | 0.82 | 0.82 | - | 0.71 | 0.68 | 0.74 | 1.09 | 1.10 | - |
| **Inventory turnover** | 5.71 | 5.80 | 4.60 | 4.62 | 4.29 | 3.40 | 7.93 | 8.38 | 7.15 |
| **Receivables turnover** | 3.44 | 3.60 | - | 3.57 | 3.77 | 3.39 | 3.24 | 3.40 | - |

*Source: NBRK, SARK*

In particular, in the first half of 2008, the increase of incomes from the products sales, overwhelming the growth of the cost, allowed increasing the level of return in the economy. Furthermore, an inflation growth stimulated to increasing the profitability of the enterprises involved in trade which was 10% year on year as of the end of the first half of 2008 in comparison to 2.6% in the same period of the last year. A favorable price conditions in the cereal market also

[21] Due to the changes in the forms of state statistical reporting of the Agency of the Republic of Kazakhstan for Statistics that exclude submitting the balance sheet indicators by small enterprise on a quarterly basis, a calculation of most indicators of the financial sustainability on an aggregate level is impossible.

[22] The indicators for the second quarter were calculated year on year except for the change in % of revenue from the products and services sales and the cost value of the sold products calculated for the period from the beginning of the year relative to the same period of the last year.

[23] The indicators are calculated using the revenue before taxation as a numerator, and return on assets (ROA), return on equity (ROE) and return on the products sales (Profitability) as a denominator.

allowed agricultural companies realizing a maximum profit. At the same time, the domestic demand decrease is first of all reflected on small enterprises. Reduction of the inventory turnover and a respective increase of the products' stay at warehouses occur in the background of decrease in the gross revenue from the products sale and services provision. This factor could put an additional load on the enterprises liquidity that is hard to be maintained in the conditions of credit volumes reduction. The large enterprises statistics also show a reduction of the assets and capital profitability in the sector of real estate and manufacturing industry.

In addition to a threat of reduction of the profitability indicators in the medium-term perspective due to lack of liquidity, gross sales reduction and world economic downturn for enterprises focused on export, a system factor of instability is an essential gap in the foreign exchange position which may be assessed on the basis of new statistics[24] of the activity of small and medium-size enterprises (Table 2.3.2).

**Table 2.3.2.**

**Foreign exchange position of the Corporate Sector**

| | | including: | |
|---|---|---|---|
| | ***Total, mln. KZT*** | ***USD*** | ***Share in assets in the foreign currency*** |
| **Financial assets* in the foreign currency** | 1,894,644 | 1,599,828 | ***84.4%*** |
| **including short-term assets** | *1,644,848* | *1,458,595* | ***88.7%*** |
| **Financial liabilities in the foreign currency** | 4,616,629 | 4,252,348 | ***92.1%*** |
| **including short-term liabilities** | *1,088,134* | *915,319* | ***84.1%*** |
| **Net balance fx. position (BfxP)** | **-2,721,985** | **-2,652,520** | |
| *Cash inflow from operating activity year-on-year* | *6,939,676* | | |
| *Cash outflow from operating activity year-on-year* | *3,563,043* | | |
| **Net proceeds from operating activity in the foreign currency** | 3,376,633 | | |
| **FX position adjusted to the cash flows on operating activity in the foreign currency** | 654,648 | | |
| ***As reference:*** | | | |
| BfxP / own capital | -28% | | |
| BfxP / cash inflow from operating activity in the foreign exchange | -39% | | |
| Current FX liquidity** | 1.51 | | |

Note: *Financial assets include money and equivalents, financial investments and receivables
**Ratio of short-term assets and liabilities in the foreign exchange
*Source: NBRK, SARK*

In particular, a negative balance currency position of large and medium-size enterprises, according to the SARK data, was equivalent to USD22.6 bln. and was formed when financial assets and liabilities expressed in USD were dominating. A negative currency position was about 28% of enterprises' own capital and about 40% of gross cash inflow in the foreign exchange from operating activity of enterprises[25]. A negative balance position was compensated by a positive gap between proceeds and payments in the foreign currency which was encouraged by the high world prices for export resources and import decrease. An indirect FX risk for the banking system is the highest in the sectors of operations with real estate, trade, hotel and restaurant business, construction – the main borrowers of the banking sector.

[24] Starting from the first quarter 2008, the statistical reporting forms were changed in part of providing by respondents of the information about financial assets and liabilities and cash flow in the foreign currency.
[25] The data of the statement on cash flow in the national and foreign currency were used which the Statistics Agency has started to collect since 2008.

## 2.4. Household Sector

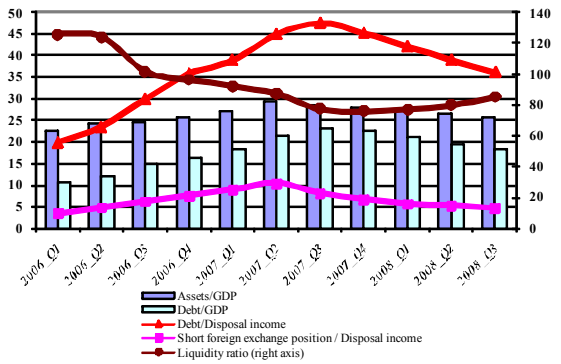
***The inflation growth, rise in the cost of credits and reduction of their availability make the servicing of the liabilities accumulated during the 'boom' period more complicated. In future this may restrict the contribution of consumption to the economic growth and the STB deposit base.***

The highest level of the debt burden was fixed at the end of 2007 which was caused by increase of STB credits to the households by 70% comparing to the end of 2006. In 2008, reduction of the population lending in conformity with the possibilities of financing of consumption and refinancing of liabilities has worsened the problem of low liquidity. In particular, in spite of the increase of cash by 9.1% and residents' deposits in deposit organizations by 6.3%, as well as debt reduction on credits of STB and non-banking financial organizations by 4.5% by the results of 9 months of 2008, the liquidity ratio was much lower than one[26] (Figure 2.4.1).

The decrease of lending resulted in reduction of the housholds business activity rates. Thus, for 9 months of 2008, the financial assets growth was only 4.4% (36% for the same period of 2007). At the same time, investments in shares considerably reduced because of the problems on the stock market which caused depreciation of a wide range of financial instruments. Although the growth of deposits was maintained, the population managed the risks related to reliability of the financial institutions during the greatest turbulence. The reaction and strategy of own deposit assets management was different in large and small depositors (Box 4).

**Figure 2.4.1**

**Assessment of Households Financial Position, %**



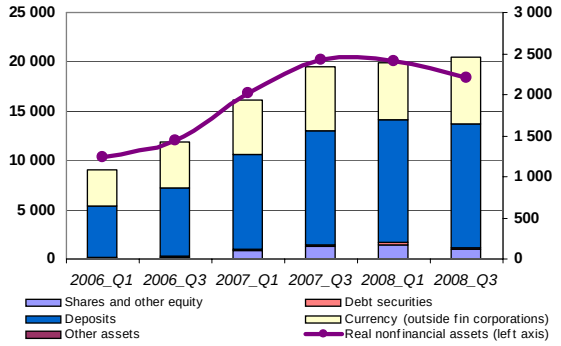

*Source: NBRK, SARK*

Reduction of attractiveness of another object of investment – the real estate market and, as a consequence, drop in prices for the real estate also led to reduction of non-financial assets (Figure 2.4.2).

The financial liabilities of households by the results of 9 months of 2008 decreased by more than 4%. With regard to the debt to financial organizations, of which 90% are STB, there is a downward trend of 6.5% per year, but in relation to credit and microcredit organizations, the growth, on the contrary, has remained by the end of the third quarter 2008, and comprised 34% and 9% respectively for the past period of the year (Figure 2.4.3).

**Figure 2.4.2**

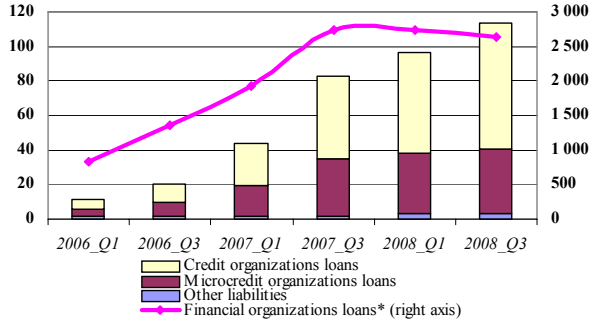
**Structure of Households Assets, bln. KZT**




*Source: NBRK, SARK, CSD*

**Figure 2.4.3**

**Structure of Households Liabilities, bln. KZT**




** include NBRK, commercial banks, mortgage companies, Development Bank*

*Source NBRK, SARK*

[26] Ratio of liquidity = (cash money+deposits)/loans. The indicator is calculated on second-tier banks, credit and microcredit organizations

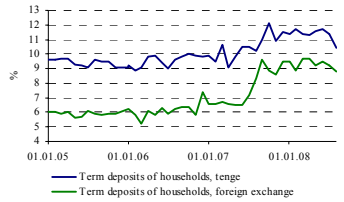
**Box 4**

## Assets Management – Assessment of the Scope of Deposits Re-Distribution in the Banking System of Kazakhstan

Due to restricted access to external financing since August 2007 the activity of Kazakhstani banks on attraction of the deposits of individuals has activated, and this in the first place was reflected in increasing the interest rates for deposits.

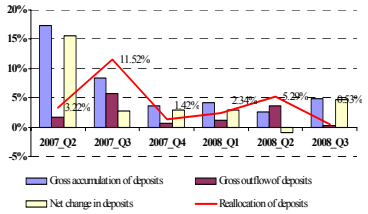
However, the interest rate level on deposits as such is not always a key factor determining preferences in favor of a certain bank. During financial instability, the population's confidence in the national banking system decreases. This inevitably leads to subjective re-estimation by depositors of risks of some financial institutions from the point of view of security guarantee for their savings. For the purpose of determining the migration level of depositors inside the banking system, there was made an assessment of change in the STB deposit base on the basis of 'gross flows'. This approach allows by the STB individual data assessing the volumes of attraction to and withdrawal from STB of deposits, and the scope of their re-distribution by depositors between financial institutions*.

**Figure 1**
**Interest rate of households deposits in Banks of Kazakhstan, %**




*Source: NBRK*

**Figure 2**
**Deposits of households in banks**




*Source: NBRK, KDIF*

**Figure 3**
**Term and conditional deposits under 700 ths. KZT**

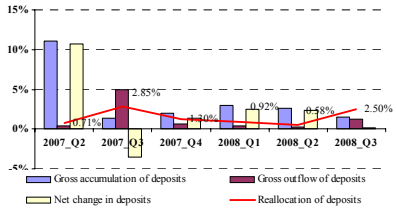
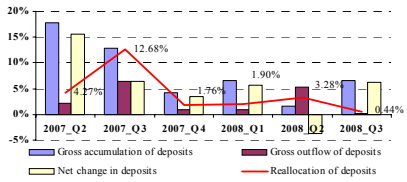



**Figure 4**
**Term and conditional deposits over 700 ths. KZT**




*Source: NBRK, KDIF*

The fact of unexpected risk increase of banks in the third quarter 2007 was not reflected directly on the net decrease of deposits of the banking system – a growth per quarter was 2.7%. At the same time, reaction of small depositors falling under the guarantee system and of large depositors was diametrically opposite. Thus, the first reaction of depositors whose deposits are subject to guaranteeing to deterioration of the conditions in the third quarter of 2007 was sharp withdrawal of deposits from bank accounts by 3.5% for the period. The effect of outflow prevailed over the effect of re-distribution which speaks of re-estimation by this category of depositors of the risks of the entire banking system and higher sensitivity of retail depositors to the change in the news background. In contrast to them, most depositors whose deposits are not subject to guaranteeing, with the aim of retaining their savings preferred not to withdraw but transfer them to other larger banks. In the third quarter 2007 about 12.7% of deposits not subject to guaranteeing migrated between banks seeking for a 'quiet harbor'. Due to the fact that this category of depositors is more concerned about safety of their savings, the level of deposits movement between banks is both higher and more changeable for them, whereby characterizing higher sensitivity to perception of risks of separate financial institutions, on the one hand, and a more weighted approach to monitoring of the banks risks, on the other hand. The level of re-distributions of savings between banks on the part of depositors who have guaranteed deposits is slight. Thereby it demonstrates a low tendency of this category to assess risks of each bank.

In the middle of 2008, gradual accumulation of negative information on the part of the market about an increase of banking sector risks created in depositors certain negative expectations in respect of the banking system, and this caused some volatility of the deposit base in the second and third quarters of 2008. Large depositors, along with more active re-distribution of the deposits between banks, also withdrew about 3.7% of deposits from the banking system. Accordingly, retention of confidence of large depositors (14% of accounts of fixed deposits) who have about 86% of fixed deposits amount should be not less priority direction of the anti-crisis policy in the conditions of risks increase for financial stability. On the average, for the period under analysis, about 4% of deposits were re-distributed by depositors between banks in virtue of re-estimation of the risks or attractiveness of the conditions of some banks of the system. (Table 1)

**Table 1**

**Descriptive Statistics**

| Name | Number of periods | Average value | Maximum | Minimum |
|---|---|---|---|---|
| Gross deposit accumulation | 6 | 6.8% | 17.3% | 2.6% |
| Gross deposit outflow | 6 | 2.2% | 5.8% | 0.3% |
| Net change | 6 | 4.7% | 15.7% | -1.0% |
| Reallocation | 6 | 4.1% | 11.5% | 0.5% |

***Methodological Explanations:*** Positive/negative flows in the period t for bank I are determined as follows:

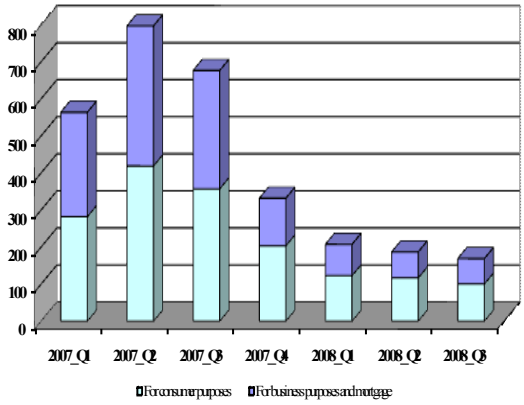
$$POS \ / \ NEG \quad flows \ = \sum_{i}^{N} |g_{it}| * \left( \frac{(I_{i,t-1} + I_{i,t}) / 2}{\sum_{i=1}^{N} I_{i,t-1}} \right)$$

where g – is a rate of deposits change versus the previous period weighted by the bank market share in total volume of deposits. The net flow is determined as a difference between positive and negative flows. The reallocation flows are determined as a sum of positive and negative flows less net flow by modulus.

* - For the analysis the information about placed deposits of individuals in the second-tier banks provided by the bank to KDIF on a quarterly basis for the period from the first quarter 2007 to the third quarter 2008 is used.

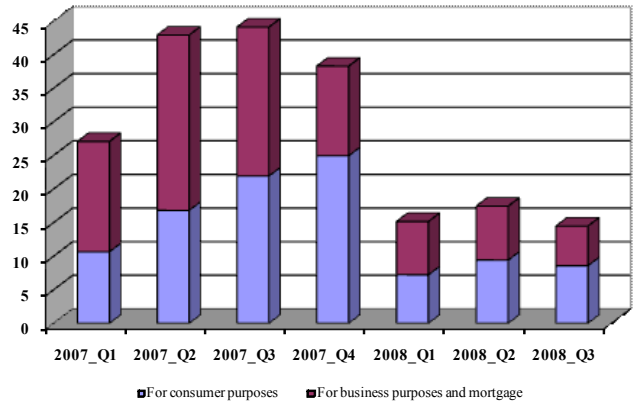
The reduction of the population lending by credit organizations by more than 2 times in the background of continuing growth of nominal income of the population caused some decrease in the debt burden on the disposed income (from 45% in 2007 to 36% for September 2008). If earlier the households' debt was formed in the first place at the expense of mortgage credits, then currently loans for consumer purposes are prevailing in the structure of loans issued (Figures 2.4.4 and 2.4.5).

**Figure 2.4.4**
**Structure of Bank lendings to the Household, bln. KZT, for the Period**




*Source: NBRK*

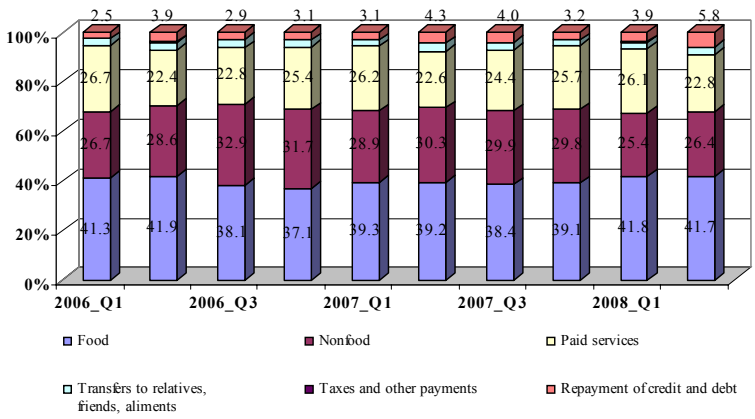
**Figure 2.4.5**
**Structure of Non-Bank* Lendings to the Housholds, bln. KZT, for the Period**




* *Credit partnerships and micro-credit organizations*
*Source: SARK*

Among the factors of reduction of natural persons lending, according to the results of banks questioning regularly conducted by NBRK, pessimistic economic expectations and high interest rates were indicated as a result of toughening of the STB credit policy in relation to borrowers. In particular, the average credit cost for individuals in the third quarter 2008 versus the second quarter 2007 grew by 19.37% from 16%; on consumer credits – to 21.6% from 17.3%, on construction and housing credits an interest rate varied in the range of 13% to 14% per annum. The interest rates growth affected the increase of a share of expenses for credit and debt repayment in cash disbursement of the population almost to 6%, or by 1.8 times comparing to the end of 2007 (Figure 2.4.6).

**Figure 2.4.6**
**Structure of Households Expenditures, %**




*Source: SARK*

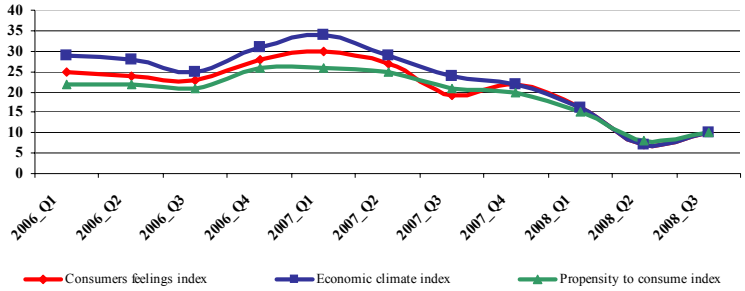
The growth of expenses for payment of interests and toughening by STB of non-price parameters of credit policy in the background of low liquidity and

high inflation did not allow implementing a positive potential of decrease of the debt burden on the population's income. Also, in spite of a slight reduction of the total unemployment level as of the end of the third quarter 2008, comparing to the same period in 2007 to 6.4%[27], there is observed a growth of a number of redundant workers by 26% due to liquidation of enterprises and by 30% of those who left in a voluntary manner[28]. In addition, in 2008 there is observed some reduction of a number of self-employed population in the economy, and reduction of the real wage in construction – by 2%; retail trade, financial activity and financial intermediation – on the average by 6%; in the sphere of operations with the real estate – by 12%, and in a number of other sectors of services.

These factors determine aggravation of the population's expectations and their careful consumer behavior. In particular, according to the population poll conducted by SARK, there was found a reduction of the desire to buy in the background of overall aggravation of expectations and perception of the economic climate (Figure 2.4.7)[29]

**Figure 2.4.7**

**Assessment of consumers behavior***




*Source: SARK*

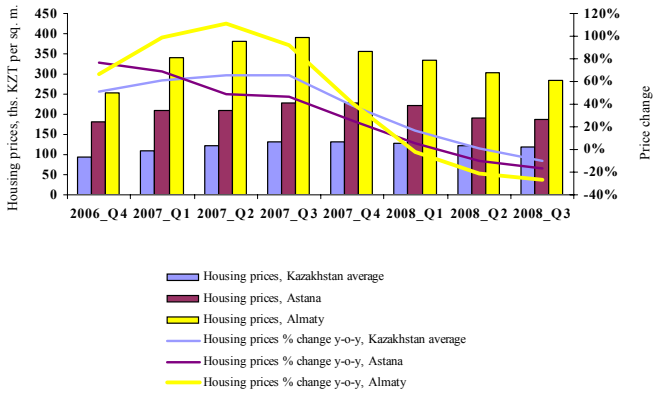
## 2.5 Factors Determining the Real Estate Market Situation

***The real estate market was characterized by prices reduction for all categories of housing in the background of speculative capital outflow and lack of investment attractiveness. At the same time, price uncertainty of main regional real estate markets, first of all in Almaty, is formed in the background of obvious gap between the factors that determine the demand and supply for real estate, including new housing. Fair pricing on the market will form either owing to further reduction of price parameters of deals as a result of disposable income constraints or renew of banks' credit activity or fall of costs inflation in the construction segment.***

After the period of intensive growth of real estate prices, the peak of which was in the second and third quarters of 2007, an extensive reduction of real estate prices could be observed in Kazakhstan. This trend is especially noticeable in Astana and Almaty which are the main 'construction sites' of the country. Thus, at the end of the third quarter of this year, the price drop for housing, according to the SARK, was 27% in Almaty, 17% in Astana, 10% in Kazakhstan in general comparing to a respective period of the last year[30] (Figure 2.5.1).

**Figure 2.5.1**

**Housing Price Dynamics**



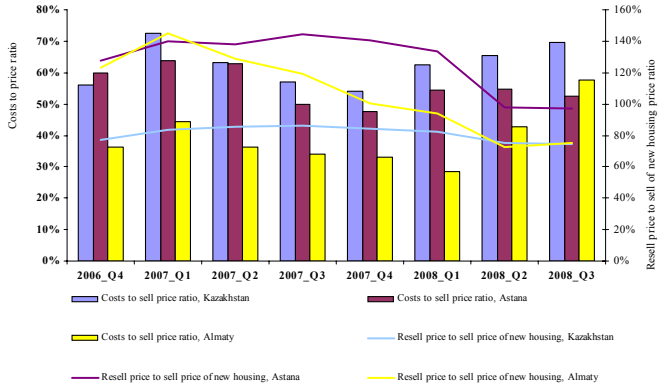

*Source: NBRK, SARK*

[27] The indicators of employment and unemployment can underestimate the real situation in the sector of small and medium-size business, especially, in the period of the economic growth deceleration.
[28] Voluntary resignation can also be a latent form of staff reduction.
[29] Assessment of consumers is made on the basis of the population poll and is calculated as a ratio of negative responses of the population to positive responses.
[30] Here and further in the text, under an average price is understood an average arithmetic of 4 prices: sale of a new standard housing and re-sale of uncomfortable, comfortable and elite housing.

The price adjustment was made in the background of drop in the speculative attractiveness of the market. In particular, in Almaty the speculative attractiveness of the market started its decrease from the second quarter of 2007, in Astana – from the fourth quarter of 2007. As of the end of the third quarter 2008, the selling prices at the secondary market to the selling prices of new housing ratio was about 75% in Almaty and it matched the average republican value.

**Figure 2.5.2**

**Imbalance Factors of Housing Market**



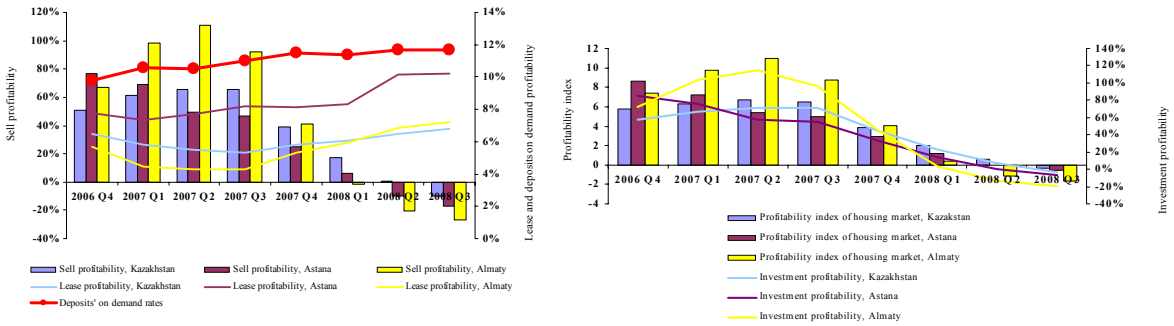

*Source: NBRK, SARK*

Besides, it should be noted that up to the first quarter of this year, the ratio between the construction cost and prices for the real estate was less than 50% which witnesses to a considerable overpricing in sale of new housing. A considerable gap between the cost value of construction and the selling price for new housing in Almaty that occurred last year is explained, on the one hand, by the high price for land plots in the city, and on the other hand, by overpricing by construction companies themselves in the background of high demand for housing (Figure 2.5.2).

The attractiveness of real estate as an investment instrument was determined by a very high profitability of investments in real estate[31] which was about 70% per annum on the average in Kazakhstan in the second-third quarters of the last year. In Almaty the peak of profitability of investments in real estate was reached in the second quarter of the last year and was 115%. Starting from the second quarter of this year, profitability of investments in real estate became negative, i.e. the market lost its attractiveness for investors and speculators (unprofitability of investments into housing in Kazakhstan in the third quarter was 10.2%, in Almaty – 26.7%). The profitability of housing rent increased slightly and was on the average 6.8% in Kazakhstan as of the end of the third quarter (Figures 2.5.3-2.5.4).

**Figures 2.5.3-2.5.4**

**Speculation Factors in the Housing Markets**



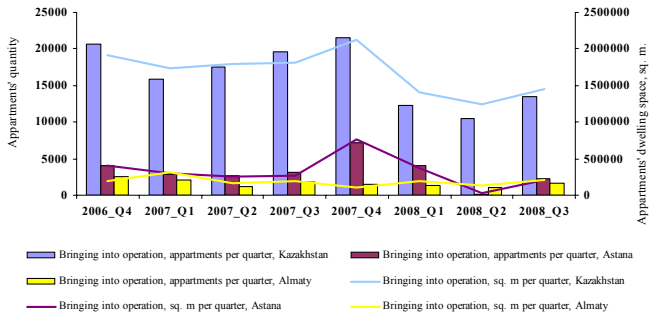

*Source: NBRK, SARK*

[31] Profitability of investment in real estate is calculated as a sum of lease profitability within a year of possession and from subsequent re-sale. The profitability indices from sale and lease are determined as a income ratio from re-sale in a year of ownership or from lease throughout a year to the value of real estate.

The main factor determining a supply on the primary real estate market is commissioning new housing. Up to the fourth quarter 2007, in Kazakhstan there was observed a growth of a number of apartments put into operation, as well as their aggregate useful area. However, in 2008 a substantial decrease of housing commissioning can be seen. However, at one of the main 'construction sites' of the country – in Almaty – this trend started to be observed back to the second quarter 2007 (Figure 2.5.5).

**Figure 2.5.5**

**New Housing Construction Volumes**

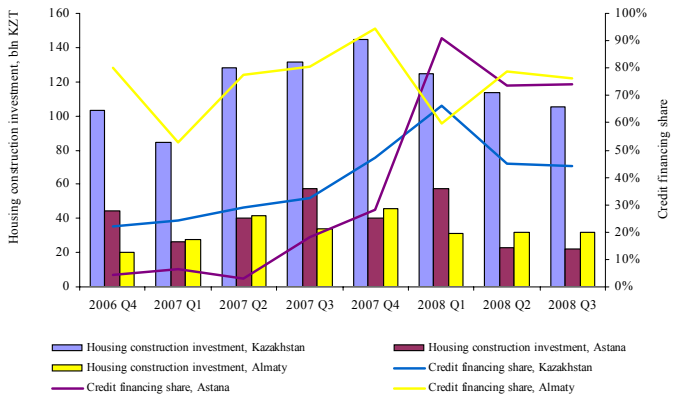



*Source: SARK*

The investments structure[32] in housing construction is not uniform in different regions. If in general in Kazakhstan the share of borrowed financing was 44.4% as of the end of the third quarter, then in Almaty where traditionally a specific weight of investments in construction at the expense of borrowed funds is traditionally high (80.45% in the third quarter 2007), it was 76.23%. In Astana up to the second quarter 2007, the share of borrowed funds was less than 10%. Afterwards there was observed a sharp growth that reached a peak (90.9%) in the first quarter 2008 (Figure 2.5.6). The growth of the share of loan financing in Astana is largely explained by allocation of money from the budget as part of stabilization measures, and this money was provided by government fund Kazyna through Kazakhstani banks.

**Figure 2.5.6**

**Investments into Housing Construction**

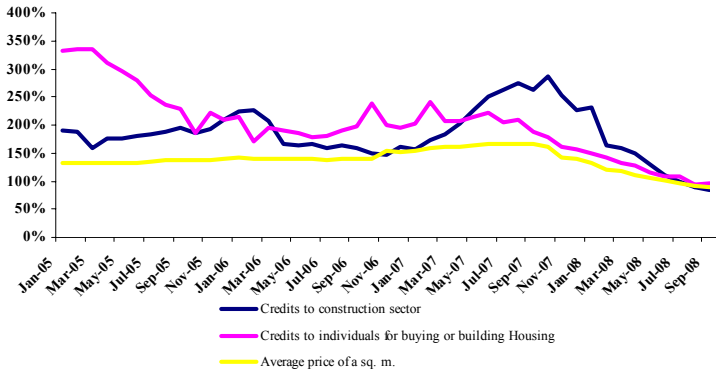



*Source: SARK*

In the recent 'construction boom' observed in Kazakhstan, the banks was played an important role crediting both construction sector and individuals for purchasing housing. However, the process of granting loans did not only stimulate the construction industry but was one of the main sources of price growth on the housing market. Starting from approximately September 2005, the trends in price change for real estate largely coincide with crediting of individuals for construction and housing purchase, But during the period of price reduction that started in the second

**Figure 2.5.7**

**Connection Between Credits and Housing Prices, growth speed y-o-y**




*Source: NBK, SARK*

[32] Under the investments in housing construction, according to the SARK methodology, are implied the costs for construction of residential houses, dormitories; residential houses of apartment and hotel type; non-residential buildings where there are residential apartments; hotels, including boarding schools under general secondary schools.

half of the last year these trends became actually identical. The prices for real estate and credits of the construction industry demonstrate a little bit less close interrelation (Figure 2.5.7).

The important source of financing the construction industry is buyers' financial participation in construction. According to the SARK data, as of the end of 2008 in Kazakhstan in general, 939 apartment residential houses were erected with attraction of share-holders. More than a half of all the projects with buyers' financial participation in construction were raised in Almaty and Astana, out of them 447 facilities were constructed in Almaty and 107 – in Astana. The role of projects with a buyers' co-investment is especially important in Astana where almost all the apartments commissioned for 3 quarters of this year were constructed with certain degree of buyers' participation. In Almaty their portion is also higher than on the average in Kazakhstan and is close to 50% (Table 2.5.1).

**Table 2.5.1**

**Role of Buyers' Co-investment in the Construction Industry Financing**

| | *1Q 2008.* | *2Q 2008.* | *3Q 2008.* |
|---|---|---|---|
| **Number of apartments in the houses constructed with buyers' financial participation in construction** | | | |
| Republic of Kazakhstan | 5,562 | 6,523 | 9,695 |
| Astana | 3,901 | 4,021 | 5,558 |
| Almaty | 587 | 1,061 | 2,029 |
| **Share of apartments in the houses constructed with buyers' financial participation in construction, in aggregate number of commissioned apartments** | | | |
| Republic of Kazakhstan | 45.56% | 28.79% | 26.86% |
| Astana | 98.19% | 96.89% | 87.50% |
| Almaty | 44.64% | 46.19% | 50.92% |

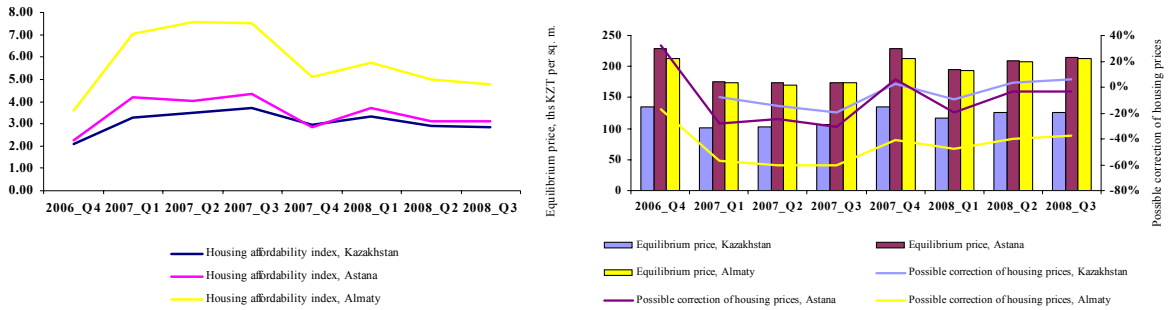
*Source: SARK*

Starting from the second half of the last year, there appeared a trend of increase of housing affordability[33] in general in Kazakhstan. Thus, as of the end of the third quarter 2008, there is observed a reduction of this ratio to 4.78 in Almaty (as of the end of the third quarter, this ratio was 7.5). The same dynamics is observed in Astana.

At the same time, at the end of the third quarter 2008, the prices in Astana and in Kazakhstan in general were close to an equilibrium price[34]. In Almaty the potential correction could be about 35% of the average housing price if there are no restrictions on the part of the cost value and in the environment of greater flexibility of the market, and also in the event if the population has no other sources of raising money to buy housing besides their own income (Figures 2.5.8 – 2.2.9).

**Figure 2.5.8- 2.5.9**

**Housing Affordability and Equilibrium Price**




*Source: NBRK, SARK*

[33] Affordability of housing is estimated using a special index that is calculated as an average price of 1 sq.m multiplied by 18 (the norm of housing) and divided by the wage value per 1 year (average monthly wage multiplied by 12 (number of months)). The ranges of this ratio characterize affordable housing (up to 3), moderate unaffordable housing (3.1-4), seriously unaffordable housing (4.1-5), considerably unaffordable housing (more than 5.1).

[34] It is calculated as an annual salary times 3 (an upper value of the ratio for affordable housing) and divided by 18 (the norm of housing).

# 3. Financial Market Situation

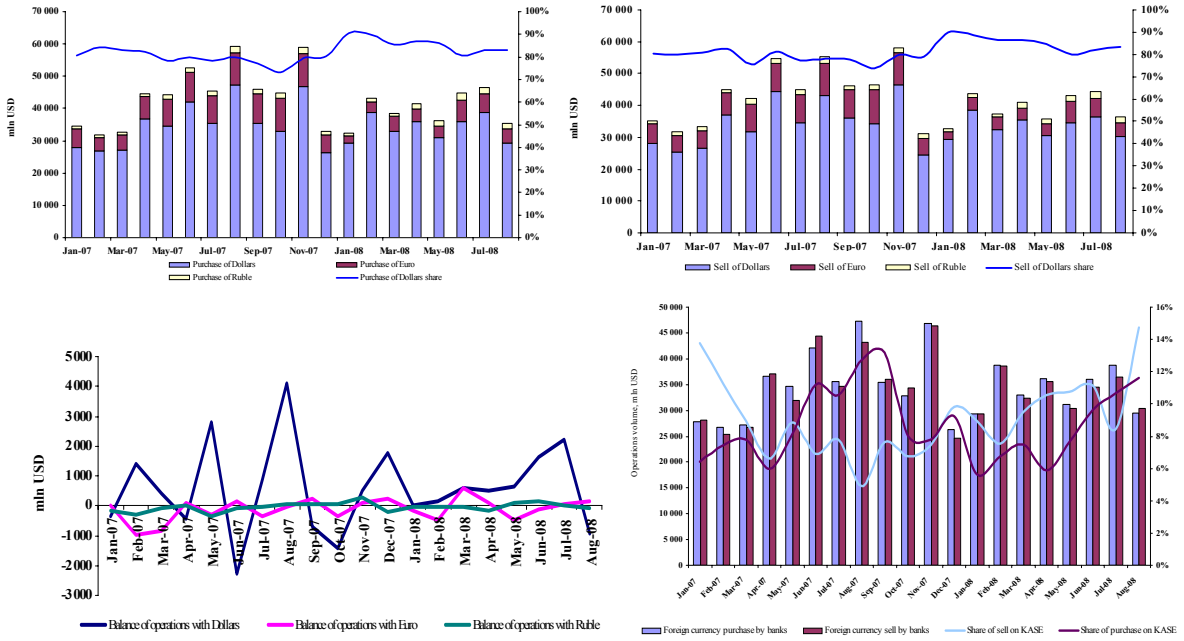
## 3.1 Currency and Money Markets

***One of the potential threats to financial stability is possible shocks of demand for US dollars on the part of the banks. As a consequence of the decrease of demand for import and restricted access to foreign funding, the aggregate volume of operations on the foreign currency purchase and sale, in particular, of a dollar, has considerably reduced this year.***

The Kazakhstani economy is dollarized to a considerable extent and in this connection a vast majority of bank operations on the foreign currency purchase and sale are operations with dollars. Thus, the share of operations on dollars purchase and sale in the aggregate volume of operations of the banks with the foreign currency from January to September of this year was about 85%. The demand and supply for dollars on the part of banks are not in an equilibrium state, and a balance of operations of banks on purchase and sale of the American currency testifies to it[35]. Thus, in August-December of the last year, a net balance of dollars purchase and sale by banks was more than USD4 bln., net balance of banks operations with clients on dollars purchase and sale was about USD7.9 bln., on banks operation at KASE - USD6.3 bln. In January-August 2008, a net balance was about USD4.8 bln., net balance of operations on purchase and sale from clients – USD15.9 bln., net balance of the operations at KASE – minus USD4.7 bln. (purchase and sale of dollars for tenge and other currencies). If from August to December of the last year there was a sharp increase of the demand for dollar in Kazakhstan, then this year on the contrary the clients of banks sold dollars the surplus of which were, in turn, sold by the banks at the stock exchange (Figures 3.1.1 – 3.1.4).

**Figures 3.1.1 – 3.1.4**

**FX-Market Operations of Banks**




*Sourcek: NBRK*

During the period of turbulence at the currency market in August-September 2007, there was a growth of a share of US dollars purchase by the banks at KASE. The growth took place in the background of total increase of purchase from clients that showed that it was the banks and not

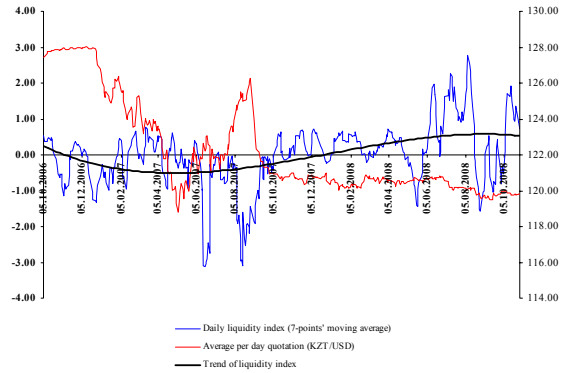
[35] The difference between the volumes of purchase and sale (purchase-sale) according to the NBK data includes the operations at the stock exchange and purchase-sale from customers.

customers' demand that became a main source of additional pressure on the exchange rate which went up from KZT119-120 per dollar to KZT126.25 per dollar on August 29, 2007. Considerable fluctuations in exchange last August-September are related to the increase of banks' demand for dollars to pay out external borrowings. Later on, the dollar deficiency decreased.

**The liquidity index**[36] of the market shows that in 2008 it noticeably grew comparing to the last year level, and afterwards slightly decreased from the peak in July of the current year. During the turbulence period last August-September, the market liquidity decreased due to speculative pressure and an increased need in the American currency. All the components of the liquidity index essentially changed (the spread and amounts of an average transaction considerably increased with the reduction of a number of transactions), and this caused reduction of its value, and an influence of spread change was maximum (Figure 3.1.5).

**Figure 3.1.5**

**KASE FX-market liquidity**



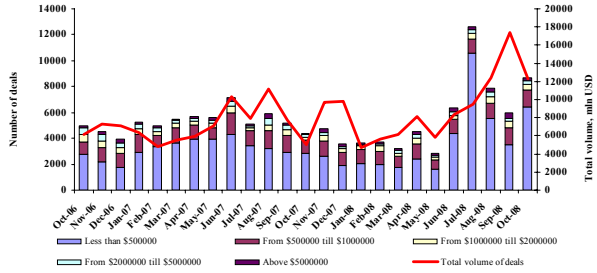

*Source: NBK, KASE*

**Tightness**[37] of the stock market of dollars increases this year versus the last year due to decrease of the spread value and its volatility.

**Depth**[38] of the market greatly changed during the last and current years. The market depth was maximum this July due to a great number of transactions relative to a small volume (less than USD500,000). By September, an aggregate volume of transactions considerably increased (to more than USD17 bln.), however, their number sharply decreased. In October the indicator of the market depth reduced both at the expense of decrease of an aggregate volume of transactions, and their number (Figure 3.1.6).

**Figure 3.1.6**

**FX-market Operations on KASE, Volumes and Operations**




*Source: NBRK, KASE*

**Resilience**[39] of the market is fairly hard to be assessed due to the activity of the National Bank on the market aimed at maintaining the tenge exchange rate. The resilience level is indirectly shown by the ratio of the daily change in exchange rate to volume of an average transaction per day[40]. This market parameter last year was notable for serious volatility related to fluctuations in exchange rate as a result of external shocks. Thus, the currency market resilience and its ability to absorb the shocks of demand and supply were considerably lower in the second half of the last year

[36] The liquidity index is calculated as a sum of normalized values of spread between the best prices of demand and supply taken with 'minus', amount of an average transaction at KASE on main session taken with 'minus', and number of transactions. It is considered that maximum liquidity is reached when the spread is minimum (i.e. the costs for covering the position are minimum), amount of an average transaction is minimum, and number of transactions is maximum.

[37] The market characteristic that shows how far the real transaction price deviates from the average market price. The main indicator of tightness is a spread between the best and average weighted prices of purchase and supply.

[38] The market characteristic that shows activity of its participants; its main indicators are an aggregate volume, average transaction volume and number of transactions.

[39] The market characteristic that shows dependence of change in the price parameters of the market upon volumes of transactions.

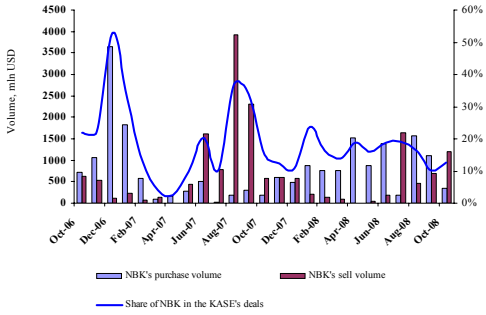
[40] The closer is the parameter value to zero, the higher is the resistance, and vice versa.

than in this year. ***In other words, the dollar exchange rate became less sensitive to the influence of transactions of a large volume.***

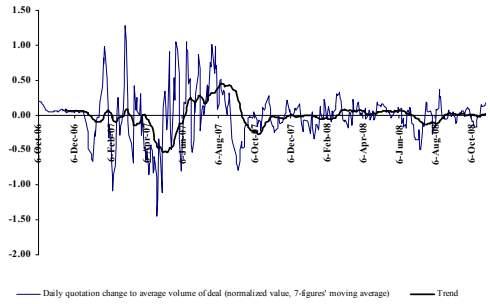
High ability of the dollar stock market for resistance is determined by participation in the bidding of the National Bank which, having considerable gold and foreign currency assets, can undertake a role of a main market-maker during the period when stability of the tenge exchange rate is threatened by shocks of demand or the dollar supply. Thus, this year a degree of participation of the National Bank[41] in the transactions at KASE was on the average 15.6% (for comparison: 22.4% in August-December 2007) (Figure 3.1.7 – 3.1.8).

**Figures 3.1.7 – 3.1.8**

**KASE's FX-market Resiliency Evaluation**




*Source: NBRK, KASE*

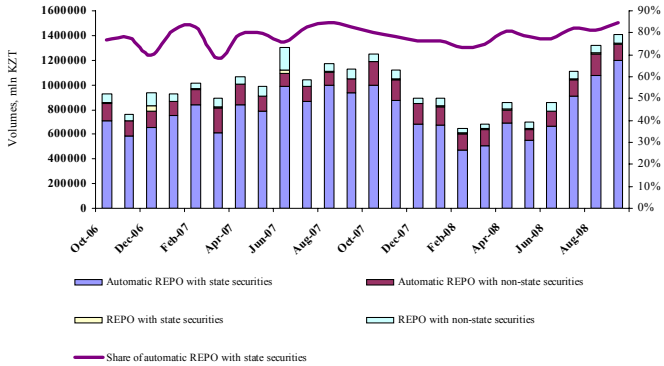



*Source: NBRK, KASE*

***In 2008 the importance of REPO market as a source of obtaining short-term liquidity by the financial market participants has increased.*** After abrupt decrease of the volumes of transactions committed in November 2007 – February 2008 there was observed a growth of the REPO market depth expressed in the increase of aggregate volumes of transactions. Thus, in September 2008, an aggregate volume of transactions was KZT1.407 trln which was an absolute maximum for two years (Figure 3.1.9). At the same time, a dominating REPO segment (84.8% this September) is automatic REPO with state securities.

**Figure 3.1.9**

**REPO Market Structure**



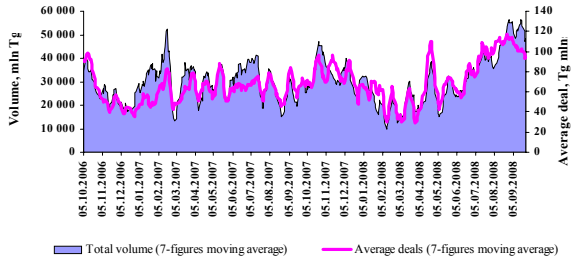

*Source: KASE*

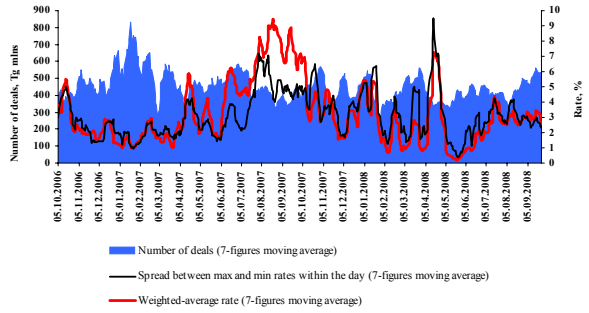
The greatest number of transactions and the greatest aggregate volumes of transactions are in the sector of automatic REPO with state securities for the term of 1 day. In 2008, there is observed an intensive increase of the market depth in this segment of REPO market at the expense of growth of aggregate volumes and number of transactions. The absolute maximum of interest rates (more than 8%) was observed in August 2007, i.e. during the period when the banks experienced the largest problems with liquidity. By the beginning of 2008, the rates considerably lowered but by April again reached a local maximum (about 7%). In August-September 2008, the situation stabilized, and the average rate in this period was about 3%. As for the average volume of transaction, its value changes slightly since the transactions are standardized (Figures 3.1.10 – 3.1.11). Thus, stabilization of the REPO rate at the level of approximately 3% has in the recent months reflected stabilization of the liquidity level of the banking system.

[41] It is calculated as a ratio of the amount of all NBK operations on both purchase and sale to the aggregate volume of transactions (on a gross basis).

**Figures 3.1.10 -3.1.11**

**Characteristics of the 1-day Automatic REPO Market**



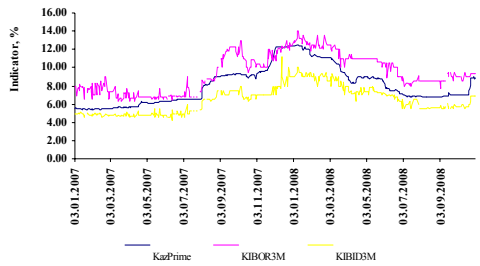

*Source: KASE*

***The decrease of main indices of the interbank money market reflecting the cost of attraction of unsecured loans on the interbank market testified to normalization of the situation with liquidity in the banking sector.***

On the interbank money market up to the beginning of this year there was observed an increase of the cost of attraction and placement of funds (Index KazPrime approached the level of 14%, and the KIBOR and KIBID indices considerably increased). Afterwards there started a rapid decrease of indices value, and since this July their stabilization was observed (KazPrime dropped to 8% and up to November demonstrates a slight volatility) (Figure 3.1.12).

**Figure 3.1.12**

**Interbank Money Market Indices**

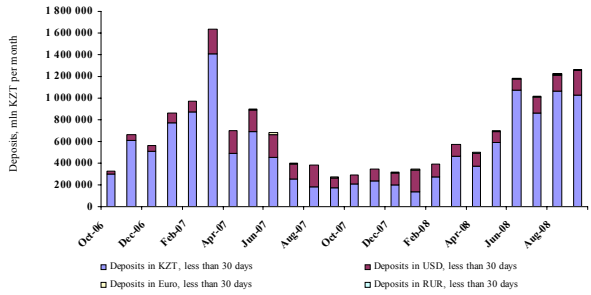


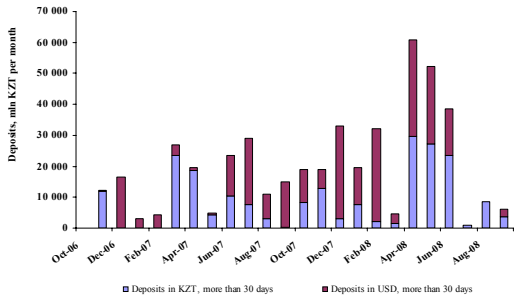

*Source: KASE*

The market of short-term interbank crediting in Kazakhstan remains comparatively undeveloped in relation to the interbank deposits market. Thus, according to the National Bank data, the loans granted for January-September 2008 were KZT20.7 bln. which is 3.4% of the amount of the deposits placed in the same period (KZT613.5 bln.). The interbank credits in dollars granted for the same period amounted to USD697.6 mln., or 0,19% of the aggregate amount of deposits denominated in dollars (USD365 bln.)[42]. The main part of interbank contributions in resident banks for the period of up to 30 days is denominated in tenge. Their volumes for the period, by reaching a minimum last September (deposits in tenge - KZT174.2 bln.. in dollars – KZT92.1 bln.), have fairly rapidly increased its volume by this August (1073.1 bln. in tenge and 102.7 bln. in dollars). The volumes of deposits for more than 30 days are insignificant comparing to the deposit with the period of less than 30 days. In the third quarter of this year, there was observed a serious reduction of their volumes (Figures 3.1.13 – 3.1.14).

**Figures 3.1.13 – 3.1.14**

**Interbank Deposits in Resident Banks**




*Source: NBRK*

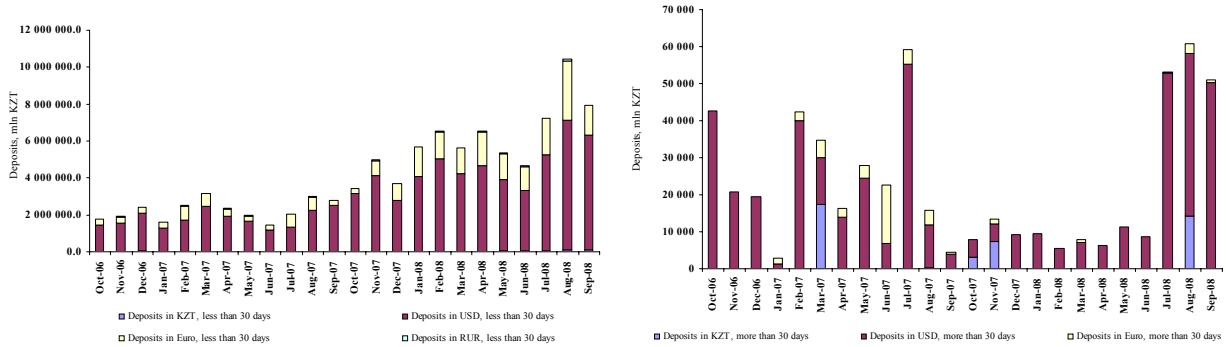
[42] Here and below the volumes of interbank deposits and loans are considered without NBK credits and banks' deposits in NBK.

Thus, the increase of deposits with the period of less than 30 days testifies to normalization of the situation with liquidity in Kazakhstani second-level banks. But at the same time, reduction of the deposits volumes over 30 days witnesses to the banks desire to retain liquidity in tenge in the next months.

The deposits in non-resident banks from January to September of the current year were at 95.9% of the aggregate number of interbank deposits. Between the internal and external markets of interbank crediting the banks give preference to the latter. The main part of accounts in non-resident banks remains nominated in US dollars. The aggregate volumes of the deposits in US dollars with the period of up to 30 days have been rapidly growing during this year. In the last quarter, in contrast to the tenge market, the deposits for more than 30 days in non-resident banks have also considerably increased (Figures 3.1.15 – 3.1.16).

**Figures 3.1.15 – 3.1.16**

**Interbank Deposits in Non-resident Banks**

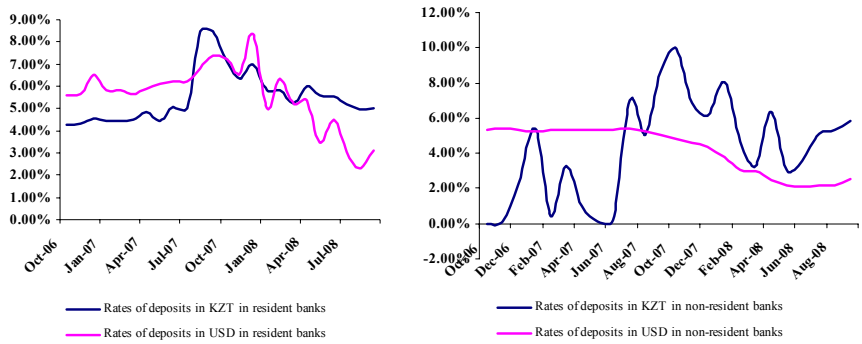



*Source: NBRK*

During the period till July-August of the last year, the rates on interbank deposits in dollars in relation to both deposits in resident banks and non-resident banks were noticeably higher than the rates for deposits in tenge. This year, the opposite takes place: the rates on tenge deposits are higher than the rates on dollar deposits which may be linked with a larger need in tenge rather than in dollar liquidity of the Kazakhstani banks. Due to the fact that the sale of dollars to the banks by clients had a positive balance, the banks had sufficient volumes of dollars, and this resulted in reduction of the rates on the interbank market (Figures 3.1.17 – 3.1.18).

**Figures 3.1.17 - 3.1.18**

**Interbank Deposits Interest Rates**




*Source: NBRK*

## 3.2. Securities Market

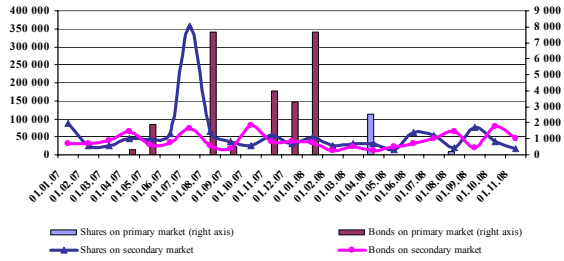
***The crisis that occurred in summer 2007 slowed down the development of Kazakhstani stock market and reflected mainly on the return on bank shares. The primary market of shares likewise the market of derivatives instruments remained on the former undeveloped level. On the***

***whole, the market of equity and debt securities could not become an alternative to banking crediting in the conditions of credit activity slowdown.***

The total turnover of the stock exchange on shares for 10 months 2008 was USD3,076.1 mln., on corporate bonds – USD2,932.3 mln., whereas as of the end of 2007 the stock turnover was 8.9 bln., and on corporate bonds – 4.1 bln. The share of REPO market operations remains prevailing as before and is equal to 61.7% of the total turnover of the stock exchange, out of them 64% - automatic REPO and 36% - direct REPO. In 2008 the National Bank stopped to actively withdraw money liquidity which affected the volumes of the government securities market. Also, in the last months of 2007 there was noted a surge on the corporate securities market which is related to additional issues of large banks with the aim of funds attraction as an alternative to foreign financing. It is also necessary to note the investors' interest on the government securities market of the Ministry of Finance. Thus, for 10 months 2008, the share of state securities of the Ministry of Finance was more than 60%. This growth is related to Kazakh investors' preferences to invest in riskless instruments in spite of low rate of return on them due to the drop in stock markets and lack of other riskless instruments (Figures 3.2.1 - 3.2.2).

**Figure 3.2.1**

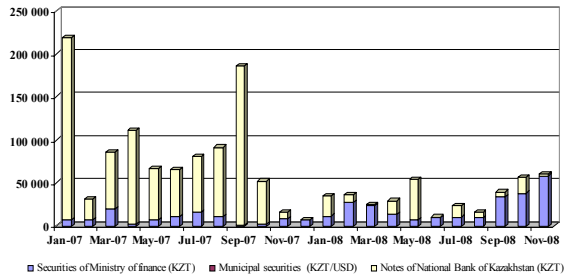
**Volume of Transactions on Primary and Secondary Markets of Shares and Bonds, for the Period (mln. KZT)**




*Source: KASE*

**Figure 3.2.2**

**Volume of Transactions on State Securities Market, for the Period (mln. KZT)**

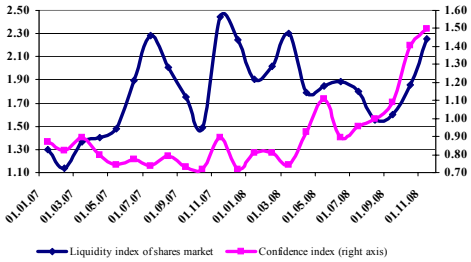



*Source: KASE*

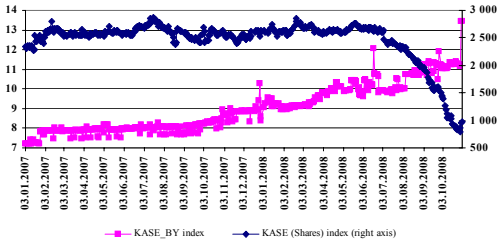
The main indicators of the stock market demonstrate an increased interest in debt instruments of high quality which shows a substantial growth of a confidence index[43]. Within 10 months of 2008 a number of transactions committed with regard to bonds has increased by 2.5 times where the peak was in September and October that entailed a growth of index KASE-BY. The market of shares, in turn, demonstrates further aggravation by 2.68 times since July 2008 which is explained by overall drop of indicators on the world stock markets. Along with that, in spite of the situation on the external market, the domestic market of shares in September-October 2008 demonstrated a growth of activity – a number of the securities on which transactions were executed exceeded the data for January-August 2008 almost by 2 times, and this entailed a sharp growth of liquidity (Figures 3.2.3 and 3.2.4).

**Figures 3.2.3 – 3.2.4**

**Stock Market Main Indicators**




*Source: NBRK, KASE*



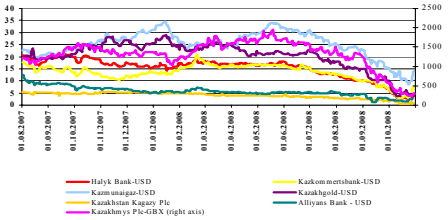

*Source: KASE*

[43] The confidence index represents a ratio of the average weighted rate of return of bonds with a high rating to the average weighted rate of return of corporate bonds with a lower rating.

The drop in prices for the shares of Kazakhstani issuers took place under the psychological influence of closure by foreign investors of the positions in securities of the financial institutions of the entire world, and also at the expense of reduction of prices for metals and petroleum. In general, an average weighted profitability of bank shares from the beginning of 2008 through October 2008 lost 47% by reaching the mark of -46.02% per annum, whereas an average weighted profitability of bank bonds for the same period increased by 1.96% (Figures 3.2.5 и 3.2.6).

**Figure 3.2.5**

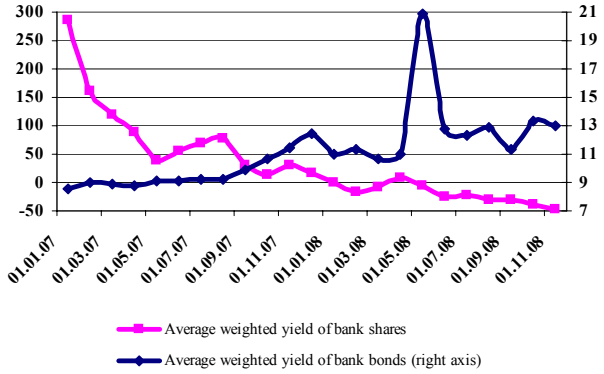
**International Market Price for Shares**




*Source: NBRK*

**Figure 3.2.6**

**Average Weighted Yield (domestic market)**

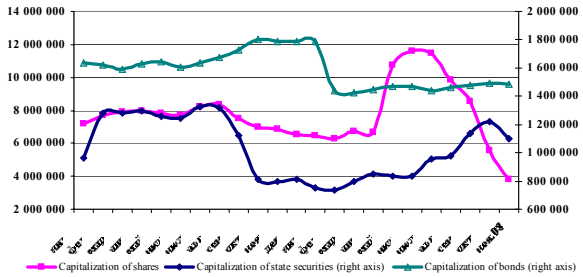



*Source: NBRK*

The drop in shares quotations resulted in decrease of market capitalization by 40% over 10 months of 2008. The greatest rise in May-June is explained by appearance of a few new issuers that also affected the sectoral structure of the securities market. In particular, by volume of the committed transactions on the Kazakhstani stock exchange, there is observed a growth of activity of the energy sector on the market of shares and industrial sector on the market of bonds represented by new issuers. This demonstrates the interest in new companies in the industries less exposed to crisis and reflects decrease in investors' confidence in the financial sector (Figures 3.2.7, 3.2.8, 3.2.9).

**Figure 3.2.7**

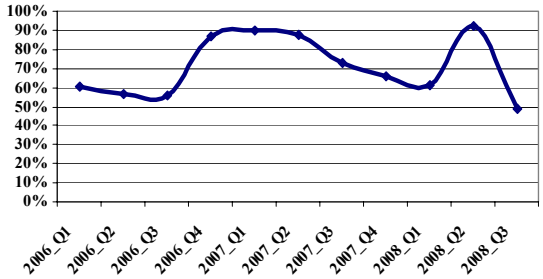
**Capitalization of the Shares, Bonds, State Securities**




*Source: KASE*

**Figure 3.2.8**

**Total Capitalization of KASE to GDP**

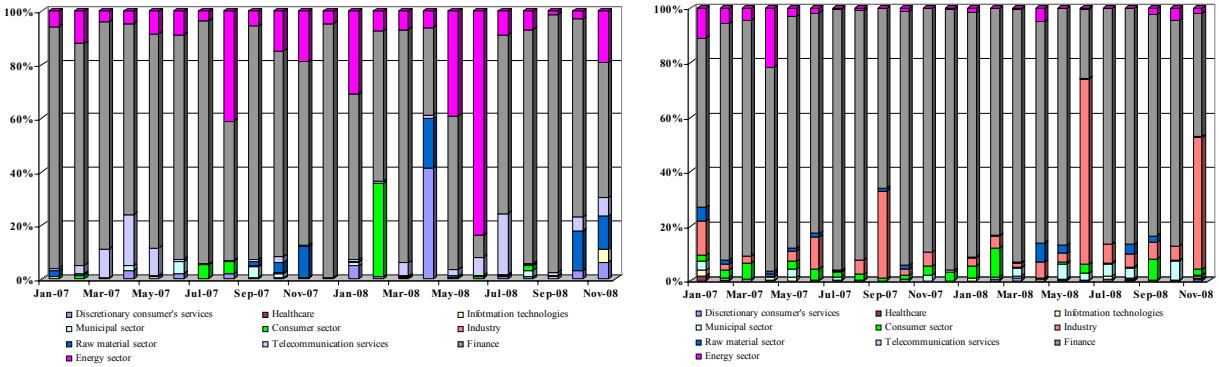


*Source: NBRK, KASE*

**Figure 3.2.9**

**Branch Structure of Securities Market in Terms of Completed Transactions, mln. KZT**

**Shares** **Bonds**




*Source: KASE*

# III. Financial Intermediary Institutions

## 4. Role of Financial Sector in the Economy

### 4.1 Level of Financial Depth

***High level of credits growth in previous periods has changed to moderate growth rates which affect the level of financial relations development in the country.***

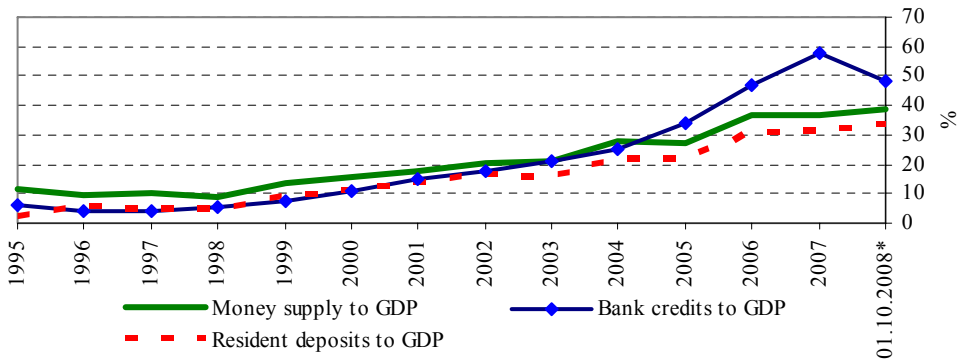
Tightening conditions of funding on external markets resulted in tightening credit conditions and increasing interest rates by banks with regard to domestic consumers of financial services. Tightening credit conditions caused decrease in credit activity in the financial sector.

As a result, a ratio of credits to the economy to GDP indicating the level of financial intermediation considerably decreased from 57.8% as of the end of 2007 to 38.8% as of the end of the third quarter 2008. In turn, decrease in resources attracted from abroad and decrease in domestic economy funding by banks has essentially decreased the gap between the level of crediting, savings of the population and the level of economy monetization. This trend should have a positive impact on equalizing the ratio of attraction and placement of resources due to internal sources of the economy.

At the same time, these complicated conditions create new opportunities and challenges for the Kazakhstani banking system with regard to determining their main factors of growth in the future. First of all, perspective directions of development are resource base diversification, improvement of risk management and management quality based on the international principles of corporate governance.

**Figure 4.1.1**

**Financial "Depth"**




*Source: NBRK, SARK.*

### 4.2 Structure of the Financial Sector

***The world financial crisis emerged in summer 2007 has not cardinally affect the structure of assets distribution of the financial sector by categories of financial institutions. However, the share of assets of the banking sector which is traditionally the largest segment decreased during the observed period that is caused by consequences of global instability for the domestic banking sector. The share of non-banking sector in the structure of financial sector assets has increased.***

The banking sector of Kazakhstan that had been intensively developing in recent years due to inflow of cheap foreign capital, demonstrated the lowest growth rates of assets from October, 2007 to October, 2008 comparing to other financial institutions (9%). As a result, the share of banking system in total assets of the financial sector decreased from 82.0% to 74.2%. Moreover, organizations engaged in certain types of banking operations demonstrated the highest growth rates of assets during observed period which grew almost by 3 times, thereby increasing its portion in the financial sector assets from 4.9% to 12.1% (Figure 4.2.1). It can be explained by the fact that

among such organizations there are organizations whose sole shareholder (participant) is the government. During the instability period such organizations has actively expanded their activity by increasing capitalization on the part of government with the purpose of financial support of priority sectors of economy, small and medium-size business as part of top priority actions of the government on ensuring stability of the social and economic development of the Republic of Kazakhstan.

The analysis of the financial sector development since 2005 shows decrease in share of assets of the banking sector and pension funds, whereas there is an increase in the share of non-banking, insurance sectors and the sector of professional participants of the securities market (Figure 4.2.2). Despite contraction of the share of banking sector in total assets of financial sector, a degree of the banking sector significance for the country's financial sector remains high that can be evidenced by banks presence on the corporate bonds market where considerable part, more than 35% of total corporate bonds were issued by STB as of October 1, 2008. At the same time, over 60% of their total amount is in the portfolio of non-financial sector organizations and other investors (Figure 4.2.3).

In the financial sector the highest degree of concentration is observed in the pension funds sector and banking sector and relatively low level of concentration in insurance sector (Figure 4.2.4). As for institutional structure of the financial sector, the number of insurance companies and professional participants of the securities market noticeably increased during the analyzed period (Table 4.2.1).

**Figure 4.2.1**

**Institutional Structure of the Assets the Republic of Kazakhstan Financial Sector, %**

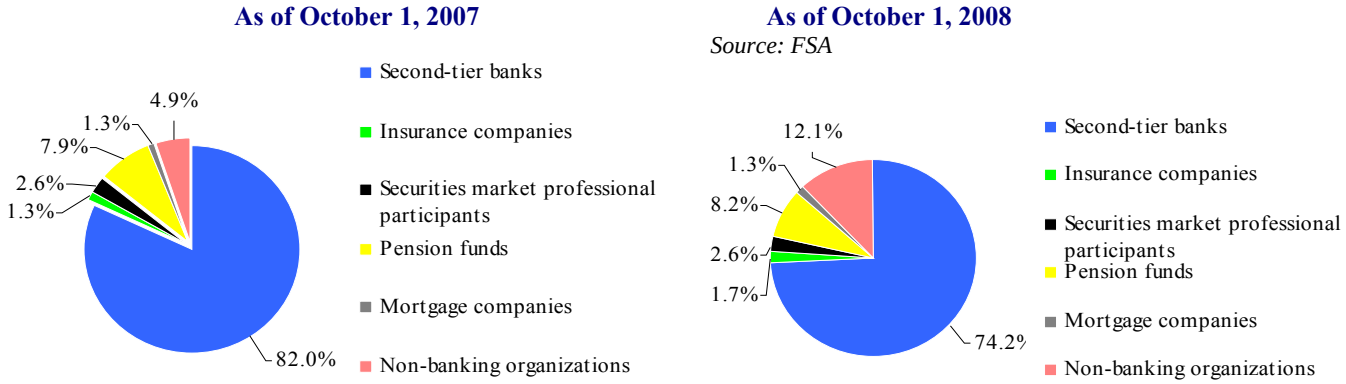



**Table 4.2.1**

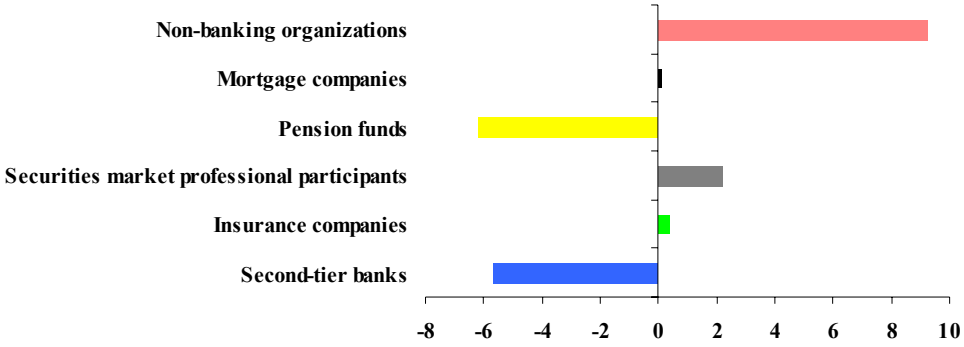
**Institutional Structure of the Financial Sector (number of financial institutions)**

| | Jan 1, 2006 | Jan 1. 2007 | Jan 1, 2008 | Oct 1, 2008 |
|---|---|---|---|---|
| Second-tier banks | 34 | 33 | 35 | 36 |
| Insurance organizations | 37 | 40 | 41 | 44 |
| Actuaries | 30 | 33 | 44 | 49 |
| Professional participants of the Securities Market*, including: | 130 | 147 | 208 | 217 |
| Brokers-dealers | 62 | 70 | 106 | 106 |
| Registrars | 18 | 16 | 17 | 15 |
| Pension assets investment management organizations | 11 | 13 | 11 | 13 |
| Investment portfolio managers | 28 | 37 | 61 | 68 |
| Custodians | 11 | 9 | 10 | 11 |
| Transfer agents | 0 | 2 | 3 | 4 |
| Auction organizators | 1 | 1 | 1 | 1 |
| Accumulation pension funds | 14 | 14 | 14 | 14 |
| Mortgage organizations | 7 | 10 | 12 | 12 |
| Organizations engaged in certain types of banking operations | 32 | 16 | 23 | 23 |
| including investment companies | 0 | 1 | 4 | 4 |

** - number of issued licenses*
*Source: FSA*

**Figure 4.2.2**

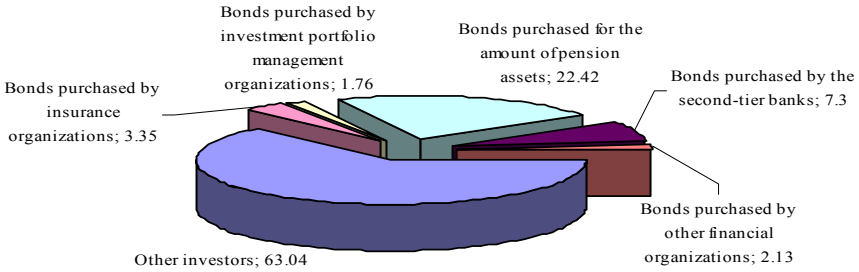
**Change in Share of Financial Sector Assets for the Period of 01.01.2005 - 01.10.2008 (in percentage points)**




*Source: FSA*

**Figure 4.2.3**

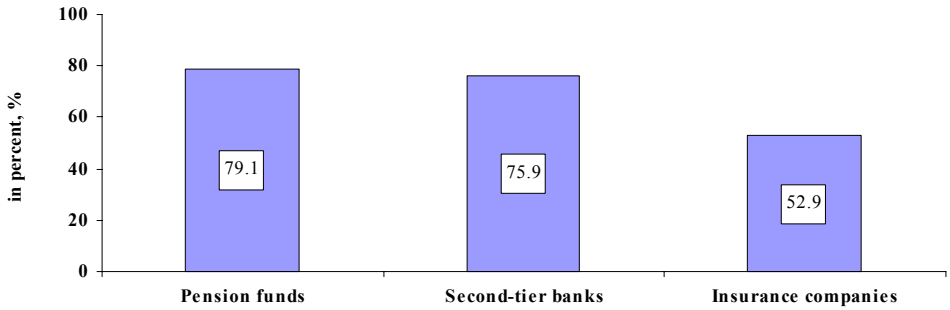
**Main Investors at the Corporate Bond Market of the Republic of Kazakhstan (in %, as of October 1, 2008)**




*Source: FSA*

**Figure 4.2.4**

**Financial Sector Segments Concentration in Kazakhstan* (as of October 1, 2008)**




**The share of the five largest financial institutions of each segment in the total segment assets*
*Source: FSA*

## 5. Banking Sector

### 5.1. Condition, Infrastructure and Concentration on the Banking Services Market

***Although the degree of concentration in the banking system of Kazakhstan has consistently decreased in recent years, it remains high in comparison with the average indicator of the European Union countries. Among key indicators, the share of 5 largest banks is especially high in the loan portfolio of the banking system which is explained by more aggressive policy pursued by banks last years both with regard to external borrowings and their further distribution.***

***World market trends contributed to entering of foreign participants in the Kazakhstani market of banking services.***

The banking system of Kazakhstan is characterized by high degree of concentration that remains stable during last years (Figure 5.1.1). The share of 5 largest banks' assets in aggregate assets of the banking system of Kazakhstan was 75.9% as of October 1, 2008 slightly reduced from the beginning of the year by 2.1 percentage points (as of January 1, 2004 – 73.9%). In spite of slight decrease, the indicator of bank assets concentration in Kazakhstan is considerably higher than the average indicator in 20 European countries (Figure 5.1.2).

The degree of concentration of 5 largest banks is especially significant in loan portfolio of the banking system and almost has not changed since the beginning of the current year and has amounted to 79.3%.

A small increase in concentration of 5 largest banks in own capital of the banking sector was observed from the beginning of the current year that was connected with the response of the banks to the ongoing deterioration of the banking assets quality.

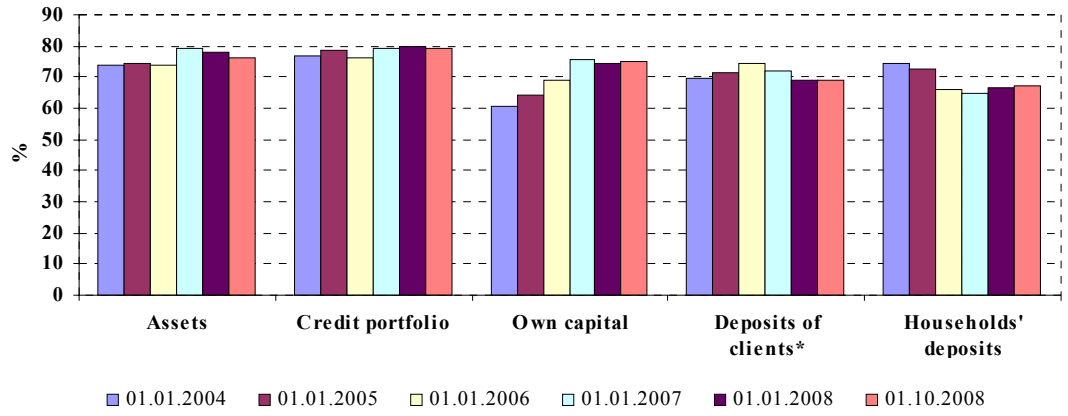
Herfindahl-Hirschman Index used for assessment of market concentration was 1,454 as of October 1, 2008 with regard to banking assets versus 1,486 as of the corresponding date of the previous year.

The overall situation on the world financial markets had an influence on prices for shares of Kazakhstani STB making them attractive for foreign investors. As a result, new shareholders entered the banking system of Kazakhstan, including those from Russia, Italy, South Korea, Turkey, UAE (OJSC Sberbank of Russian Federation, Italian Banking Group UniCredit, Turkish Bank Bankpozitif Kredi ve Kalkinma Bankasi which affiliates Israel Group Bank Hapoalim, South Korean Kookmin Bank, Arab Investment Company Alnair Capital). On the one hand, this indicates an increased interest in the banking system of Kazakhstan; on the other hand, this bears certain risks related to the performance of the parent foreign companies in the background of ongoing instability on the world financial markets. It should be noted that almost all transactions are large acquisitions, which indicates long-term plans of the investors.

From the beginning 2008, the share of assets of the banks with foreign participation in the aggregate assets of the banking system decreased from 15.8% to 14.8%, that is considerably lower than the level of the Central and Eastern European countries. At the same time, the share of authorized stock capital of the banks with foreign participation in the authorized stock capital of the banking system for the same period increased from 15.4% to 17.6% (Figures 5.1.3, 5.1.4).

**Figure 5.1.1**

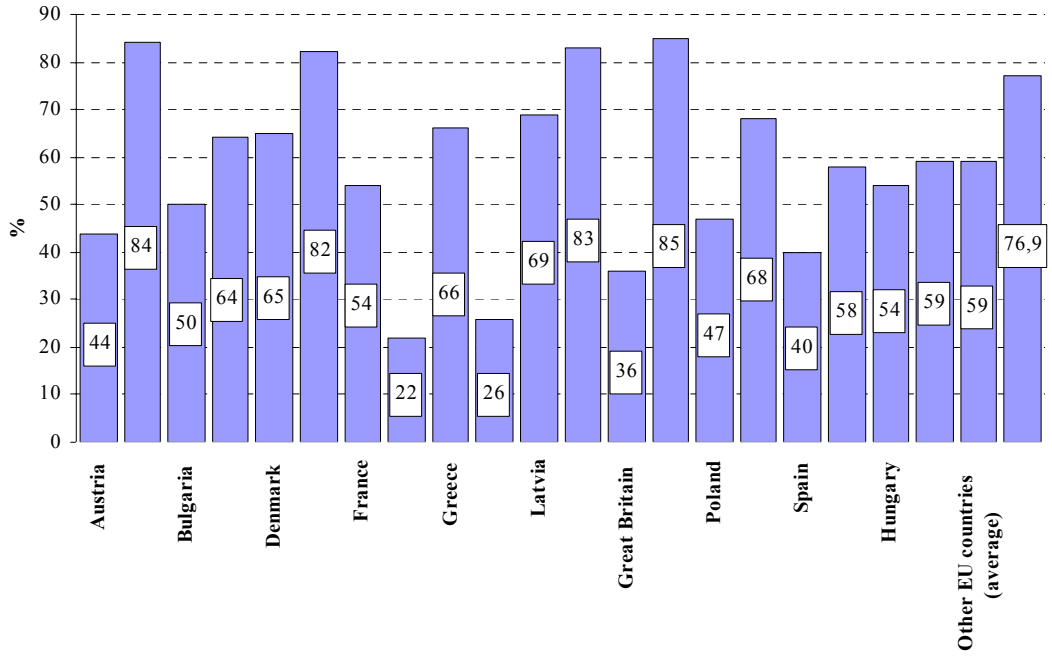
**Concentration of 5 Largest STB (as of 01.10.2008)**




** excluding deposits of special purpose vehicles (SPV)*
*Source: FSA*

**Figure 5.1.2**

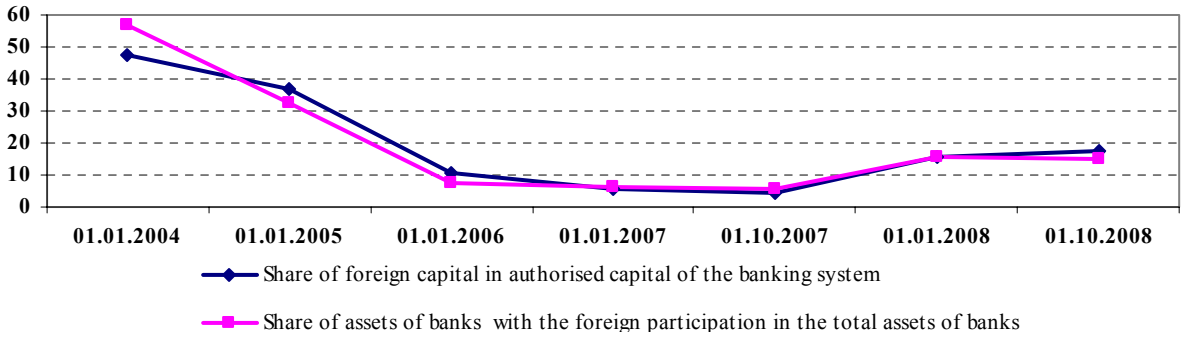
**Concentration in the Banking System across Countries (share of 5 largest banks in total assets*, %)**




** Data of EU countries for 2006*
*Source: national sources, ECB, FSA*

**Figure 5.1.3**

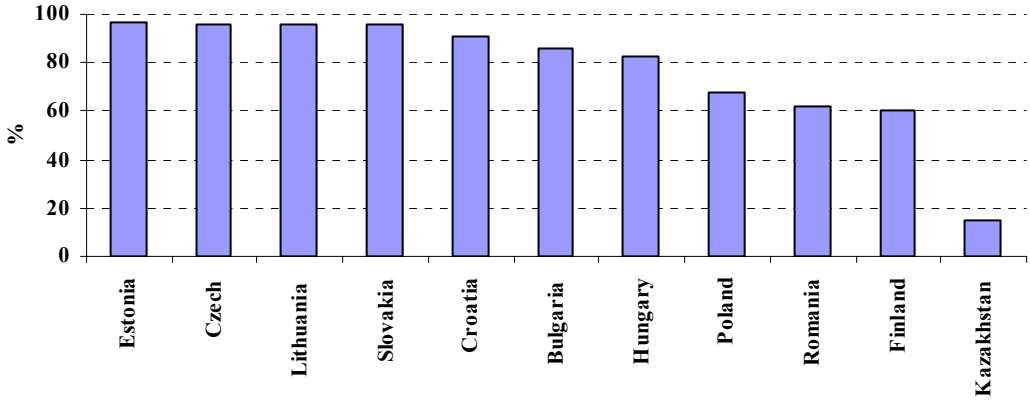
**Foreign Participation in the Banking System of the Republic of Kazakhstan (%)**




*Source: FSA*

Figure 5.1.4

**Share of Foreign Banks in Total Assets of the Banking Sector across Countries***




** data across countries for 2006, 2007*
*Source: national and other sources, FSA*

## 5.2 Credit Risks

***The consequences of the world financial crisis exposed weaknesses of domestic STB and brought to light the problems, especially with regard to quality of assets which were repeatedly indicated by regulatory institutions.***

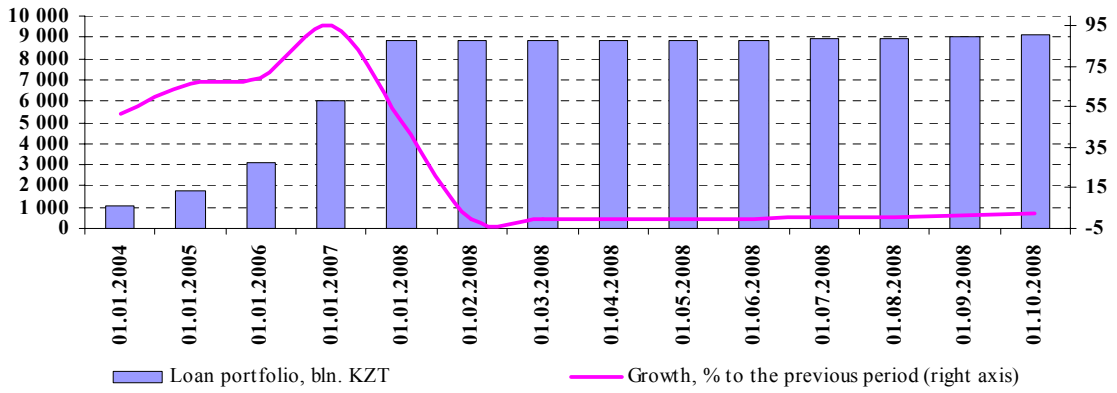
***As it was expected, deteriorating quality of the loan portfolio as well as liquidity deficit are the key factors affecting the stable functioning and future developments of the banking sector.***

Global instability caused slowdown of growth rates of key indicators of the banking sector, especially its loan portfolio which has demonstrated rapid growth rates in recent years (2005 – 68.9%, 2006 – 95.7%, and 2007 – 48.0%). Thus, from October 1, 2007 to October 1, 2008 loan portfolio of the banks was almost at the level of 2007 having increased only by 4.5% (Figure 5.2.1). At the same time, the volumes of crediting decreased considerably in real estate and construction sectors, as well as crediting of small entrepreneurship entities which functioned in the conditions of stability due to banking resources and were the main factors of economic growth in the last years (Figure 5.2.2). Such situation affected the economic activity and, consequently, the ability to service liabilities to STB. In addition, one of the factors that affected the payment discipline of borrowers is the change in prices in real estate market together with revision of credit terms by banks in the background of decrease of population's real income as a result of increasing inflationary pressure this year.

High growth rates of lending 'hide' credits quality as borrowers have opportunities for re-financing. However, in the current conditions an essential decrease in credits to the economy disclosed a real quality of loan portfolio of STB.

Figure 5.2.1

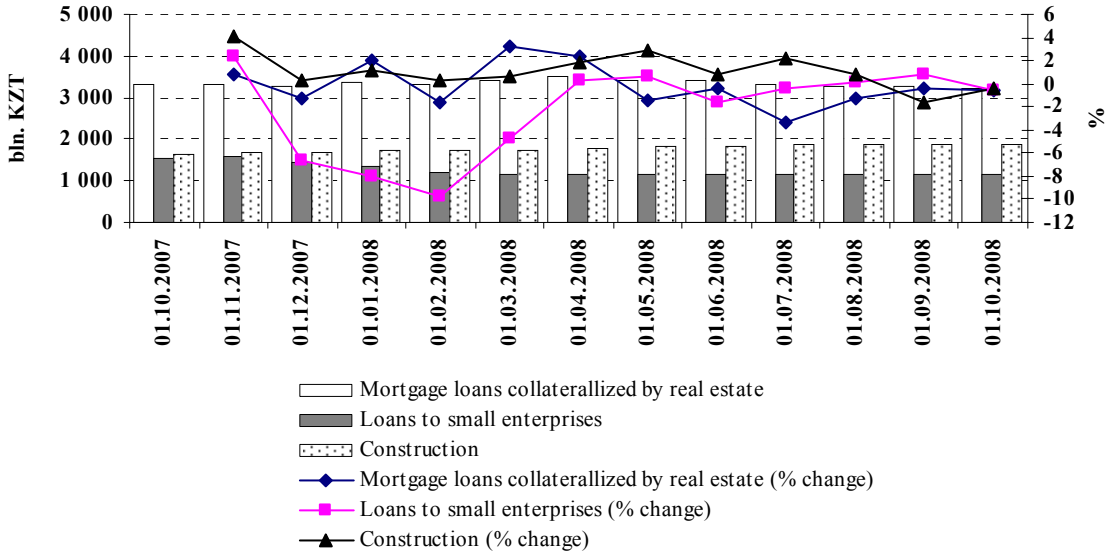
**Loan Portfolio (bln. KZT)**




*Source: FSA*

**Figure 5.2.2**

**Loans and its Growth Rates in Particular Segments**




*Source: FSA*

***Although the indicators of loan portfolio quality assessment do not exceed critical values, they are characterized by persistent growth in dynamics, threatening to the banking sector stability. These trends show that the situation will deteriorate. As loan portfolio quality worsens the level of reserves increases to absorb potential losses, however its adequacy is doubtful.***

All concerns about high growth rates of assets, as a factor of risk, threatening to their quality in case of economy slowdown, were realized under the pressure of global turbulence on domestic economy. Slowdown of the credit activity of the Kazakhstani banks was accompanied by intensive deterioration of the loan portfolio quality.

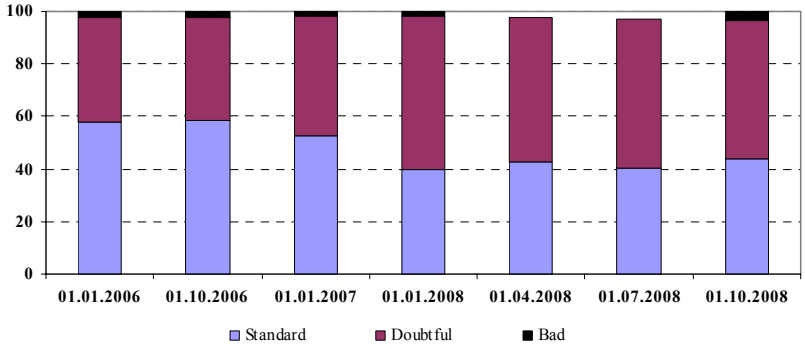
Even if the share of standard credits in loan portfolio of the banks increased to 44.0%, the share of bad credits increased by 2.7 times from 1.2% as of October 1, 2007 to 3.3% as of October 1, 2008 which was the highest value last 4 years amounting KZT 300.1 bln. (Figures 5.2.3, 5.2.4).

Sustainable migration of credits to the categories of worse quality loans is observed in the structure of doubtful loans. Thus, if doubtful loans 1 decrease by 27.4% and doubtful loans 2 decrease by 26.9% in the structure of doubtful loans, there is observed an increase in doubtful loans 3 (by 2.7 times), doubtful loans 4 (by 2.4 times) and doubtful loans 5 (by 4.3 times) (Figure 5.2.5).

An increase in overdue indebtedness by 3 times and its ratio to the loan portfolio at 2.9% versus 1.0% as of October 1, 2007 indicates deteriorating quality of loan portfolio (Figure 5.2.6). At the same time, individuals' loans are traditionally characterized by worst quality, and overdue individuals' indebtedness has increased more than by 3.5 times since October 1, 2007, whereas the total overdue indebtedness has increased by 3 times during the same period (Figure 5.2.7).

**Figure 5.2.3**

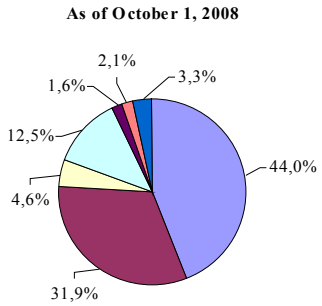
**Aggregate Loan Portfolio Quality (% to total)**




*Source: FSA*

**Figure 5.2.4**

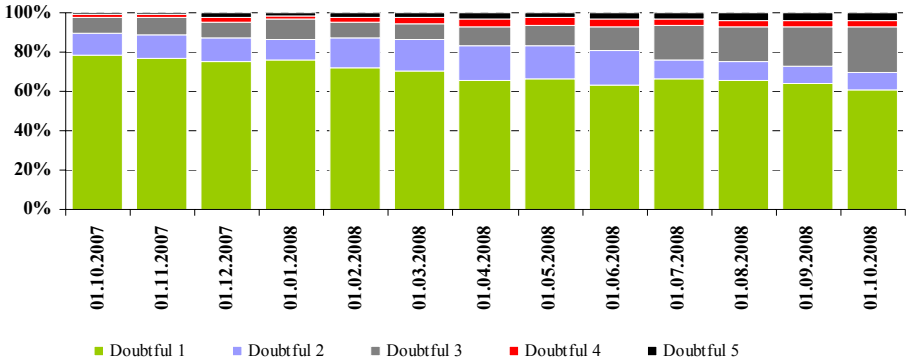
**Specified Data on Loan Portfolio Quality**




*Source: FSA*

**Figure 5.2.5**

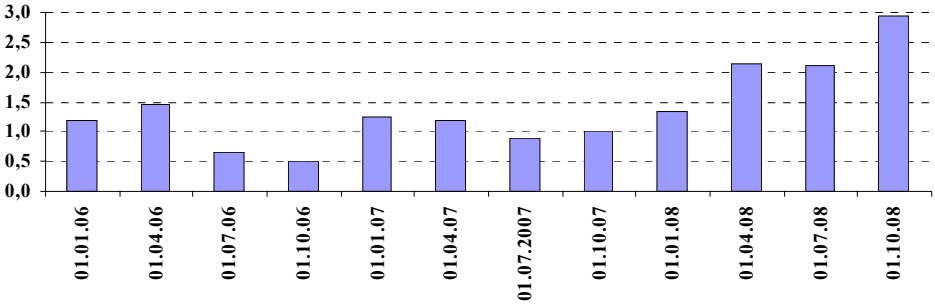
**Dynamics of Doubtful Loans Categories (% to total)**




*Source: FSA*

**Figure 5.2.6**

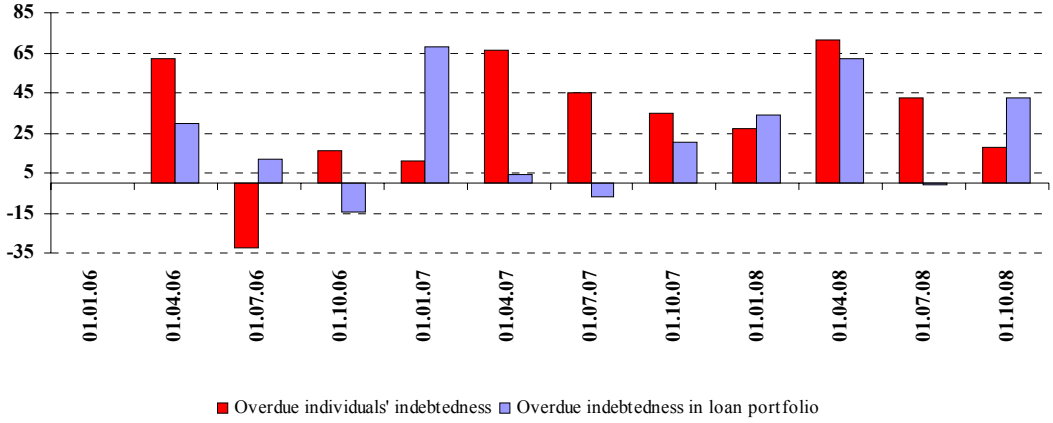
**Share of Overdue Indebtedness in Banks' Loan Portfolio (%)**




*Source: FSA*

**Figure 5.2.7**

**Growth Rates of Overdue Indebtedness in Loan Portfolio comparing to Growth Rates of Overdue Individuals' Indebtedness (%)**




*Source: FSA*

Non-performing loans widely used in international practice to assess loans quality were growing steadily during the whole observed period in the background of slowdown of credits growth.

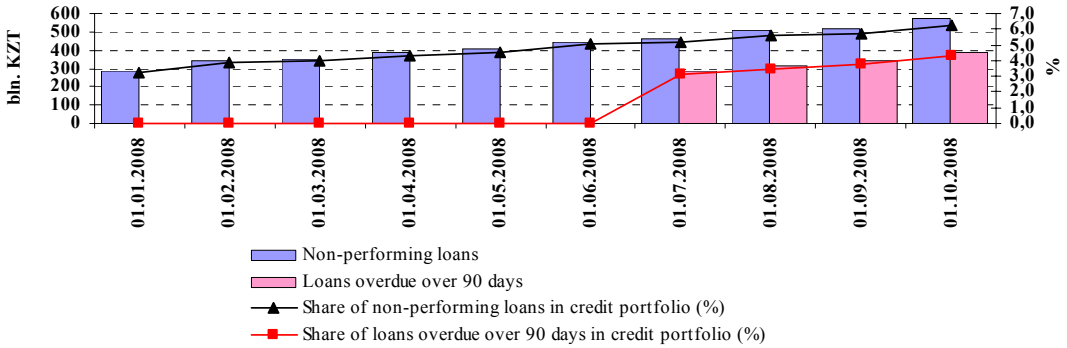
Non-performing loans calculated according to FSA methodology[44] have increased almost by 3 times since October, 2007 and have amounted to KZT 570.0 bln. in absolute terms. Their share in loan portfolio of the banking sector increased from 2.3% to 6.3%. Share of loans with overdue payments over 90 days in loan portfolio was 4.3% as of October 1, 2008 and increased in absolute terms by 38% during three months (from the date of implemented reporting – July 1, 2008).

Non-performing loans indicator recommended by the international practice was 1.5 times lower than the indicator calculated according to the FSA methodology. At the same time, the values of non-performing loans calculated according to the both methodologies are lower than the critical level of 10% which is recommended by the same international practice (Figure 5.2.8). However, in comparison with other countries the level of non-performing loans in the Kazakhstani banking system is higher than their level in some countries of Central and South-Eastern Europe and is equal to the level in the countries of South-Eastern Asia (Figure 5.2.9).

At the same time, under continuing dynamics of non-performing loans (FSA methodology) and loan portfolio observed from the beginning of the year the ratio of non-performing loans to loan portfolio can reach 7.5-8% by the end of 2008.

**Figure 5.2.8**

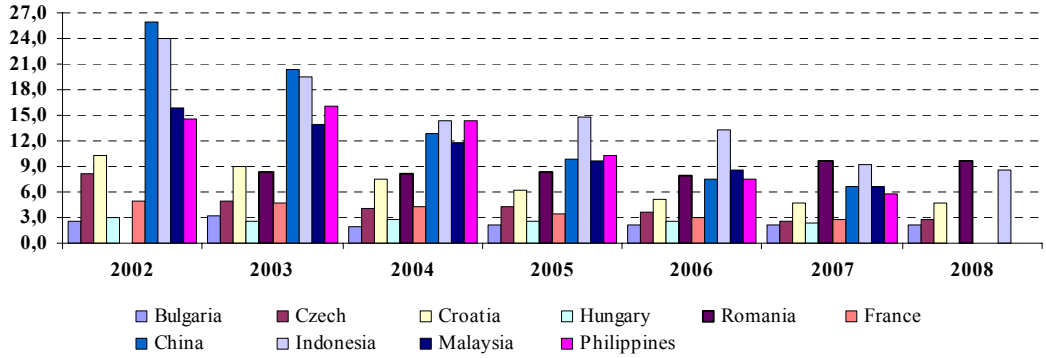
**Non-Performing Loans Evaluated According to the International Practice and FSA Methodology**




*Source: FSA*

**Figure 5.2.9**

**Loan Portfolio Quality across Countries (non-performing loans to total loans, %)**




*Source: IMF (GFSR, 2008)*

[44] In accordance with the international practice (IMF, IAS, etc.), the main criteria of loans to be recorded as non-performing loans (NPL) is overdue payments over 90 days. However, it is necessary to take into consideration that aggregate overdue loans are volatile because loans can be restructured or prolonged.

Taking into consideration this fact, FSA calculates non-performing loans as doubtful 5 and bad loans (including provisions on homogeneous loans), thereby guiding not only by the existence of an overdue indebtedness but additional criteria used in loan classification (according to the requirements of existing classification, if there is a loan prolongation or write offs, the category of this loan worsens).

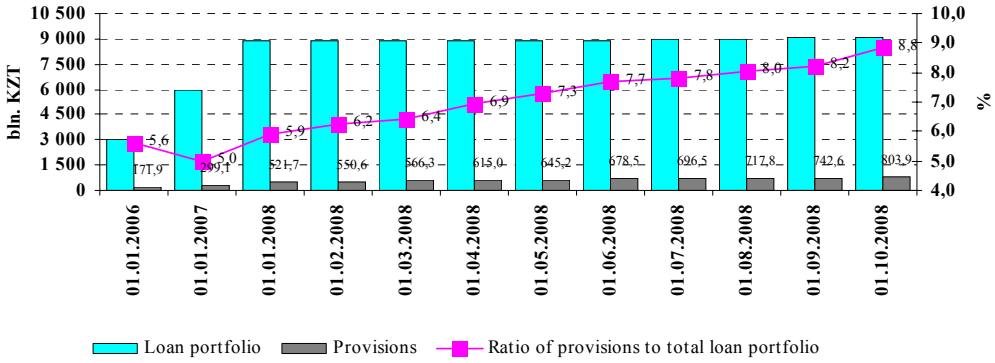
In response to the decrease in loan portfolio quality, the level of reserves increases to absorb possible credit losses. Since October last year provisions have risen in absolute value by 76.8% to KZT 803.9 bln., or 8.8% of loan portfolio (Figure 5.2.10). However, the growth rates of provisions are not comparable with growth rates of non-performing loans, and it is evidenced by gradual decrease in coverage both non-performing loans according to the FSA methodology and overdue loans over 90 days with provisions. If the growth dynamics of non-performing loans continues, there is a risk to lose an ability of STB to absorb potential losses on credits (Figure 5.2.11). At the same time, in comparison with other countries a degree of coverage with provisions is higher than the level in the countries of South-Eastern Europe and South-Eastern Asia (Figure 5.2.12).

Moreover, in the background of low growth rates of loan portfolio and accelerated growth rates of provisions during observed period, coverage of loan portfolio with both collateral and provisions has slightly increased (Figure 5.2.13).

Deterioration of loan portfolio quality is also shown by slight but sustainable growth of credits written off-balance in the conditions of crediting slowdown (Figure 5.2.14).

**Figure 5.2.10**

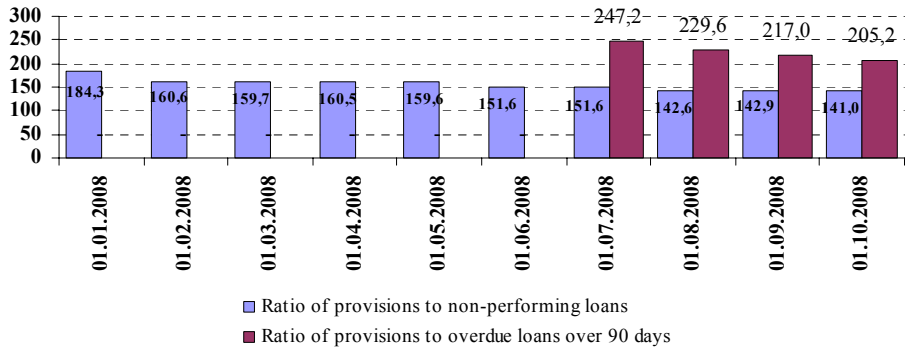
**Provisions on Loan Portfolio**




*Source: FSA*

**Figure 5.2.11**

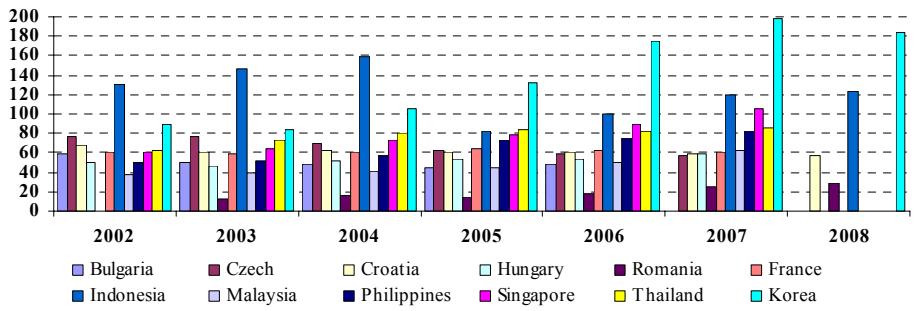
**Coverage of Non-Performing Loans and Overdue Loans over 90 days with Provisions (%)**




*Source: FSA*

**Figure 5.2.12**

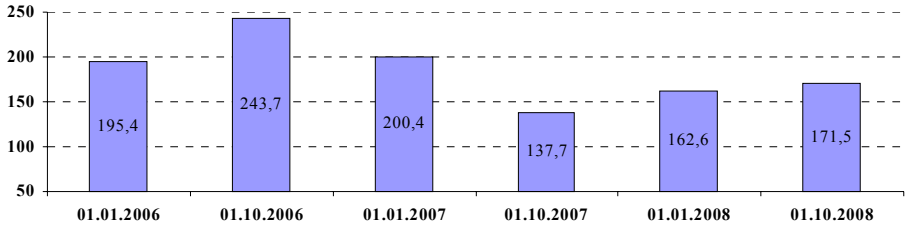
**Coverage of Non-Performing Loans across Countries (provisions to non-performing loans, %)**




*Source: IMF (GFSR, 2008)*

**Figure 5.2.13**

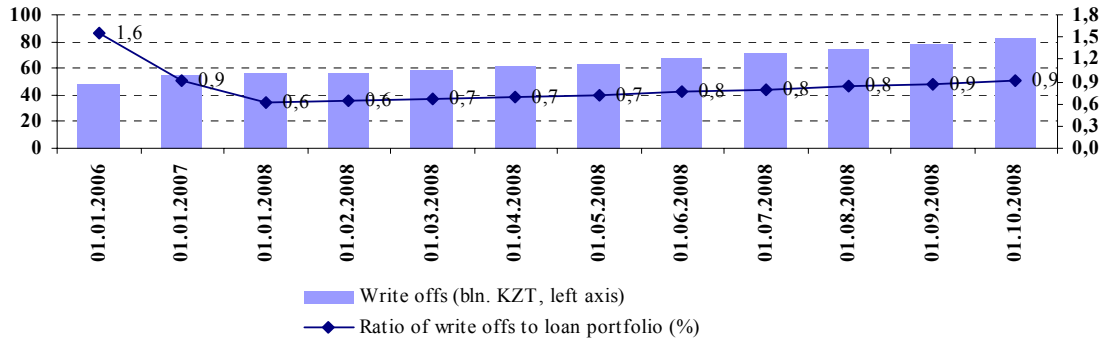
**Coverage of Loan Portfolio with Collateral and Provisions* (%)**




** ratio of aggregated provisions and collateral value to the STB loan portfolio*
*Source: FSA*

**Figure 5.2.14**

**Write offs to Loan Portfolio (%)**




*Source: FSA*

***Overall instability and high concentration of credit risk in the most sensitive and vulnerable segments of crediting exposed some weaknesses in the risk management of Kazakhstani STB.***

The economy growth that has been observed in recent years, as well as improvement of the population welfare facilitated increase in consumer demand for credit resources. The improvement of technologies of servicing the population and introduction of the newest banking products for individuals caused a rapid growth of retail crediting, and population's demand for housing caused increase in mortgage loans and credits to construction sector. As a result, it facilitated increase in lending by STB these segments which became the most sensitive to the consequences of global instability.

Share of consumer credits in loan portfolio of banks was characterized by stable dynamics during the observed period and remained almost on the level of corresponding period of the last year, and the share of loans collateralized by real estate decreased by 2.4 percentage points and amounted 35.6%. It should be noted that in the banking system of Kazakhstan the share of loans collateralized by real estate in loan portfolio of STB is in the range of 0.4% to 98% which is unacceptable from the point of view of risk management in spite of the STB sizes. The loans provided to the construction sector were 26.7% in the structure of crediting the sectors of economy, and did not exceed 30% during the observed period (Figure 5.2.15).

General situation on the world markets facilitated essential 'cooling-down' of the crediting market. Such trends are largely caused by overall situation in the economy and in the banking system and essential tightening of lending requirements by banks, as well as by more weighted approach to the selection of borrowers and also by uncertainty in the real estate market of Kazakhstan.

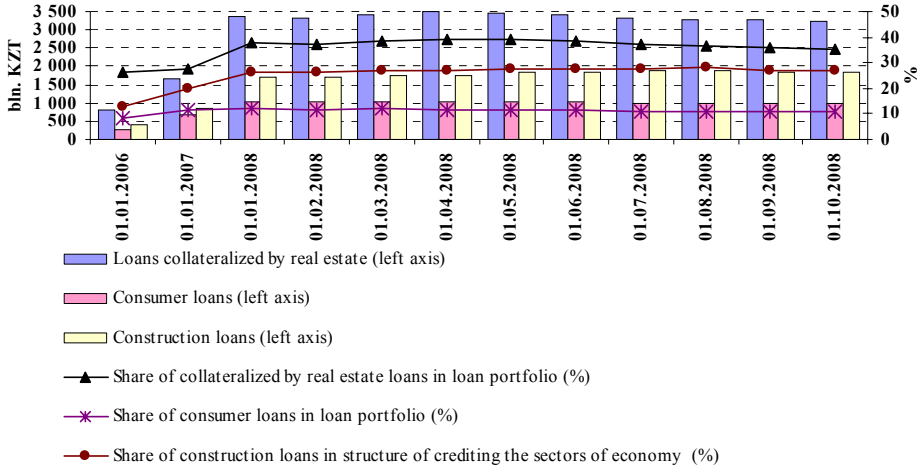
Along with the construction sector, trade and industry were the most attractive sectors, and their share in the structure of crediting the sectors of economy was 28.7% and 13.0% respectively as of October 1, 2008.

More essential decrease in loans quality of these sectors relative to others indicates higher sensitivity of these sectors to the arisen shocks. Since the beginning of the current year, the share of doubtful loans in the structure of loans provided to construction, trade and industry has increased by

1.5 to 2.3 times, and it has not exceeded 1.6 times in agriculture, transport and communications (Table 5.2.1). This fact is generally confirmed by a considerable increase in ratio of provisions to loan portfolio of each sector with regard to trade, construction and industry (Figure 5.2.16).

**Figure 5.2.15**

**Concentration of Risks**




*Source: FSA*

**Table 5.2.1**

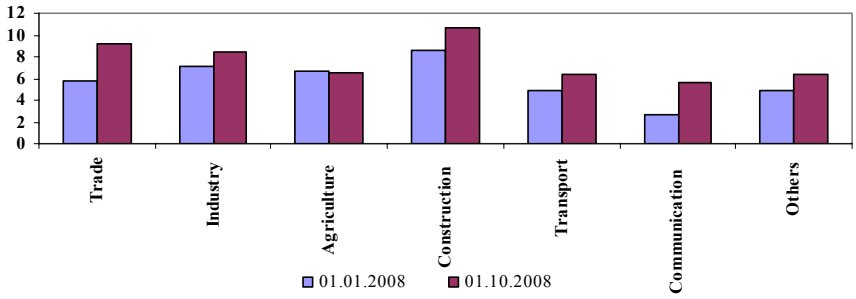
**Structure of Classified Loans**
**(% to total)**

| Classification by sectors of economy | Standard | | Doubtful | | Bad | | Total |
|---|---|---|---|---|---|---|---|
| | Jan 1, 2008 | Oct 1, 2008 | Jan 1, 2008 | Oct 1, 2008 | Jan 1, 2008 | Oct 1, 2008 | |
| Trade | 39,9 | 44,1 | 58,6 | 53,1 | 1,5 | 2,8 | 100 |
| Industry | 51,0 | 51,8 | 46,3 | 44,1 | 2,7 | 4,1 | 100 |
| Agriculture | 44,7 | 55,2 | 52,8 | 41,3 | 2,5 | 3,5 | 100 |
| Construction | 25,2 | 36,8 | 73,2 | 59,5 | 1,6 | 3,7 | 100 |
| Transport | 71,4 | 68,3 | 26,3 | 28,0 | 2,3 | 3,7 | 100 |
| Communication | 54,1 | 39,5 | 45,5 | 60,4 | 0,4 | 0,1 | 100 |
| Other | 43,8 | 54,4 | 55,5 | 43,9 | 0,7 | 1,7 | 100 |
| **Total in the economy** | **39,0** | **46,7** | **59,4** | **50,3** | **1,6** | **3,0** | **100** |

*Source: FSA*

**Figure 5.2.16**

**Ratio of Provisions to Loan Portfolio per Each Sector of Economy (%)**




*Source: FSA*

***High risks of non-repayment of consumer credits were disclosed in the conditions of reduction of lending volumes, deceleration of economic growth and decrease in the population's income which shows high sensitivity to the shocks disclosed in the economy and indicates high degree of risk in this segment. STB should thoroughly assess solvency of borrowers and risks related to retail crediting. At the same time, one of the positive trends of the last years is an increase in the share of mortgage loans where ratio of loan to collateral value does not exceed 70%.***

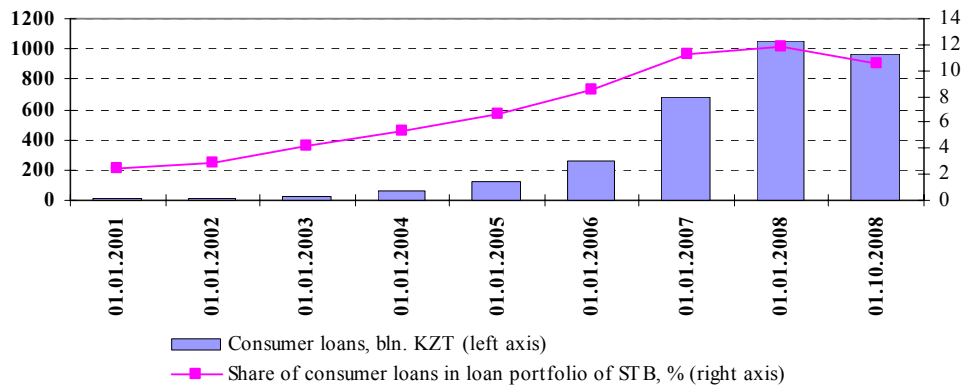
Along with deceleration of growth rates of total lending, the credit activity in consumer crediting segment also decreased, while there was twofold increase in consumer credits from 2005 to 2008 (Figure 5.2.17).

Quality of credits to individuals for consumption purposes essentially deteriorated. Analyzing the quality of consumer credits, it should be noted that it largely depends on the condition of economy because such loans are usually provided for a short term but at the same time under relatively preferable conditions (for example, without income confirmation). While the crediting terms become more toughen and the economic growth slows down, consumer credits quality show that revenues of borrowers are exposed to high vulnerability. In spite of increase in standard and doubtful loans, the share of bad loans essentially increased (Figure 5.2.18).

The dynamics of share of loans in aggregate portfolio of mortgage housing loans where the ratio of loan to collateral value does not exceed 70% is characterized by stable growth. On the one hand, it is caused by tightened requirements by authorized agency to STB capitalization with regard to real estate operations financing, and by more conservative approaches of STB to assessment of the risks related to this segment of crediting (Figure 5.2.19).

**Figure 5.2.17**

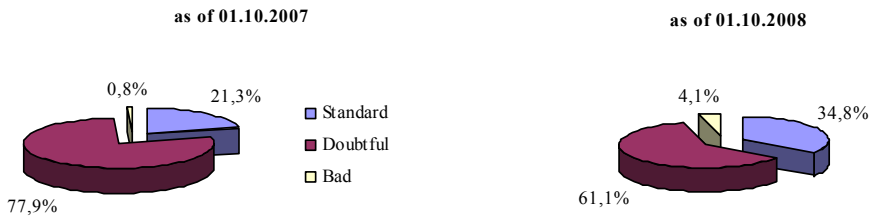
**Consumer Loans**




*Source: FSA*

**Figure 5.2.18**

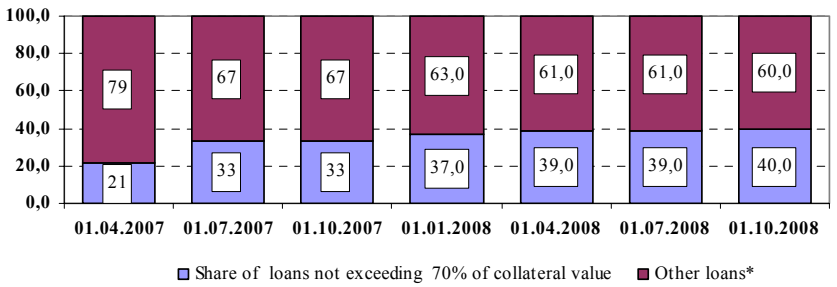
**Quality of Consumer Loan Portfolio, (%)**




*Source: FSA*

**Figure 5.2.19**

**Mortgage Loans Structure by Loan-to-Value Ratio, (%)**




** Other loans contain loans exceeding 70% of collateral value, including terms specified by prudential regulations (loans collateralized by insurance policy and guarantee, etc.)*

*Source: FSA*

***The level of dollarization of the loan portfolio of the Kazakhstani banking system remained stable in 2008.***

***In spite of slow down in growth rates of crediting, Kazakhstani STB continue to pursue strategy of entering the neighboring markets, and in the conditions of uncertainty existing in all world markets it may result in losses if there is a large discrepancy in cyclic development of the economies of countries-partners.***

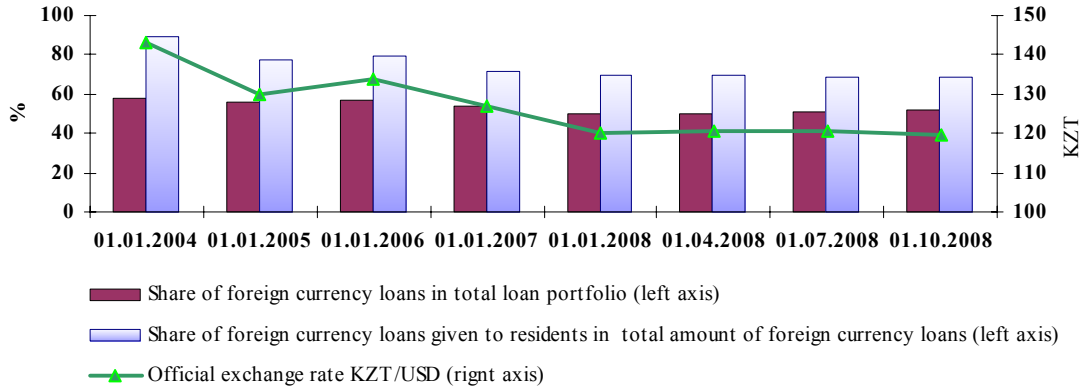
Over the last years, relatively stable dynamics of concentration of loans denominated in foreign currency in the loan portfolio of STB of Kazakhstan has remained. Comparing to the beginning of 2007, the share of loans in foreign currency in loan portfolio of STB of Kazakhstan decreased to 50%. As before, large part of such loans was provided to domestic population. However, from the beginning of 2007, there is observed a gradual decrease in the domestic demand for loans in foreign currency. It can be seen from decrease in share of loans in foreign currency to residents in total loans in foreign currency from 71.1% to 68.7% as of October 1, 2008 (Figure 5.2.20). Analyzing the quality of loans in foreign currency, it should be noted that since last October the overdue loans in foreign currency have increased by 2.4 times against a threefold increase in total loan portfolio. At the same time, with regard to loans in foreign currency to individuals, overdue indebtedness increased by more than 5 times against 3.5 on all loans to individuals.

Expansion of the Kazakhstani STB to the neighboring markets that started at the time of rapid growth, continued during the entire period of the global financial instability. The most attractive country for assets placing, in the opinion of Kazakhstani STB, remains the Russian Federation which has 25.8% in the structure of non-residents lending. Comparing to the last year, although share of loans to Russian Federation slightly decreased in the structure of non-residents lending, it increased by 26% in absolute terms from the beginning of the current year. In addition to Russia, the British Virgin Islands, Luxemburg, Cyprus, USA, Turkey are the main partner-countries (Figure 5.2.21).

Increase in cross-border risks of the banking system of Kazakhstan is also shown by increase in claims to non-residents in aggregate assets of Kazakhstani STB (Figure 5.2.22), as well as increase in share of loans to non-residents both in aggregate claims to non-residents, and in loan portfolio of the banking sector (Figure 5.2.23).

**Figure 5.2.20**

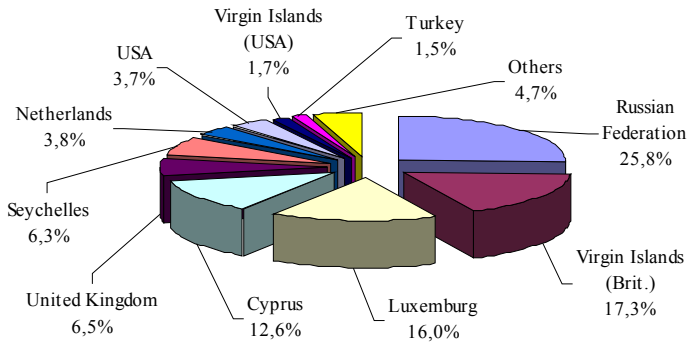
**Foreign Currency Lending**




*Source: FSA, NBRK*

**Figure 5.2.21**

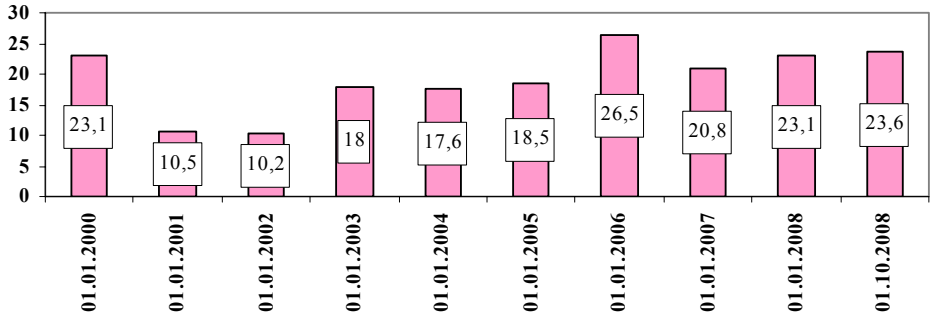
**Distribution of Loans to Non-Residents by Country as of October 1, 2008 (%)**




*Source: FSA*

**Figure 5.2.22**

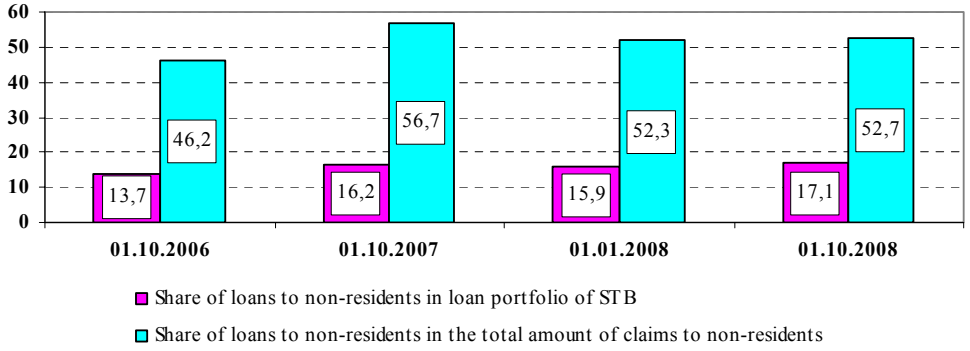
**Share of Claims to Non-Residents in Total Assets (%)**




*Source: FSA*

**Figure 5.2.23**

**Lending to Non-Residents (%)**




*Source: FSA*

## 5.3 Market Risks

***In the conditions of instability, along with the credit risk, market risks also become very important. The GAP-analysis shows the presence of liquidity deficit in the short- and medium-term perspective, including foreign currency liquidity. Nevertheless, in general, market risks can be controlled and managed.***

Shares of currency assets and liabilities of the banking sector in its aggregate assets and liabilities demonstrate the tendency of consistent reduction. As of October 1, 2008, the foreign currency assets were 51.7% in aggregate assets, foreign currency liabilities were 58.2% in aggregate liabilities (as of October 1, 2007 – 54.3% and 59.2%, respectively). The difference between these

ratios was minus 6.5 percentage points, decreasing from the beginning of the current year (an average amount of difference for the given period is 7.9 percentage points). At the same time, a considerable difference between these indicators was in the second quarter of 2008 which is mostly caused by an increase in liabilities in foreign currency with unchanged level of bank assets (Figure 5.3.1).

Although there is a gap in foreign currency components of assets and liabilities of STB, during the whole period the coefficients of currency liquidity were maintained with surplus that demonstrates an adequate perception of potential risks (Figure 5.3.2).

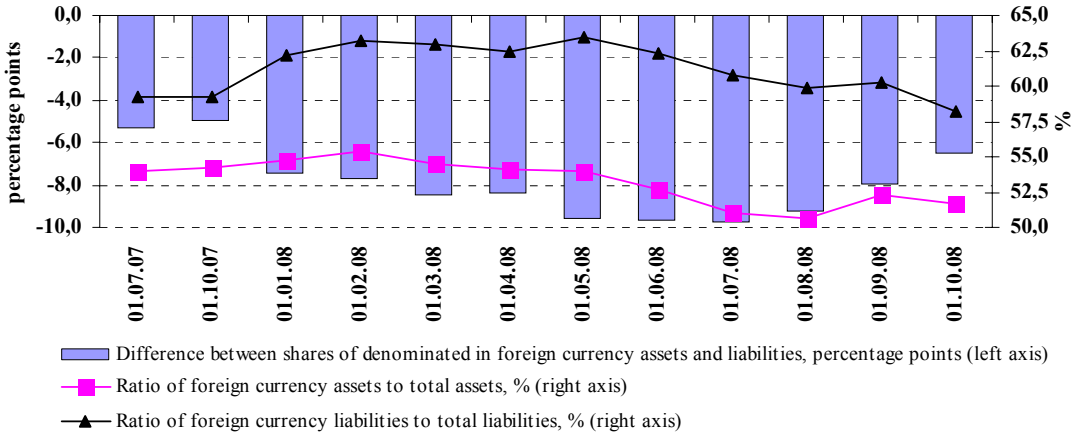
It should be noted decrease in ratio of net-currency position to own capital which has been recently amounted to the level much lower than the requirements (Figure 5.3.3).

Banks maintain an essential level of ratio of currency assets to currency liabilities with the terms 'on demand' and up to 1 month, and this indicates that currency risk is controlled and managed. At the same time there is a need in currency resources in the range from 1 to 6 months (Figure 5.3.4).

As for the analysis of equivalence of the banks' aggregate assets and liabilities by remaining maturity, deficit of resources remains in the short-term perspective (up to 1 year) (Figure 5.3.5). As of October 1, 2008, the assets up to 1 month exceeded by 2 time the liabilities with the same term. However, with the terms from 1 to 3 months, this indicator amounted 0.5 versus 1.0 as of the same date of the last year (Table 5.3.1).

**Figure 5.3.1**

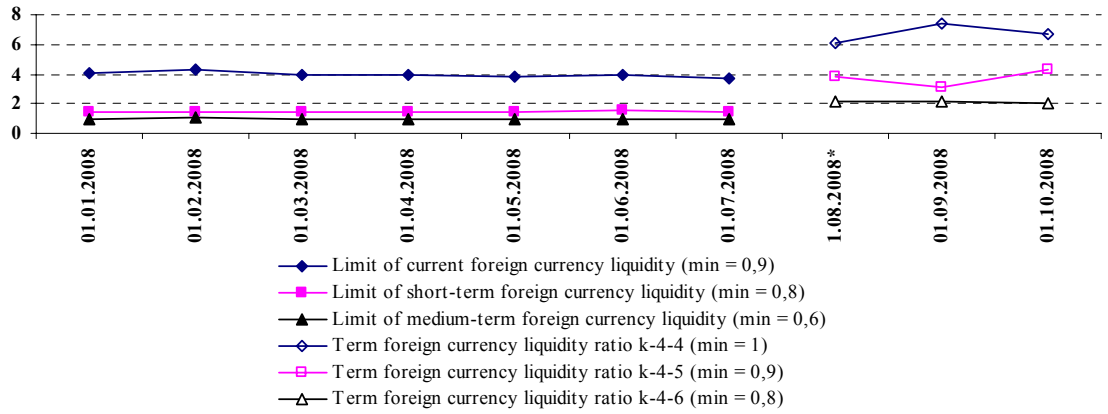
**Share of Assets and Liabilities Denominated in Foreign Currency in Total Assets and Liabilities of the Banking Sector**




*Source: FSA*

**Figure 5.3.2**

**Term Foreign Currency Liquidity Ratios**

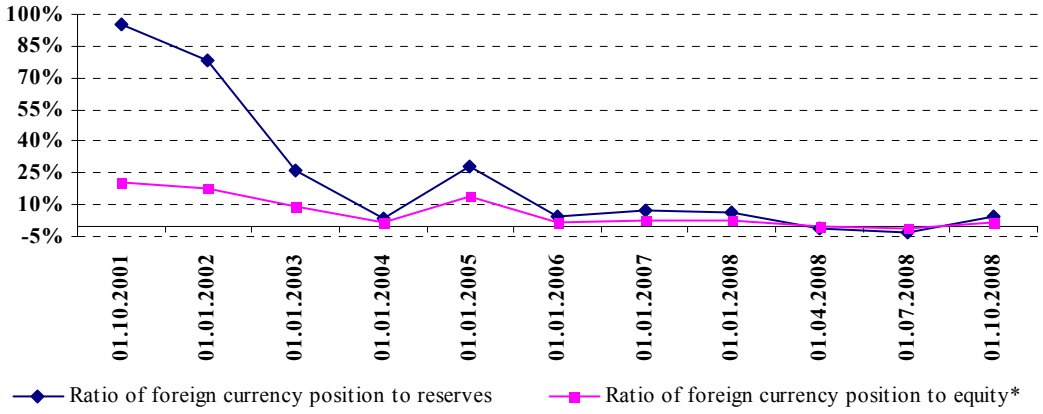



** Since July 1, 2008 it has been introduced new term and foreign currency liquidity ratios up to 7 days, and it has been changed the methodology of term and term foreign currency liquidity ratios up to 30 and 90 days.*

*Source: FSA*

**Figure 5.3.3**

**Net Foreign Currency Position of STB (%)**

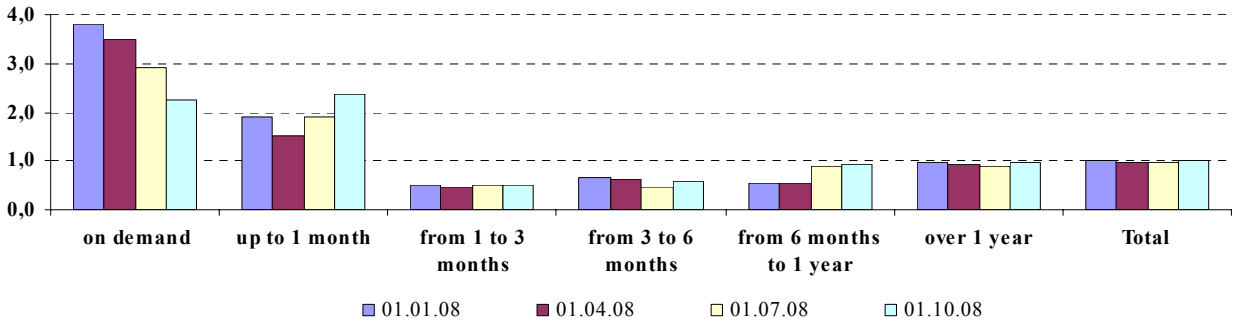



**Regulatory value is 25% of own capital*

*Source: FSA*

**Figure 5.3.4**

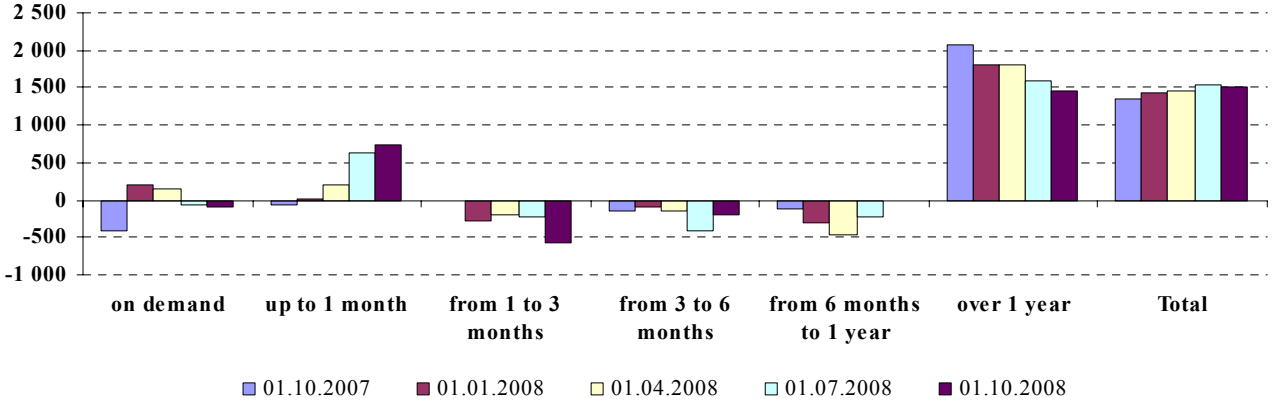
**Ratio of Foreign Currency Assets to Foreign Currency Liabilities**




*Source: FSA*

**Figure 5.3.5**

**Gap between Assets and Liabilities by Remaining Maturity of STB (bln. KZT)**




*Source: FSA*

**Table 5.3.1**

**Assets and Liabilities of STB by Remaining Maturity as of October 1, 2008 (bln. KZT)**

| Period | Assets | Liabilities | Gap between assets and liabilities | Cumulative GAP |
|---|---|---|---|---|
| On demand | 1,378.2 | 1,479.4 | -101.2 | -101.2 |
| Up to 1 month | 1,583.0 | 852.7 | 730.3 | 629.2 |
| From 1 to 3 months | 666.3 | 1,234.7 | -568.4 | 60.8 |
| From 3 months to 6 months | 602.4 | 809.3 | -207.0 | -146.2 |
| From 6 months to 1 year | 1,065.1 | 1,066.2 | -1.1 | -147.3 |
| More than 1 year | 6,817.3 | 5,371.4 | 1,445.9 | 1,298.6 |
| Total | 12,500.3 | 10,980.7 | 1,519.6 | 1,519.6 |

*Source: FSA*

**Box 5**

## Stress Testing as Instrument of Risk Management

In order to assess sustainability of the banking system FSA makes a sensitivity analysis of unfavorable factors which impact on the banking sector. Such factors as exchange rates, prices for real estate and deterioration of the loan portfolio quality are taken into consideration.

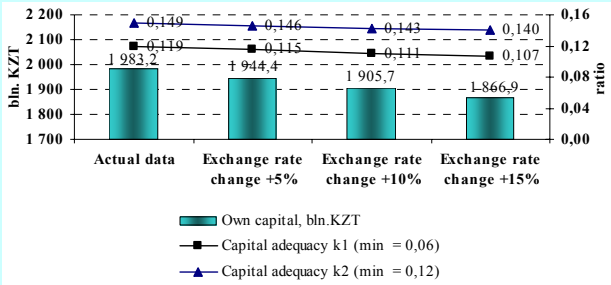
### Scenario of Exchange Rate Change

The share of claims and liabilities in USD are the largest in the structure of claims and liabilities in foreign currency of STB. As of October 1, 2008, this indicator was 82%. In this connection, stress testing was carried out on the basis of open currency position on USD.

The scenarios of increase in exchange rate of KZT/USD by 5%, 10% and 15% were considered. Thus, if as of October 1, 2008 exchange rate was 119.84 KZT/USD, then the scenarios imply its increase to 125.8; 131.8; 137.8. Change in credit risk caused increase in provisions by 20% from the difference between actual total assets and calculated total assets.

*Stress testing results indicate that under increase in exchange rate KZT/USD by 5% – 15% the required levels of own capital adequacy will be fulfilled by all banks. The ratio of currency net-position to own capital of STB will remain on an acceptable level – 1.9% (Figure 1).*

**Figure 1. Stress Testing as of October 1, 2008**
**(increase in exchange rate of KZT per USD)**

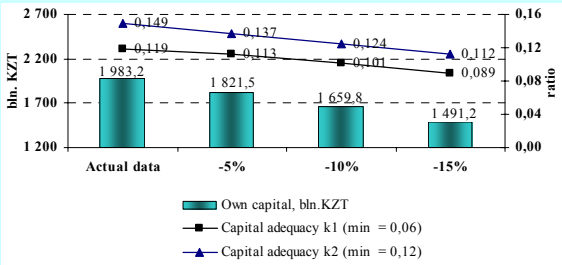



### Scenario of Real Estate Price Change

Depreciation of the real estate by 5-15% is the scenario for the assessment of the banking sector's financial condition. In calculation, mortgage loans (collateralized by real estate) at 35.6% in aggregate loan portfolio of STB (as of October 1, 2008) were considered. Thus, if real estate on mortgage loans depreciates by a certain percent, STB will have to form additional provisions for the amount of depreciation.

*As a result, devaluation of real estate by 5-15% on mortgage loans will have an essential impact on the financial condition of the banking sector. Violations of the own capital adequacy requirements under depreciation of real estate by 10% is noted in 5 STB, depreciation by 15% – in 7 STB (Figure 2).*

**Figure 2. Stress Testing as of October 1, 2008**
**(real estate depreciation)**




### Scenario of Deterioration of the Loan Portfolio Quality by Sectors of Economy.

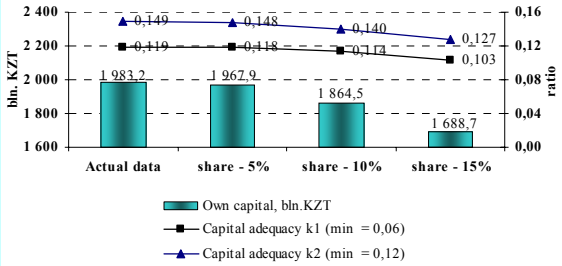
Based on the structure of credits to the economy, as well as the share of bad loans in each sector of the economy, stress testing was conducted in construction, trade and industry. Under stress testing the share of provisions in credits of a particular sector of the economy increased to 5–15%. At the same time, the most considerable influence on change of own capital of the banking sector is made by deterioration of the loans quality in trade.

*It should be noted that deterioration of loan portfolio in each sector will not considerably affect the financial condition of STB, and the adequacy requirements of own capital will be fulfilled by STB.*

*At the same time, when considering the scenario of an increase in share of provisions in loan portfolio in the sectors of economy to 5-15 percentage points, two STB will not fulfill requirements of own capital adequacy*

*(Figure 3).*

**Figure 3. Stress Testing as of October 1, 2008**
**(loans quality deterioration in construction, trade and industry)**




## 5.4 Risks of Liquidity and Sources of STB Funding

***2008 has become comparatively difficult with regard to opportunities for refinancing of external borrowings of the banking sector. Nevertheless, the supportive measures of the National Bank of Kazakhstan along with the Kazakhstani banking policy contributed to some mitigation of liquidity and refinancing risks in the conditions of instability. The level of external indebtedness of the banking sector remains high. The narrowness of the domestic market does not allow the banks to settle the problems with liquidity.***

***Liquidity and refinancing risks in the conditions of limited access to external capital markets and pressure on assets quality required additional incentives in the framework of economic policy.***

The liquidity level in the banking system is on an acceptable level. The liquidity ratios before amendments were on an adequate level with a moderate downward trend. The amendments made by the supervisory agency and aimed to regulate the liquidity level up to 7, 30 and 90 days stimulated STB to maintain an adequate level of liquidity for a more short-term perspective. It is proven by essential exceeding of the changed liquidity ratios since August 2008 (Figure 5.4.1).

In general, share of highly liquid assets in aggregate assets of the banking system was between 13.7% and 15.8 % during the current year that is caused by sustainability of liquid assets in the conditions of insignificant growth of the banking assets. In other countries the level of liquid assets in aggregate assets essentially exceeds the value of Kazakhstan[45].

Value of the funding volatility ratio is inclined to decrease which is caused mostly by comparatively high growth rates of the deposit base comparing to the bank assets and decreasing of external borrowings as a source of financing. Nevertheless, its value continues to be rather high, reflecting thereby inadequate level of deposit base to be used as a main source of funding of Kazakhstani STB (Figure 5.4.2).

In the structure of STB distribution by interval groups of the liquid assets level since last October the number of banks with relatively high level of liquidity risk (less than 15% of the aggregate assets) has essentially increased. At the same time, a number of banks that have a share of liquid assets in the aggregate assets in the range of 15 to 30% is constant (Figure 5.4.3).

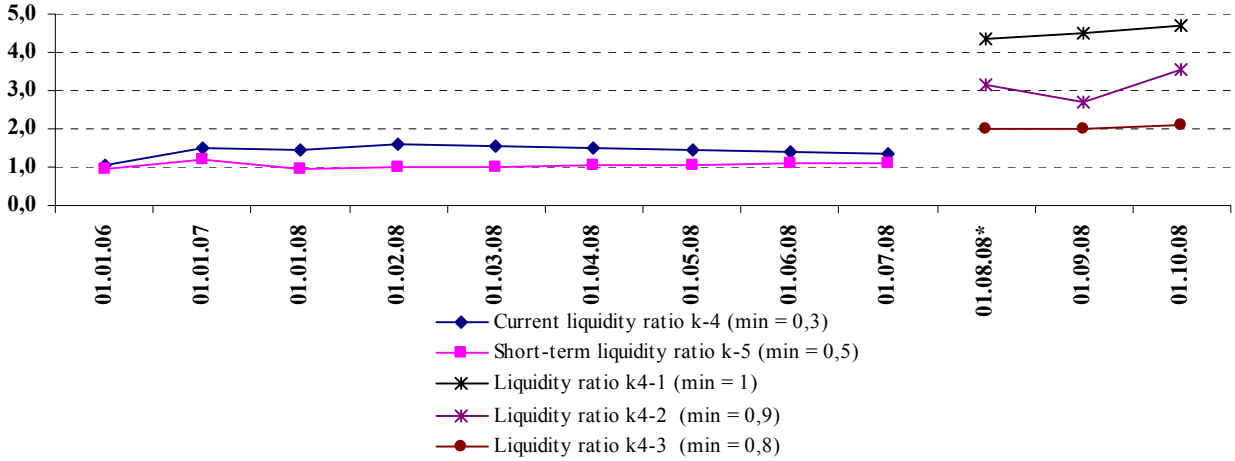
In the structure of high-liquid assets of STB, no essential changes have been noticed since the beginning of the current year. However, over the period the share of funds on correspondent accounts and deposits in NBRK has slightly increased, while the share of government bonds in aggregate high-liquid assets has decreased (Figure 5.4.4).

Liquid assets completely cover the volume of demand liabilities. At the same time, with regard to short-term liabilities of the banks with remaining maturity less than 1 year and demand liabilities, liquid assets are capable to cover only the third part. It indicates the liquidity risk and refinancing risks in close future (Figure 5.4.5).

[45] Data for 2007: national sources, rating agencies.

**Figure 5.4.1**

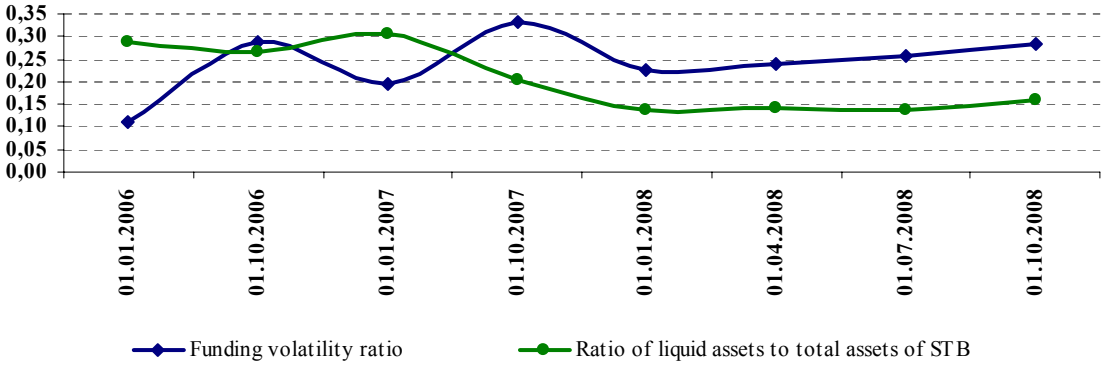
**Dynamics of Liquidity Ratios**




** since July 1, 2008 new foreign currency liquidity ratios have been introduced for STB*
*Source: FSA*

**Figure 5.4.2**

**Share of Liquid Assets and Funding Volatility Ratio***



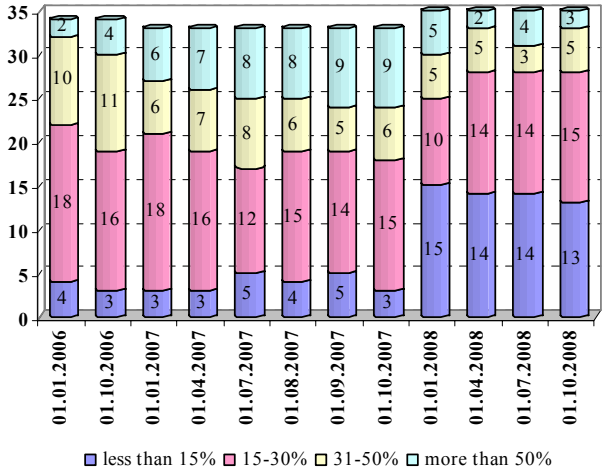

**Liquid assets include money, demand deposits and other short-term assets, securities available for sale and transactions of reverse REPO with securities.*

***Funding volatility ratio is calculated as the ratio of difference between deposit base and liquid assets to the difference between total assets and liquid assets.*

*Source: FSA*

**Figure 5.4.3**

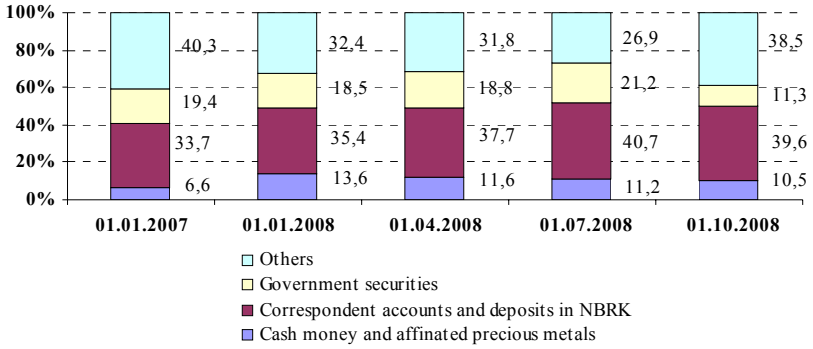
**Distribution of Banks by Liquidity Level***
**(number of banks)**




** share of liquid assets in total assets of STB, %*
*Source: FSA*

**Figure 5.4.4**

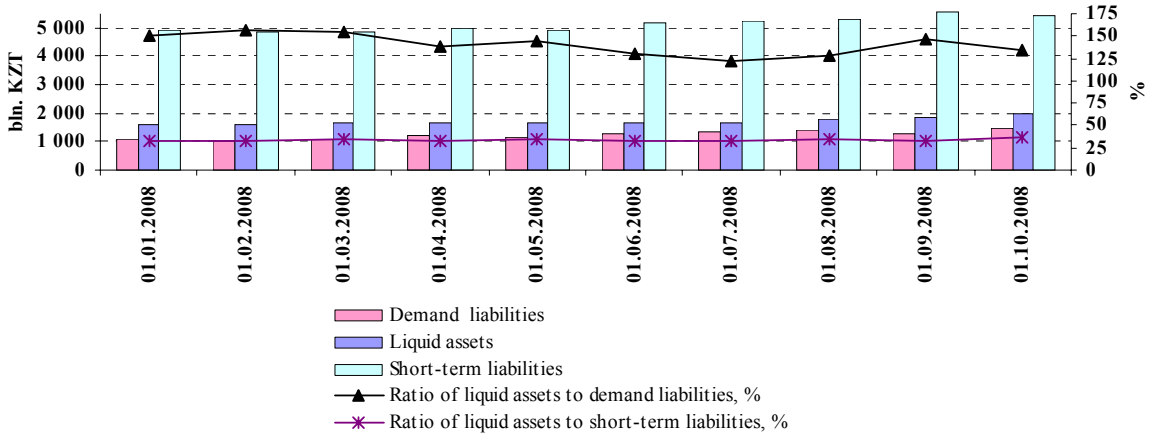
**High-Liquid Assets Structure**




*Source: FSA*

**Figure 5.4.5**

**Coverage of Demand Liabilities and Short-Term Liabilities of STB With Liquid Assets (up to 1 year)**




*Source: FSA*

***In spite of investors' panic caused by financial instability, the deposit base of the banking system is characterized by structural consistency and relatively positive dynamics. However, the deposit base as a source of STB funding remains rather weak. The potential of the STB funding through interbank relations also remains weak. In spite of decline in external liabilities in total liabilities of the banking sector, external funding continues to remain as a key source of financing of the STB activity.***

Clients' deposits (without deposits of special purpose vehicles) comparing to the beginning of the current year increased by more than 27% and reached KZT 4,962.4 bln. in absolute terms. The main contribution to the deposit base growth was made by legal entities' deposits, which increased by almost 40% for the same period whereas deposits of individuals increased by only 6.8%. Relatively high growth rates of deposits of legal entities contributed to some increase in their share in aggregate clients' deposits.

The general growth of clients' deposits resulted in increase in their share in aggregate liabilities of the banking sector. In spite of increase in share of deposits in foreign currency, a prevailing part of the STB deposit base is in the national currency (Figure 5.4.6).

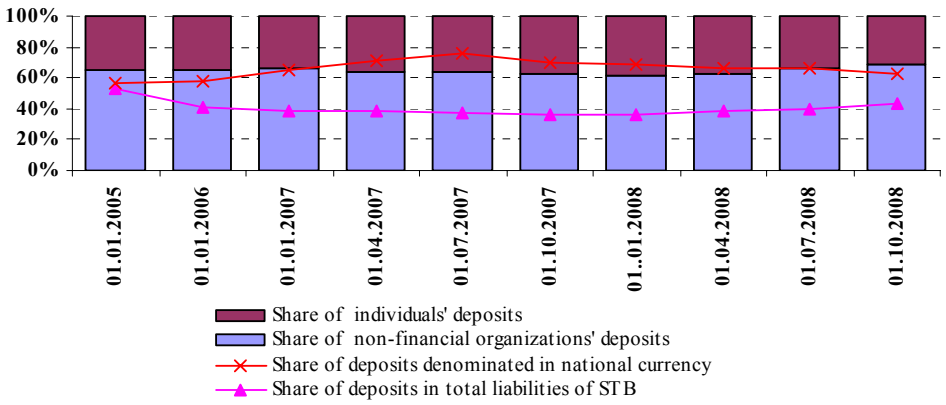
The structure of individuals' deposits also remained unchanged where considerable share is term deposits and conditional deposits. As in the currency structure of overall deposit base, a prevailing part of individuals' deposits has been attracted in the national currency (Figure 5.4.7).

In spite of stable dynamics and consistent structure of deposit base in the banking system, it can not be widely used as a source of funding. It is evidenced by relatively high ratio of loans to deposits used for assessment of STB liquidity, and its downward trend with decline of loan portfolio under a consistent growth of deposit base. We believe that increase in the amount of guaranteed compensation on individuals' deposits up to KZT 5 mln. in the framework of

stabilization measures in Kazakhstan will enhance the potential of deposit base as a source of funding (Figures 5.4.8, 5.4.9).

**Figure 5.4.6**

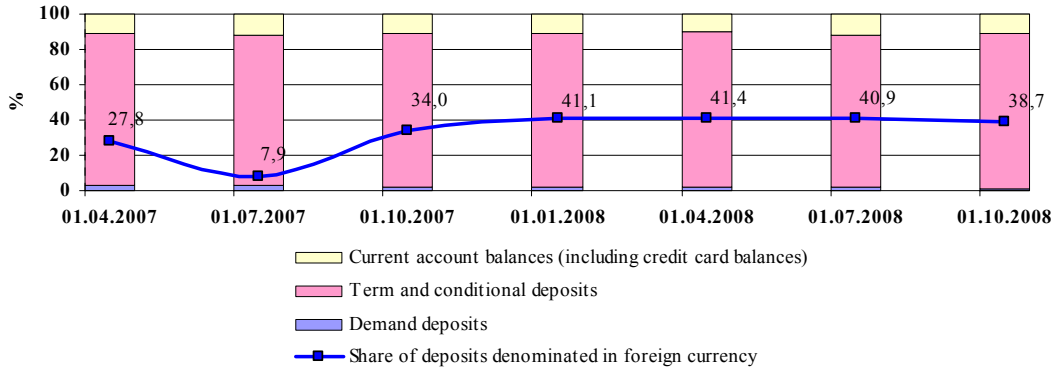
**Structure of STB Deposit Base***




** excluding non-residents*
*Source: FSA*

**Figure 5.4.7**

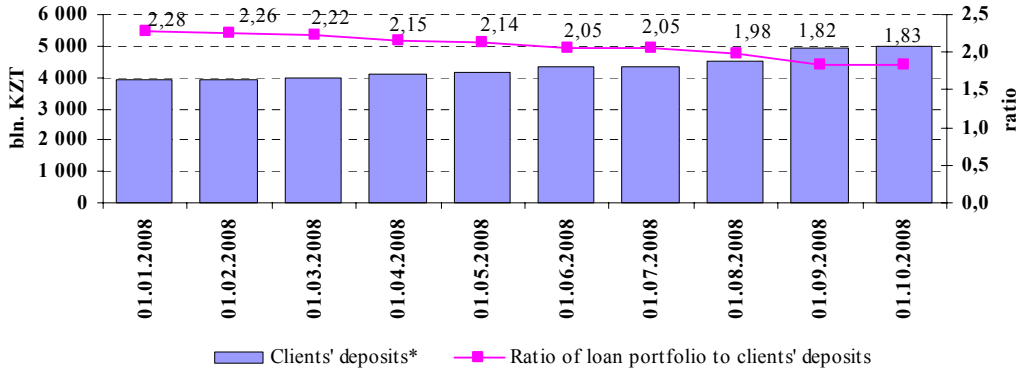
**Structure of Individuals' Deposits by Deposit Types (% of total)**




*Source: NBRK, KDIF, FSA*

**Figure 5.4.8**

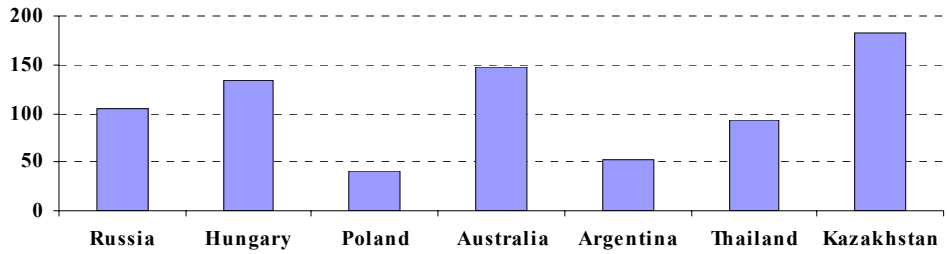
**Credits/Deposits**




** excluding deposits of special purpose vehicles (SPV)*
*Source: FSA*

**Figure 5.4.9**

**Kazakhstani STB Compared to Other Countries' Banks: (Credits/Deposits) (%)**

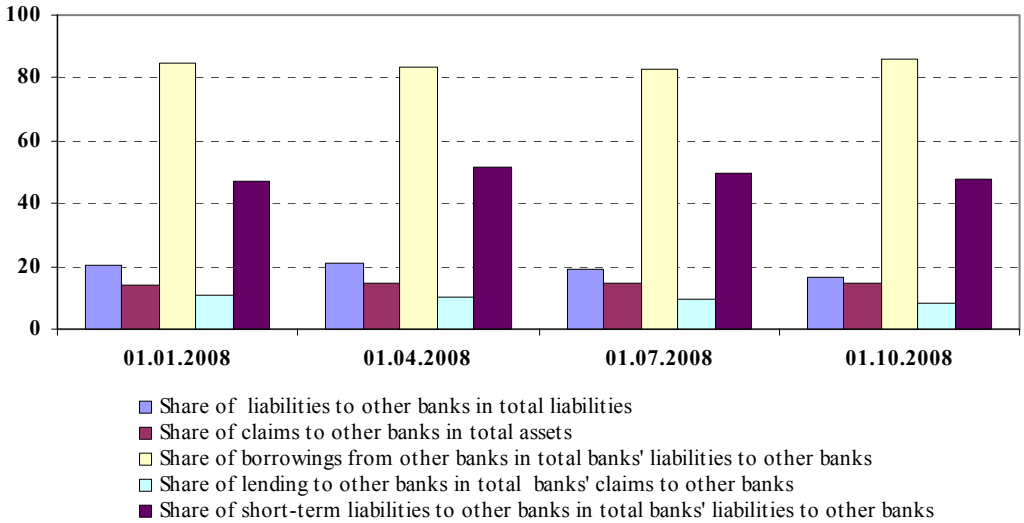



*Sources: national sources, rating agencies, FSA (data across countries for 2007-2008, Kazakhstan – as of October 1, 2008)*

As for interbank relations, from the beginning of 2008 a share of banks' liabilities to other banks in aggregate liabilities decreased from 20.6% to 16.7% with a slight increase in share of interbank claims in aggregate assets of the banking system from 13.8% to 14.6%. The share of short-term interbank liabilities in aggregate liabilities of the banks is characterized by constant dynamics (Figure 5.4.10).

**Figure 5.4.10**

**Dynamics of Interbank Relations Development (%)**




*Source: FSA*

Since the beginning of the current year instability on the global markets has resulted in decline of external liabilities which have been recently formed the main source of the banking sector growth both in absolute and relative value. On the one hand, it decreases the banking system vulnerability to external shocks, and on the other hand, it increases deficit of liquidity in the conditions of narrowness of the domestic liquidity market. However, in spite of decline in ratio of external liabilities to aggregate liabilities of the banking sector, the level of external indebtedness remains high and comprises a considerable part of aggregate liabilities of STB (Figure 5.4.11). At the same time, there were no essential changes in the structure of external liabilities of the banking sector during observed period (Figure 5.4.12).

In spite of problems with liquidity, Kazakhstani banks service external loans. Along with the support of the National Bank, they refinance external liabilities on external markets in the conditions of 'closed' external markets. It indicates that Kazakhstani banks have international creditors' confidence.

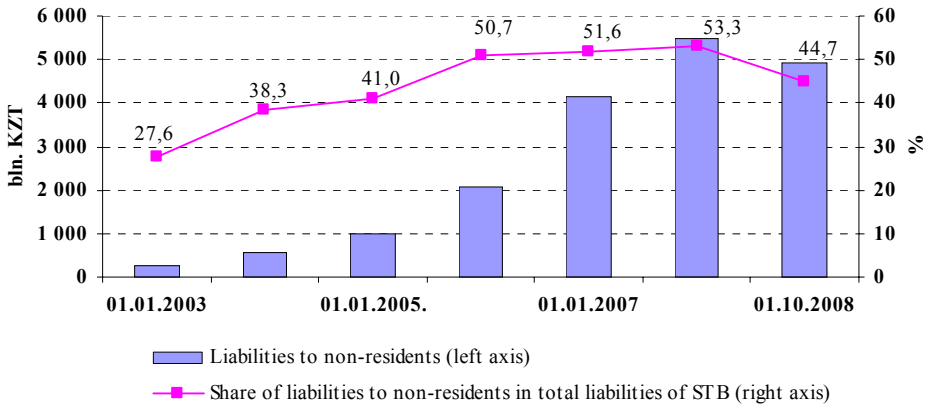
According to the data of the National Bank of Kazakhstan, as of June 30, 2008, during 2009 STB will have to repay about KZT 1,320.0 bln. (USD 11 bln.) on external liabilities.

Under instability conditions, international creditors can require advanced repayment of external liabilities. Thus, among the covenant terms for advanced repayment of the loans attracted

by Kazakh STB from external markets are default, cross-default, bankruptcy/liquidation, legal proceedings, incorrect information, amendments to legislation, nationalization and expropriation, violation of the authorized agency requirements, revocation of a license, essential changes in the structure of shareholders, and significant negative events.

**Figure 5.4.11**

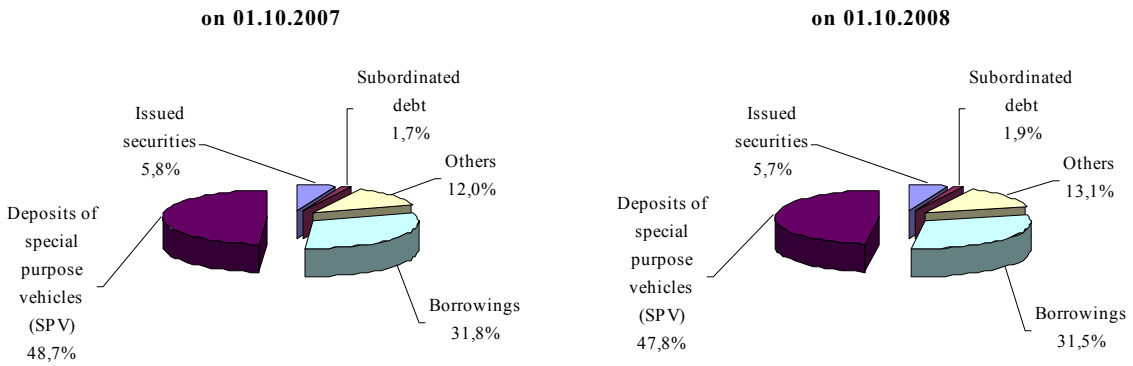
**Liabilities to Non-Residents in Total Liabilities of STB (%)**




*Source: FSA*

**Figure 5.4.12**

**Foreign Liabilities Structure of the Banking Sector**




*Source: FSA*

## 5.5 Effectiveness of STB Activity and Capital Adequacy

***Increase in reservation as a result of deteriorating quality of the loan portfolio along with considerable decrease in bank lending operations contributed to decline in banks' profitability creating at the same time pressure on capitalization of the banking sector.***

STB have received an aggregate net income after income tax in the amount of KZT 71.1 bln. within 9 months of the current year, which is 2.5 times less than for the same period of the last year. It was conditioned by reduction of STB lending operations and essential increase of STB expenses on provisions. The aggregate (gross) income was KZT 2,007.2 bln. (as of October 1, 2007 – KZT 1,269.5 bln.).

Since last October the share of interest incomes has decreased from 70.0% to 54.7% along with increase in the share of non-interest expenses from 55.1% to 69.1% in the structure of STB expenses (Table 5.5.1).

Indicators of return on assets and own capital have decreased since last October by more than 2 times which is connected with decrease in lending operations and pressure by assets quality, increase in interest rates by STB on newly attracted resources to increasing possibility of refinancing external loans due to internal sources of financing under limited access to external capital markets (Figure 5.5.1).

Besides, the indicators of Kazakhstani STB profitability were lower than the average value in the countries of Europe and South-Eastern Asia both return on assets (1.8% in 2008) and return on capital (15.7% in 2008) (Table 5.5.2).

However, the indicators of interest margin and interest spread of the banking system had an upward trend indicating prevalence of interest revenues and interest expenses in the structure of revenues (expenditures) (Figure 5.5.2).

**Table 5.5.1**

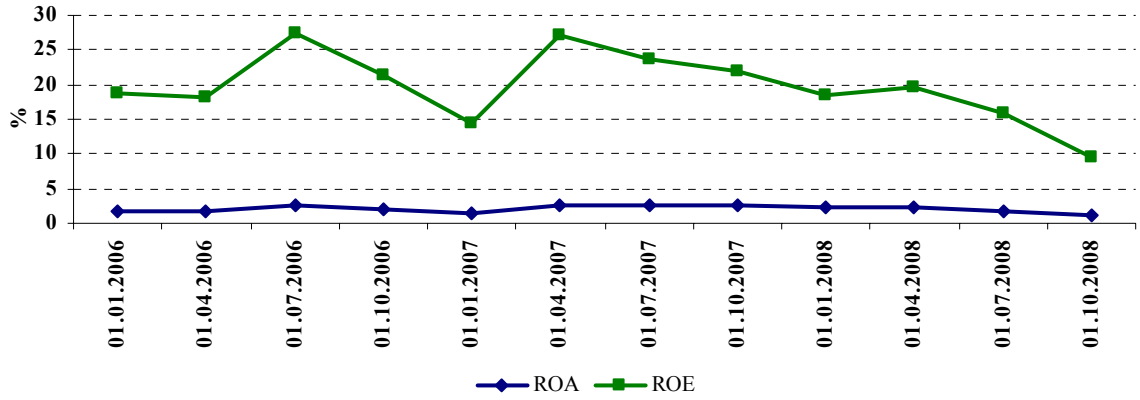
**Banking Sector Profitability**
**(bln. KZT)**

| Indicator | Oct 1, 2006 | Oct 1, 2007 | Oct 1, 2008 | Change (+;-), % |
|---|---|---|---|---|
| Interest income | 422.4 | 886.7 | 1,097.9 | 23.8 |
| Interest expense | 230.4 | 469.9 | 589.9 | 25.5 |
| **Net interest income** | **192.0** | **416.8** | **508.0** | **21..9** |
| Non-interest income | 189.4 | 382.7 | 909.3 | by 2.4 times |
| Non-interest expense | 281.3 | 578 | 1,320.2 | by 2.3 times |
| *incl. allocations for provisions* | *92.5* | *15.3* | *819.9* | *by 5.2 times* |
| **Net non-interest income (loss)** | **-91.9** | **-195.3** | **-410.9** | **by 2.1 times** |
| **Extraordinary items** | **0.9** | **0.2** | **-** | **-** |
| Net income before income tax | 101 | 221.7 | 97.1 | - 56.2 |
| Income tax costs | 12.9 | 37.3 | 26.0 | - 30.3 |
| Net income after income tax | 88.1 | 184.4 | 71.1 | - 61.4 |

*Source: FSA*

**Figure 5.5.1**

**Dynamics of ROA, ROE (annualized)**




*Source: FSA*

**Table 5.5.2**

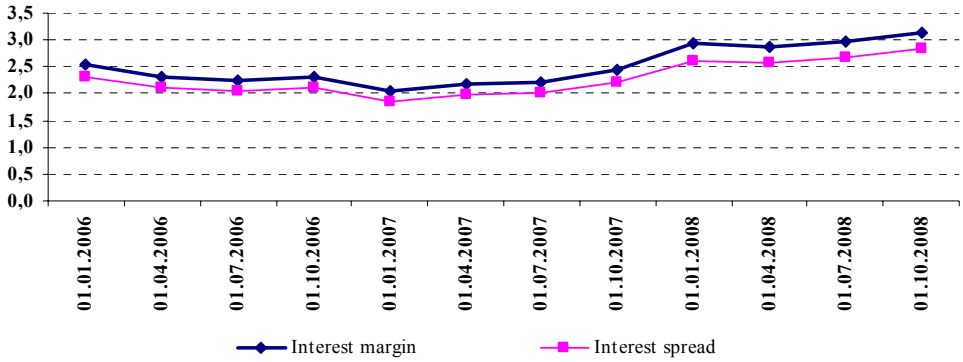
**Comparative Analysis of ROE and ROA Indicators across Countries in Europe and Asia**

| Countries | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | | 2008 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ROA | ROE | ROA | ROE | ROA | ROE | ROA | ROE | ROA | ROE | ROA | ROE |
| Bulgaria | 2.4 | 19.6 | 2.1 | 21.4 | 2.1 | 25.0 | 2.2 | 24.8 | 2.4 | 24.6 | 2.5 | 28.6 |
| Czech | 1.2 | 23.8 | 1.3 | 23.3 | 1.4 | 25.2 | 1.2 | 22.5 | 1.3 | 24.5 | 1.4 | 26.0 |
| Croatia | 1.6 | 14.1 | 1.7 | 16.1 | 1.6 | 15.1 | 1.5 | 13.0 | 1.6 | 11.1 | 1.6 | 10.0 |
| Hungary | 1.5 | 19.3 | 2.0 | 25.3 | 2.0 | 24.7 | 1.8 | 24.0 | 1.4 | 18.1 | … | … |
| Romania | 2.7 | 20.0 | 2.5 | 19.3 | 1.9 | 15.4 | 1.7 | 13.6 | 1.3 | 11.5 | 1.5 | 15.4 |
| France | 0.4 | 8.5 | 0.5 | 10.6 | 0.6 | 11.8 | 0.7 | 15.5 | 0.4 | .9.8 | … | … |
| Indonesia | 2.6 | … | 3.5 | 22.9 | 2.5 | 16.5 | 2.6 | 16.4 | 2.8 | 17.7 | 2.7 | 19.2 |
| Korea | 0.2 | 3.4 | 0.9 | 15.2 | 1.0 | 18.4 | 1.1 | 14.6 | 1.1 | 14.6 | 0.9 | … |
| Malaysia | 1.3 | 15.6 | 1.4 | 16.7 | 1.4 | 16.7 | 1.3 | 16.2 | 1.5 | 1.9.7 | … | … |
| Philippines | 1.1 | 8.5 | 0.9 | 7.1 | 1.1 | 8.7 | 1.0 | 10.6 | 1.4 | 11.8 | … | … |
| Singapore | 1.0 | 8.7 | 1.2 | 11.6 | 1.2 | 11.2 | 1.4 | 13.7 | 1.4 | 13.4 | … | … |
| Thailand | 0.6 | 10.3 | 1.2 | 16.8 | 1.4 | 14.2 | 0.8 | 8.8 | 0.1 | 7.3 | … | … |

*Source: IMF, GFSR, 2008*

**Figure 5.5.2**

**Interest Margin and Spread**




*Source: FSA*

As of October 1, 2008, the banks regulatory capital reached KZT 1,983.2 bln., having increased by 11.4% from the beginning of the year due to increase in Tier 1 capital by 19.2%. At the same time, the Tier 2 capital decreased by 6.2% due to decline in retained income (Table 5.5.3).

At the same time, from the beginning of the current year own capital of STB increased by KZT 94.5 bln. (6.6%) and amounted to KZT 1,519.6 bln. as of the reporting date.

In the structure of Tier 1 capital there was an essential increase in the share of reserve capital and decline in the share of retained net income, which was caused by implementation of measures on reserve capital increase in November 2007. These measures stipulated establishing a minimum amount of reserve capital not less than 2% of the STB loan portfolio subject to classification (previously the amount of reserve capital of STB should have been in total not less than 5 % of STB assets not subject to classification in accordance with the legislation of the Republic of Kazakhstan) which have come into effect since May 1, 2008 (Figure 5.5.3).

Capitalization of the banks remains on an adequate level. Adequacy indicators of the banking sector exceed the indicators accepted in the international practice and stipulated by requirements of existing banking legislation. However, continuing trends in loan portfolio quality require additional incentives in banks' capitalization (Figure 5.5.4).

In comparison with other countries, capital adequacy ratio (k2) of Kazakhstani banks is higher than in some countries of South-Eastern Europe and essentially lower than in Malaysia (Figure 5.5.5).

It should be noted considerable decline in the ratio of regulated capital to bad loans and provisions that was caused by deteriorating quality of the loan portfolio expressed in a considerable increase in bad loans and, accordingly, in increase of reserves. At the same time, the ratio of the regulated capital to doubtful loans and ratio of the regulated capital to aggregate loan portfolio of the banking sector is characterized by constant dynamics (Figure 5.5.6).

**Table 5.5.3**

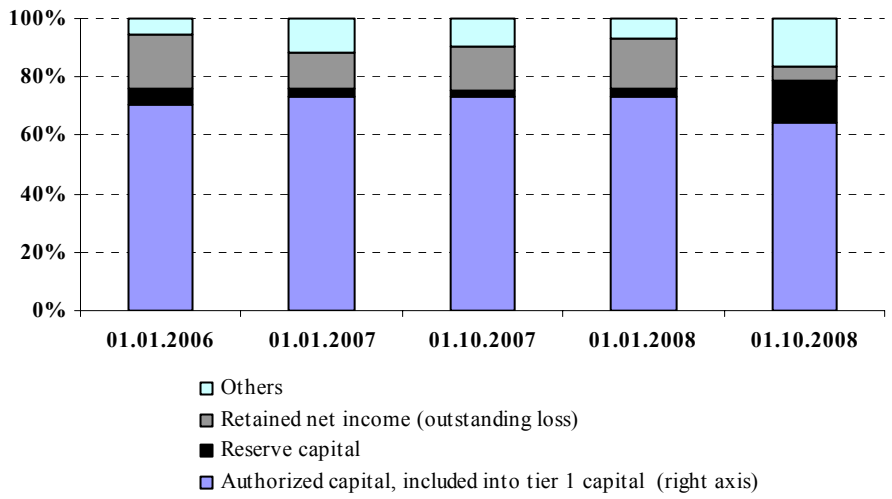
**Characteristics of Aggregate Own Capital of the Banking System**

| Name | Jan 1, 2008 | Oct 1, 2008 | Surplus, in % |
|---|---|---|---|
| Tier 1 capital | 1.284.0 | 1.530.8 | 1.9.2 |
| Authorized capital | .940.2 | .985.5 | 4.8 |
| Additional capital | 3.8 | 4.8 | 26.3 |
| Retained net profit of prior years | 204..9 | 232.8 | 13.6 |
| Tier 2 capital | 558..9 | 524.4 | -6.2 |
| Retained net profit | 216.7 | 71.2 | -67.1 |
| Subordinated debt | 460..9 | 543.7 | 18.0 |
| Tier 3 capital | 1.7 | 1.2 | -2.9.4 |
| Total own capital | 1.780.2 | 1,.983.2 | 11.4 |

*Source: FSA*

**Figure 5.5.3**

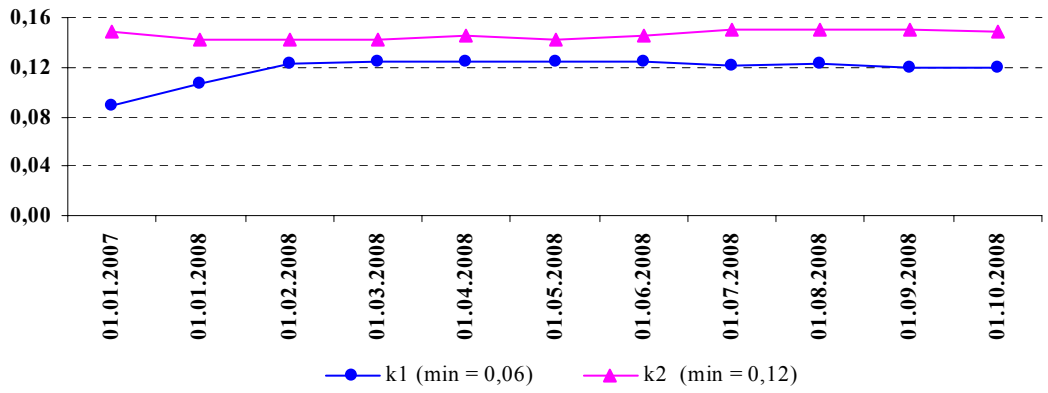
**Tier 1 Capital Structure (%)**




*Source: FSA*

**Figure 5.5.4**

**Capital Adequacy Coefficients**




*Source: FSA*

# 6. Other Financial Institutions

## 6.1 Insurance Sector

### 6.1.1 The Situation on Insurance Market

***The insurance sector of Kazakhstan had been intensely developing in the last years in the conditions of sharp growth of other segments of the financial sector, especially, banking sector as a main consumer of insurance services. In 2008, it slightly slowed down its growth rate. At the same time, appearance of new players in this sector indicates the growth potential of the insurance market in Kazakhstan.***

As of October 1, 2008, 44 insurance organizations carried out a licensed activity on the insurance market (as of October 1, 2007 – 40 insurance organizations).

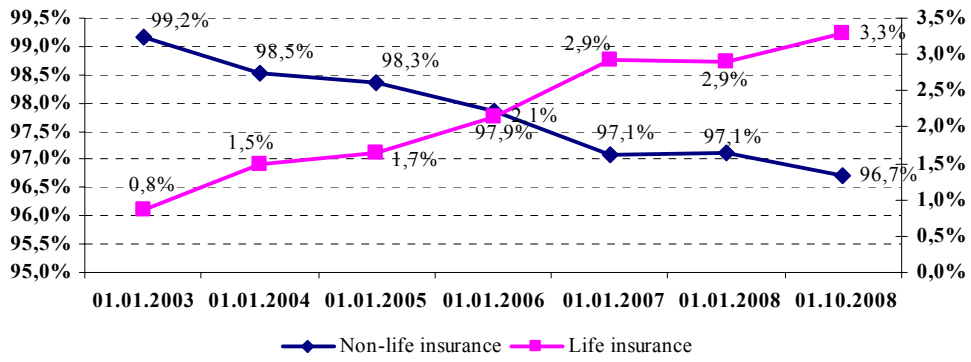
The main indicators of the Kazakhstan's insurance sector demonstrate high rates of growth compared to other segments of the financial sector despite the fact that insurance premiums written by insurance (re-insurance) organizations under direct insurance policies have decreased since last October by 1.5% to 108.8 bln. KZT. Thus, the aggregate volume of assets of insurance organizations reached 281.7 bln. KZT as of October 1, 2008 (56.0% increase compared to October 1, 2007). The aggregate equity capital, having increased since last October by more than 46%, amounted to 162.1 bln. KZT. The volume of insurance reserves has comprised 97.1 bln. KZT, which is by 58.1% more than the volume of the reserves as of October 1, 2007.

A considerable part of insurance premiums falls to general insurance in spite of its gradual decreasing share (Figure 6.1.1.1).

The role of insurance sector in the country's economy remains insignificant which is confirmed by the ratio of the insurance organizations assets to GDP having constituted 1.87%, insurance premiums – 0.72%, equity capital – 1.08%.

**Figure 6.1.1.1**

**Distribution of Insurance Premiums Written**




*Source: FSA*

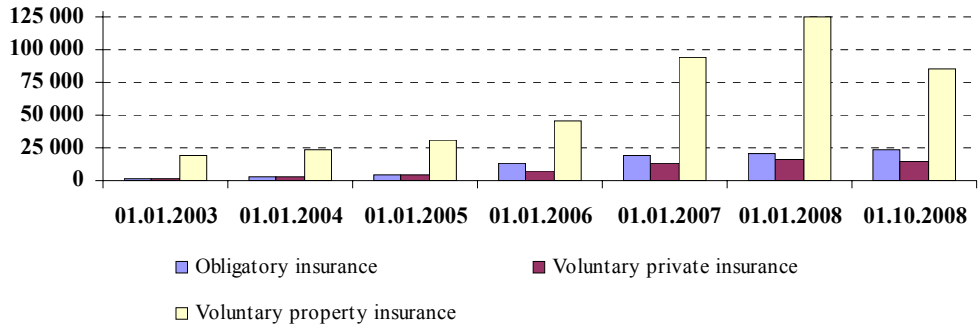
In the structure of the aggregate insurance premiums written, the premiums on obligatory and voluntary personal insurance have increased by 51.1% and 20.4% respectively since last October, and the volume of premiums on voluntary property insurance decreased by 10.4% (Figure 6.1.1.2).

With the decrease of insurance premiums for the period under review the insurance payments essentially increased (almost by 50%) and was KZT49.6 bln. as of October 1, 2008. The growth of insurance payments on claim was noted across all classes of insurance. A considerable share in the structure of aggregate insurance payments is attributed to payments on voluntary property insurance, mainly insurance against other financial losses, insurance of guarantees and pawns, insurance of loans, property, and transport, including motor vehicles, and motor-third-party liability insurance (Figure 6.1.1.3).

For the most part high rates of the insurance market growth in recent years were observed due to the increase of premiums written in voluntary property insurance, particularly in insurance from other financial losses. In the conditions of essential slowdown of credit active operations of STB, the volume of insurance premiums is decreasing (when consumer loans are granted a mandatory condition is to effect a policy of life and health insurance of a borrower from accidents, collateralized property insurance).

**Figure 6.1.1.2**

**Structure of Insurance Premiums Written (mln. KZT)***

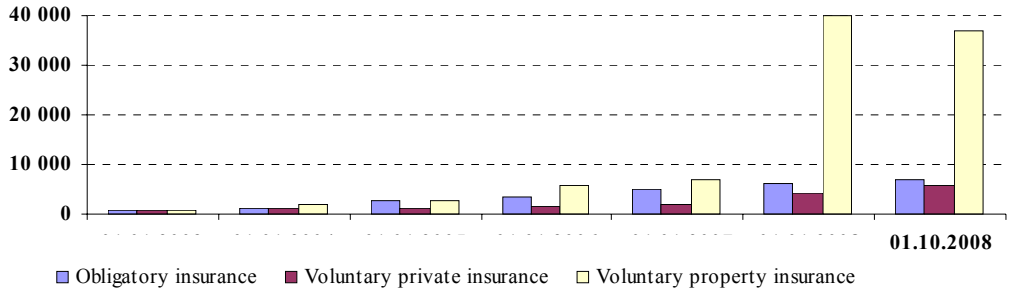



* insurance premiums under insurance and reinsurance policies

*Source: FSA*

**Figure 6.1.1.3**

**Structure of Insurance Payments on Claim (mln. KZT)**




*Source: FSA*

### *Bank Risks Insurance*

As of October 1, 2008, 20 insurance organizations out of 44 insure the risks related to banking operations (without consideration of the operations with JSC Bank of Development of Kazakhstan).

Risks of banking operations are covered by insurance organizations through insurance against other financial losses, property (except for insurance of transport and cargoes), motor transport, liability insurance (except for liability insurance of owners of motor vehicles), loans, guarantees and pawns (Table 6.1.1.1).

**Table 6.1.1.1**

**Premiums and Payments Associated with Banking Operations, ( in thousand KZT)**

| Name of classes | Premiums/ Payments | Jan 1, 2005 | Jan 1, 2006 | Jan 1, 2007 | Oct 1, 2007 | Jan 1, 2008 | Oct 1, 2008 |
|---|---|---|---|---|---|---|---|
| Motor vehicle insurance | Premiums | 2,340,955 | 3,227,573 | 4,969,860 | 5,148,984 | 6,589,335 | 4,134,212 |
| | Payments | 933,594 | 1,110,269 | 1,150,769 | 1,297,120 | 1,818,025 | 1,734,453 |
| Property insurance | Premiums | 10,177,269 | 14,824,186 | 21,809,267 | 23,236,391 | 32,924,959 | 22,038,797 |
| | Payments | 67,295 | 2,203,522 | 1,037,511 | 1,022,074 | 1,143,497 | 734,124 |
| General liability insurance | Premiums | 10,496,831 | 16,628,263 | 22,639,797 | 15,579,715 | 20,580,863 | 22,084,368 |
| | Payments | 699,114 | 749,818 | 402,327 | 369,281 | 563,567 | 109,924 |
| Loan insurance | Premiums | no data | no data | 616,360 | -6,646 | 207,603 | 125,618 |
| | Payments | no data | no data | 720 | 0 | 668 | 182,237 |
| Guarantee and pawn insurance | Premiums | no data | no data | 7,829 | 4,433 | 9,109 | 16,025 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Payments | no data | no data | 0 | 0 | 0 | 5,760 |
| Insurance against other financial losses* | Premiums | 2,206,532 | 4,364,785 | 31,414,530 | 31,717,632 | 42,241,808 | 14,424,435 |
| | Payments | 355,453 | 1,362,785 | 3,418,563 | 22,333,937 | 34,947,084 | 32,857,916 |

** before adoption of Law of the Republic of Kazakhstan No.128-III dated February 20, 2006 "On Amendments and Additions to Some Regulatory Acts of the Republic of Kazakhstan on the Matters of Insurance"- entrepreneurial risk insurance*

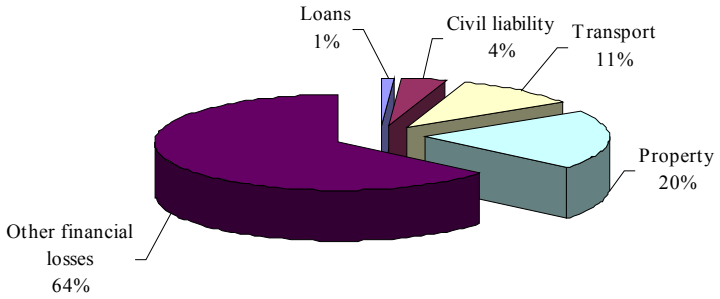
*Source: FSA*

The total volume of insurance premiums on these classes was KZT62.8 bln. The insurance premiums volume under insurance policies of risks relating to banking operations was KZT13.0 bln.[46] which is 12% of the total insurance premiums received under insurance policies and 14% of the total insurance premiums received under insurance policies in "general insurance" industry.

The number of existing insurance policies is 275.5 thous., the insurance cover on them is KZT1,138.9 bln., or 4% of the aggregate insurance cover volume on all the policies existing as of October 1, 2008. Out of the total amount of insurance premiums on operations with STB, 40% are the operations where the insured is a client of STB, and the beneficiary is an STB, and 60% are the contracts when the insurer (the insured) and beneficiary is an STB (Figure 6.1.1.4).

**Figure 6.1.1.4**

**Distribution of Insurance Premiums Written under Insurance Policies Covering Bank Risks**




*Source: FSA*

Out of the insurance premiums under risk insurance policies, 99% are the operations between affiliated organizations.

At the same time, the share of insurance (re-insurance) organizations' assets where STB are large participants in the aggregate assets of the insurance sector, and the share of affiliated organizations' premiums in the aggregate insurance premiums remain high in spite of consistent decrease (Table 6.1.1.2).

**Table 6.1.1.2**

**Concentration of Insurance Organizations (%)**

| | Share of assets of insurance (re-insurance) organizations where STB are large participants, in aggregate assets of insurance sector, % | Share of premiums of insurance (re-insurance) organizations where STB are large participants, in aggregate insurance premiums % |
|---|---|---|
| Jan 1, 2003 | 19.6 | – |
| Jan 1, 2004 | 82.1 | 45.7 |
| Jan 1, 2005 | 70.5 | 71.8 |
| Jan 1, 2006 | 70.3 | 64.8 |
| Jan 1, 2007 | 67.5 | 58.3 |
| Jan 1, 2008 | 62.5 | 59.7 |
| Apr 1, 2008 | 60.7 | 46.1 |
| Jul 1, 2008 | 61.8 | 55.3 |
| Oct 1, 2008 | 57.0 | 53.2 |

*Source: FSA*

[46] According to the data provided at the request of the authorized body.

Thus, on the whole, the volume of operations related to bank risks is relatively small, except for the volume of operations between affiliated organizations. At the same time, with regard to such organizations, loss on bank risks insurance is covered by other classes of insurance.

In spite of imbalance in the dynamics of insurance premiums and insurance payments, the level of financial stability of the insurance sector remains satisfactory. This is indicated by a growth of share of high-liquid assets in the insurance organizations' assets structure from 55.8% in the beginning of the current year to 64.1% as of October 1, 2008, and positive dynamics in capitalization.

As for the level of concentration in the insurance sector, then starting from last October it was observed a slight reduction of the insurance market concentration on insurance premiums and insurance payments. Five largest insurance companies have 50.3% of the aggregate insurance premiums and 69.3% of insurance payments. The share of five largest insurance companies in the aggregate assets of the insurance market was 52.9% versus 52.5% - as of October 1, 2007.

### 6.1.2 Re-insurance

***Along with a decrease in the volume of insurance premiums, there is a tendency to decrease of insurance premiums ceded to re-insurance. The share of insurance premiums ceded to re-insurance to non-residents is increasing in the structure of re-insurance.***

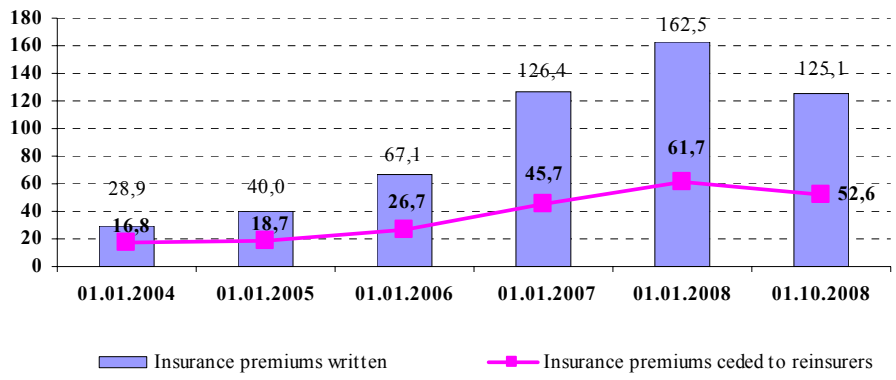
The insurance premiums ceded to re-insurance reduced from the beginning of the year by 14.7%, and was KZT52.6 bln., or 42% of the aggregate insurance premiums (Figure 6.1.2.1).

In the re-insurance structure, non-residents take a considerable part (Figure 6.1.2.2). Expansion of the trend of risks transfer to non-residents by re-insurance, on the one hand, is positively assessed as one of the risk management instruments of insurance organizations and a method of sharing the best practices in the management practice and new technology. On the other hand, in the conditions of global instability, re-insurance risks are increasing, i.e. failure to meet the obligations by a contractor under re-insurance policies.

In the country structure of the premiums ceded to re-insurance, a considerable part of the premiums ceded to re-insurance is taken by Russia – 30.2% (as of January 1, 2008 – 13.8%), United Kingdom – 17.5% (6.9%), Germany – 14.3% (15.8%), Sweden – 8.3% (7.1%). Due to objective reasons, the share of premiums ceded to re-insurance in USA greatly decreased and was only 1.3% versus 21.2% as of the beginning of this year. At the same time, the level of interaction of Kazakhstani insurance organizations in risks re-insurance within Kazakhstan is decreasing. This is evidenced by reduction in the re-insurance structure of the share of premiums ceded to re-insurance to local insurance companies from 19.6% at the beginning of the year to 13.2% as of the beginning of this October (Figure 6.1.2.3).

**Figure 6.1.2.1**

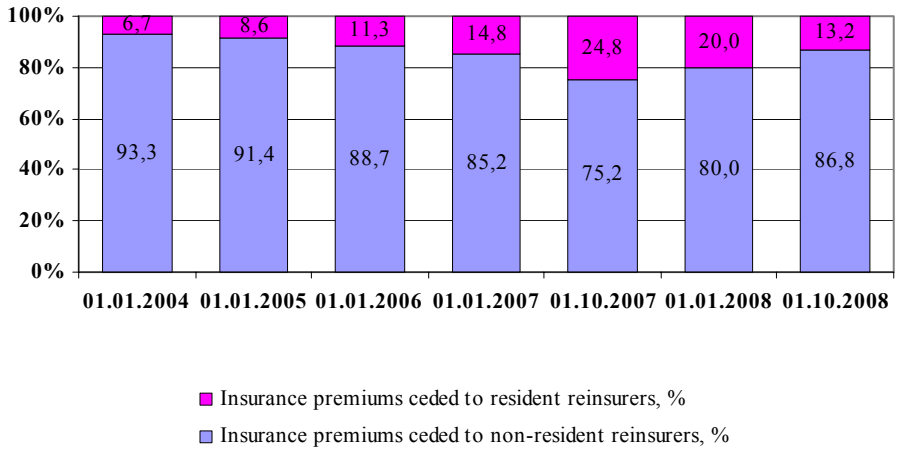
**Insurance Premiums Written and Ceded to Reinsurers**




*Source: FSA*

Figure 6.1.2.2

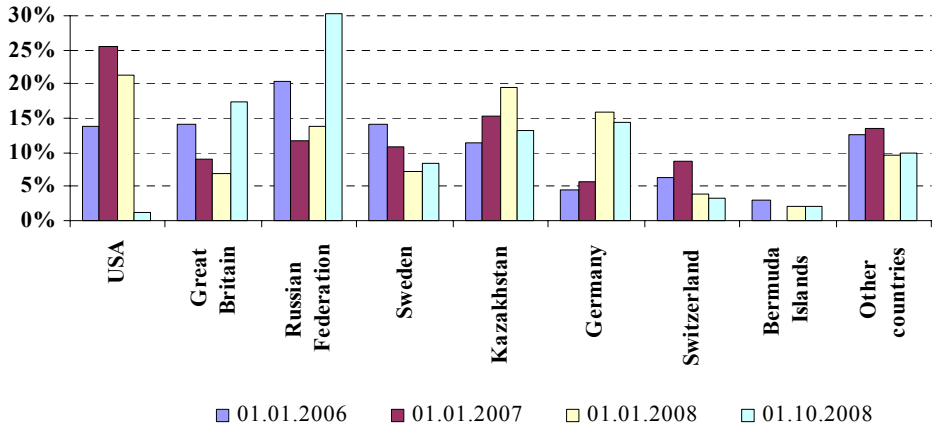
**Structure of Insurance Premiums Ceded to Reinsurers**




*Source: FSA*

Figure 6.1.2.3

**Structure of Insurance Premiums Ceded to Reinsurers (per country)**




*Source: FSA*

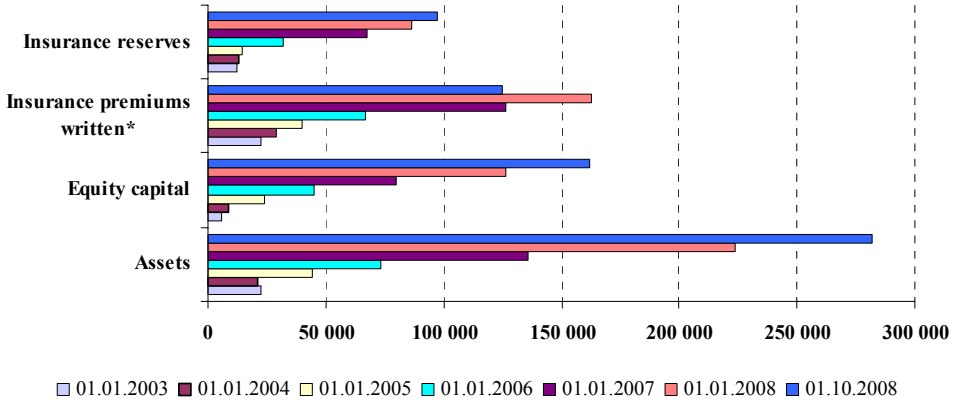
### 6.1.3 Insurance Sector Profitability

***The increased level of insurance payments together with reduction of insurance premiums flow promoted the reduction of return from insurance organizations. Further decrease in the crediting volumes increases the probability of the insurance portfolio loss ratio. At the same time, it includes the possibility of covering losses due to other classes of insurance that are not related to bank risks.***

In the conditions of instability on both the world and domestic markets, the dynamics of indicators of the insurance sector development in Kazakhstan demonstrates an overall positive dynamics. The exception is the insurance premiums volume that has decreased since the beginning of this year in the background of a reduction of the growth rates of STB lending (Figure 6.1.3.1).

**Figure 6.1.3.1**

**Major Indices of Kazakhstan's Insurance Market (mln. KZT)**



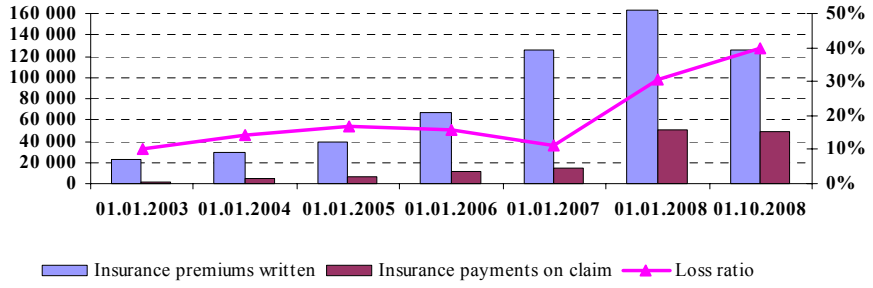

* - insurance premiums under insurance and reinsurance policies

*Source: FSA*

The insurance premiums have decreased since the beginning of this year. Now they are practically on the level of 2006, while insurance payments demonstrate a sustainable growth. As mentioned above, only since last October, a growth of insurance premiums has been almost 50%. Following the market trends, the payments to premiums ratio on the insurance market keeps growing. From the beginning of this year, the payments to premiums ratio on the insurance market increased by 1.2 times. It increased by more than 3.5 times comparing to the beginning of the last year (Figure 6.1.3.2).

**Figure 6.1.3.2**

**Loss Ratio on the Insurance Market**

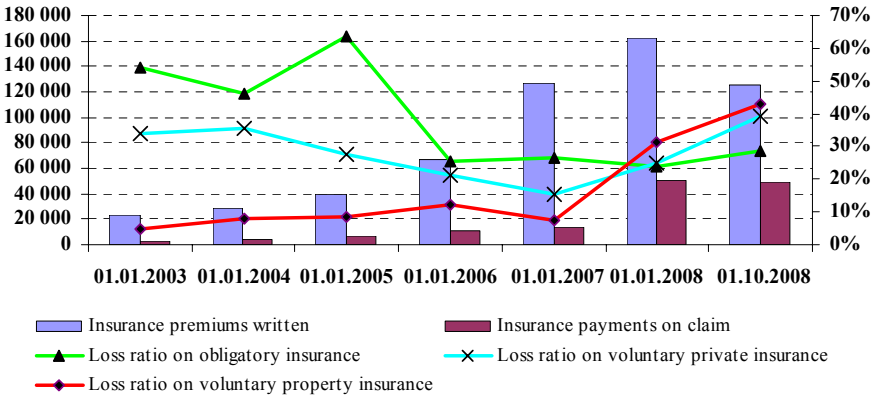



*Source: FSA*

The value of the payments to premiums ratio on voluntary property insurance essentially exceeds the indicator on the system in general, while on other types of insurance the ratio values are on the level not exceeding the value on the system (Figure 6.1.3.3).

**Figure 6.1.3.3**

**Loss Ratio in terms of Insurance Activity**



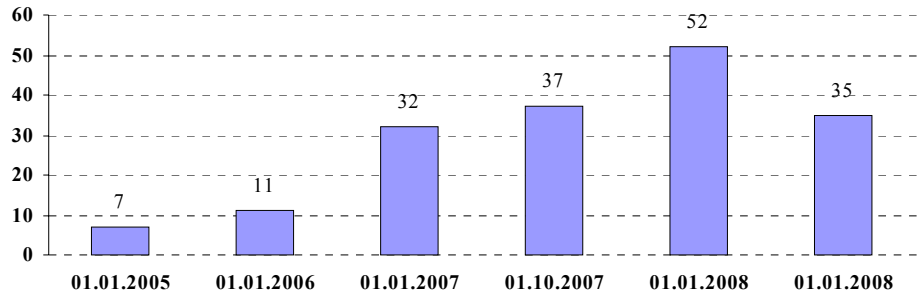

*Source: FSA*

With further decrease of the rates of banking crediting, it is likely that the expenses of insurance organizations will grow, and in case of no possibility of covering unprofitability at the expense of other classes of insurance (not related to the banking sector), the profitability of insurance organizations will go down which will accordingly affect the level of capitalization. The possibility of retention of the insurance market development potential will depend upon rise in the quality of servicing, improvement of existing products and services, development and introduction of new insurance products, further development of risk management practice.

The net profit of insurance organizations in the background of loss ratio increase in the insurance sector decreased by 33% from the beginning of the year. It is lower than the level of the same period of the last year which is caused by consequences of liquidity squeeze for the insurance market in the banking sector (Figure 6.1.3.4). At the same time, the indicators of return on assets and capital of insurance organizations decreased almost by 2 times from the beginning of the year (Figure 6.1.3.5).

**Figure 6.1.3.4**

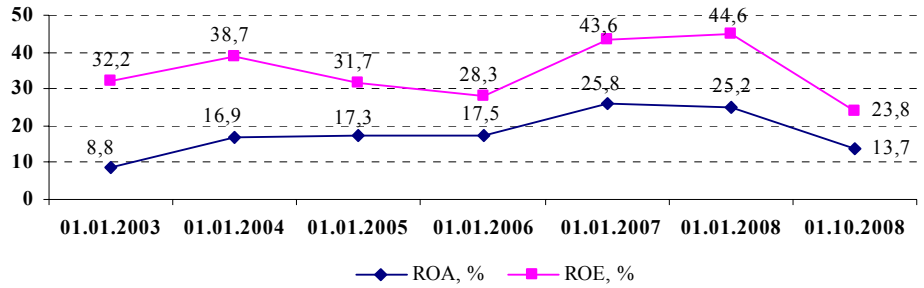
**Net Income of Insurance Companies (bln. KZT)**




*Source: FSA*

**Figure 6.1.3.5**

**Return on Assets and Equity**

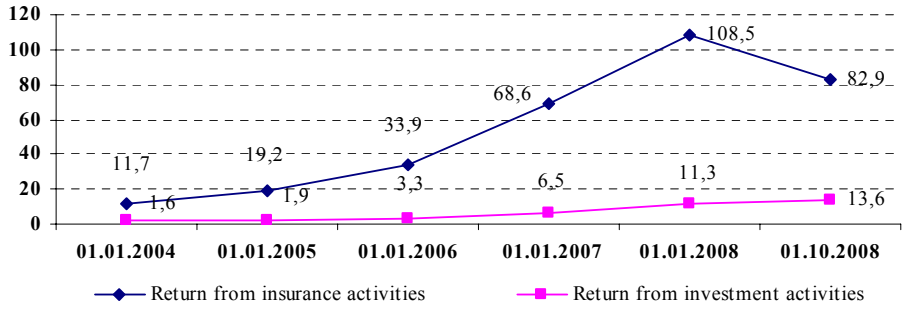



*Source: FSA*

As far as the structure of insurance organizations' income is concerned, the problems in the country's banking sector promoted the reduction of income from the core business. The investment activity that traditionally takes a small part of insurance companies' income is on the contrary showing a growth. However, in the current conditions, it is early to speak about a turning point in the structure of income of the insurance market (Figure 6.1.3.6).

**Figure 6.1.3.6**

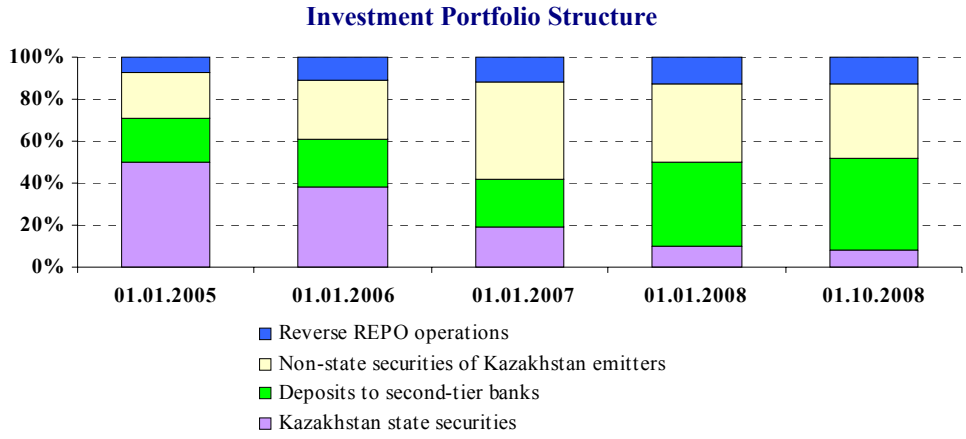
**Return from Insurance and Investment Activities, (bln. KZT)**




*Source: FSA*

The tendency to reduction of the share of investment in public securities and non-public securities of issuers in RK remains in the investment portfolio of insurance organizations. At the same time, the share of deposits in second-tier banks is increasing. This is caused by a comparatively low return of public securities and reduction of attractiveness of securities of the non-public sector basically represented by second-tier banks. This low return occurred because of depreciation of the securities value both in the domestic and foreign trade sites, and turbulence of global markets that has worsened in the second half of this year in the background of corporate events in USA and in Europe (Figures 6.1.3.7).

**Figure 6.1.3.7**




*Source: FSA*

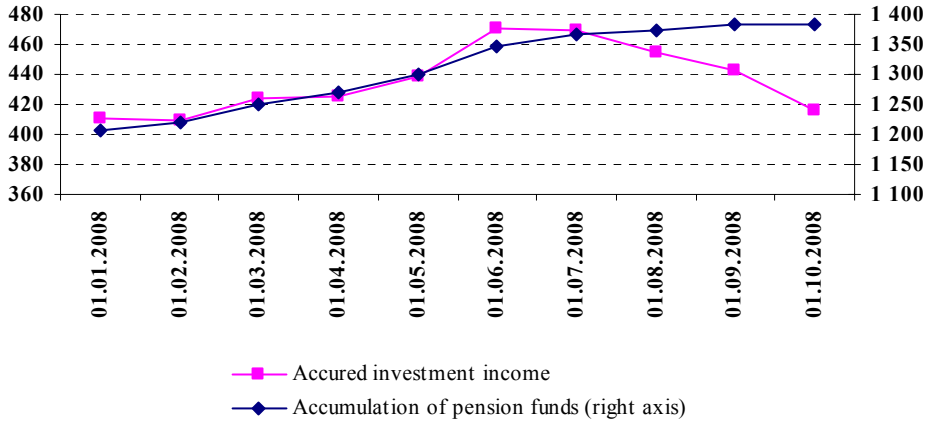
## 6.2. Accumulation Pension System

***Portfolios of the Kazakhstani accumulation pension funds likewise foreign ones expose high sensitivity to the shocks on both the world and domestic stock markets which deepened in the second half of 2008 in the background of bankruptcy of the world largest financial corporations. The profitability of pension assets substantially went down as a result of depreciation of a number of financial instruments which are in the portfolio of Kazakhstani accumulation pension fund. In the conditions of high tension on the financial markets, the problem of financial instruments deficit essentially aggravated.***

As of October 1, 2008, 14 accumulation pension funds operated in Kazakhstan. Pension assets increased from last October by 24.4% and in absolute terms amounted to KZT1,377.8 bln. At the same time, an average monthly increase of pension assets from October 1, 2007 to October 1, 2008 was KZT22.5 bln. Pension savings of depositors (recipients) comparing to the same period of the last year grew by KZT274.5 bln. (24.78%) and amounted to KZT1,382.0 bln. The share of pension accumulations in the country's GDP increased versus last October by 0.3 percentage points and was 9.2% as of October 1, 2008. Along with that, it should be noted that for the first time since the commencement of the Kazakhstani accumulation pension system operation, this September there has been fixed a reduction of pension accumulations which is explained by essential reduction of the APF investment income due to volatility on the financial markets and related negative trend of market quotations for securities that are in the investment portfolios of APF (Figure 6.2.1). Furthermore, since the second half of the current year, accumulation pension funds showed a negative investment income. Thus, 'net' investment income of APF for the third quarter 2008 decreased by KZT34 bln. Also, it is observed a reduction of the share of 'net' investment income in the total sum of pension accumulations of depositors (recipients) from 28.1% as of the beginning of the year to 24.46% as of October 1, 2008 (Table 6.2.1).

**Figure 6.2.1**

**Accumulations and Investment Income of Pension Funds (bln. KZT.)**




*Source: FSA*

**Table 6.2.1**

**Pension Savings of APF and Investment Income, (bln. KZT)**

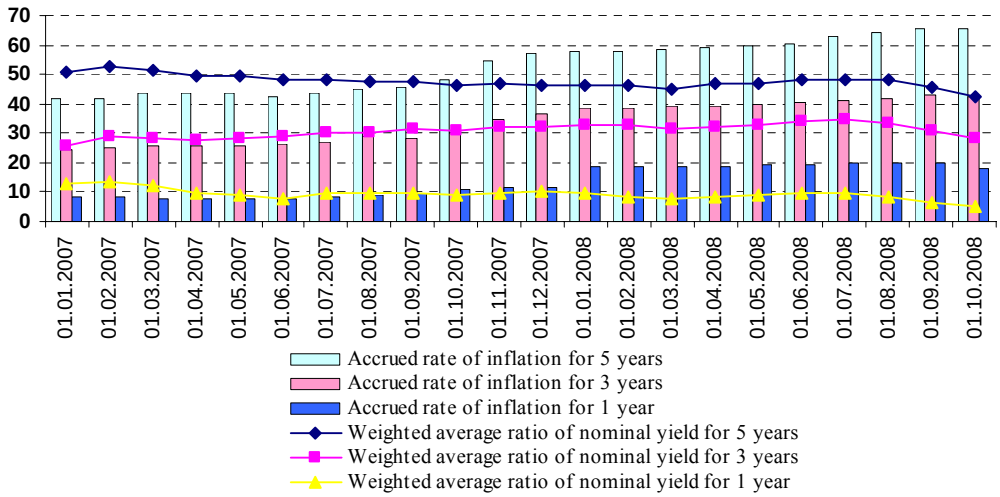
| | Jan1'08 | Feb1'08 | Mar1'08 | Apr1'08 | May1'08 | Jun1'08 | Jul1'08 | Aug1'08 | Sep1'08 | Oct1'08 |
|---|---|---|---|---|---|---|---|---|---|---|
| investment income (per month) | 24.1 | -1.5 | 14.1 | 2.1 | 12.4 | 32.2 | -0.5 | -15.5 | -12.2 | -26.2 |
| investment income (cumulative) | 411.3 | 409.7 | 423.8 | 426.0 | 438.4 | 470.6 | 470.0 | 454.6 | 442.4 | 416.1 |
| 'net' investment income | 339.3 | 337.5 | 350.2 | 360.1 | 360.1 | 386.8 | 385.8 | 372.0 | 361.0 | 338.0 |
| Pension savings of APF | 1,208.1 | 1,221.4 | 1,249.8 | 1,269.3 | 1,300.1 | 1,346.7 | 1,366.4 | 1,374.4 | 1,383.3 | 1,382.0 |

*Source: FSA*

The average weighted coefficients of the nominal income on pension assets of accumulation pensions funds showed a sustainable trend to decrease from the second half of this year. As of October 1, 2008, the accumulated inflation rate per year increased the average weighted coefficient of the nominal income per year by more than 3.5 times, whereas the excess of inflation rates for 3 and 5 years over the average weighted coefficients of the nominal income for the same periods was not more than 1.5 times (Figure 6.2.2).

**Figure 6.2.2**

**Average Weighted Nominal Return Ratio of APF and Accumulated Inflation**




*Source: FSA*

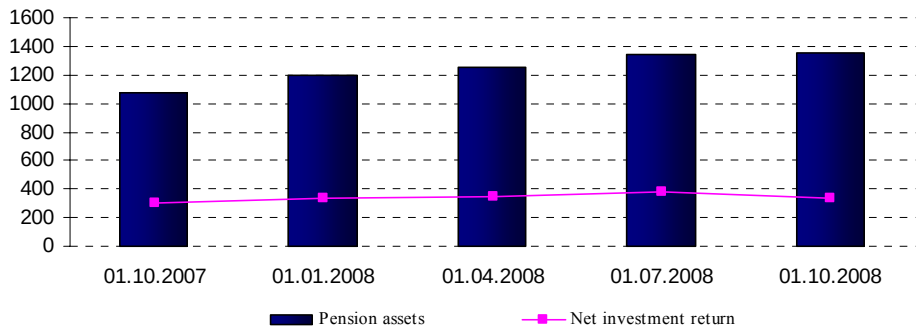
Although the 'net' investment income decreased, the total volume of pension assets demonstrates a positive dynamics which is provided basically at the expense of receiving monthly pension contributions (Figure 6.2.3).

The reduction of an investment income amount is largely caused by essential drop in the value of securities of Kazakhstani and foreign issuers represented in the portfolio of accumulation pension funds that occurred in the second half of this year in the background of corporate events of the USA, Europe and that enhanced volatility on the global stock markets.

An essential depreciation of the accumulation pension funds portfolio also led to achievement of negative values as of October 1, 2008 in the indicators of profitability and essential increase of accumulation pension funds assets weighted by the degree of credit risk (Figure 6.2.4, 6.2.5).

**Figure 6.2.3**

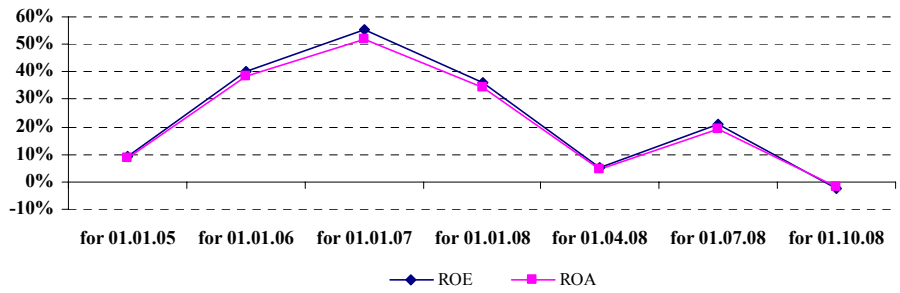
**Invested Pension Assets and Net Investment Return (bln. KZT) (bln. KZT)**




*Source: FSA*

**Figure 6.2.4**

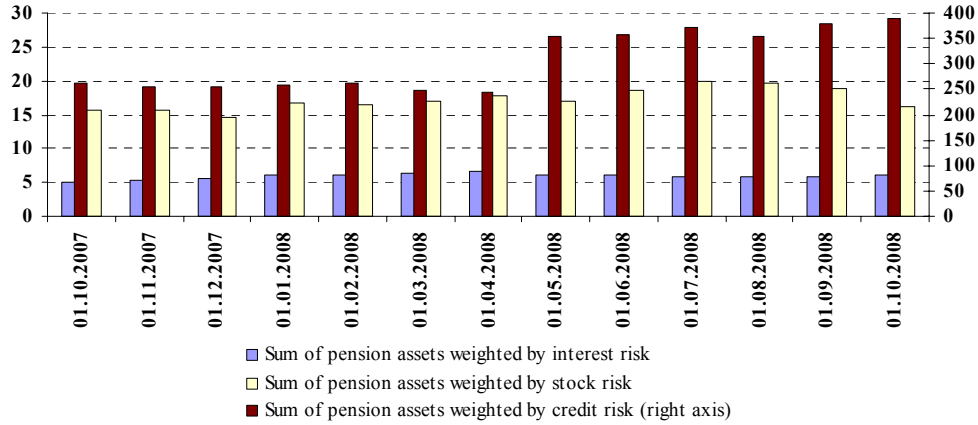
**Profitability of Pension Funds (in %)**




*Source: FSA*

**Figure 6.2.5**

**Risk Weighted Volume of APF Assets (bln. KZT)**




*Source: FSA*

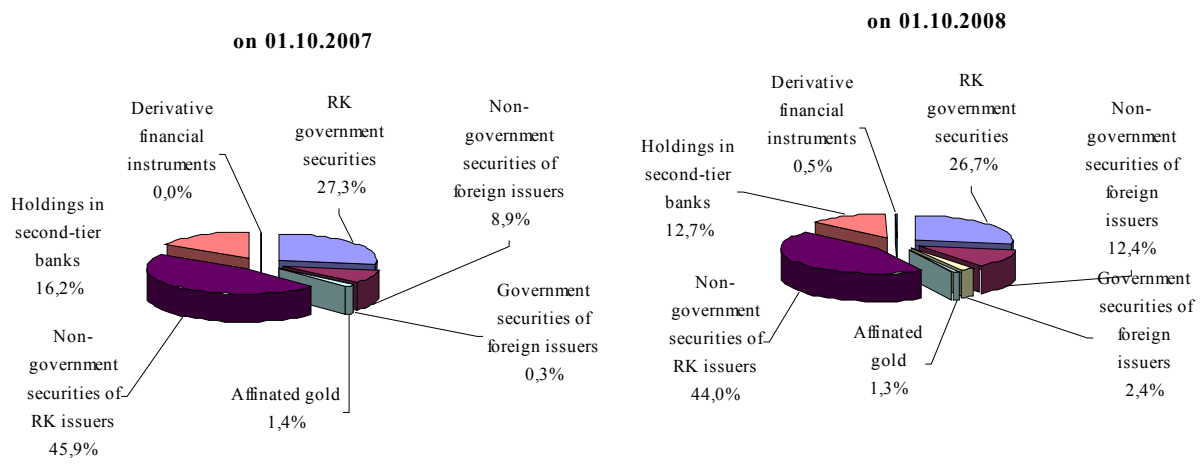
As of October 1, 2008, there was observed a flow of the investments of accumulation pension funds to the external markets, and the increased share of foreign issuers' securities in the structure of the investment portfolio of accumulation pension funds testifies to this. This is largely conditioned by a desire for risks diversification because external markets are represented by a fairly wide list of issuers and instruments meeting the requirements in relation to ratings, reputation available, etc. (Figure 6.2.6). At the same time, since the situation on foreign markets remains rather uncertain and unstable, especially, considering drop in the world stock indices this October, currently accumulation pension funds are restructuring the investment portfolio with the aim of its focusing on the domestic market to a greater extent.

Although the legislation of the Republic of Kazakhstan sets forth a wide list of financial instruments permitted to purchase at the expense of pension assets, taking into consideration the situation on the world stock markets and high volatility of most financial instruments, the accumulation pension funds are currently experiencing lack of facilities for investment.

In the current situation, for the purpose of reducing investment risks, the accumulation pension funds need to adjust the selected investment strategy of pension assets in order to increase the share of financial instruments less exposed to fluctuations of the international stock markets which is possible with enhancement of the risk management system in the accumulation pension funds.

**Figure 6.2.6**

**Structure of APF Securities Portfolio**




*Source: FSA*

## 6.3. Financial Status of Non-Banking Organizations

***The credit activity of the organizations engaged in certain types of banking operations was characterized by more active rates than in the banking sector due to activation of the organizations the sole shareholder (participant) of which is the state in the framework pf implementation of stabilization programs of the state on providing support to the real sector and small and medium-size business entities. At the same time, global instability caused reduction of crediting volumes by mortgage organizations.***

The non-banking organizations sector comparing to the last year was distinguished by a qualitative and quantitative change of participants due to the improvement of the norms regulating legal relationship between the participants on the market of non-banking organizations[47]. Out of 23

[47] Resolution of the Board of the Agency of the Republic of Kazakhstan for Regulation and Supervision of the Financial Market and Financial Organizations No. 280 dated December 24, 2007 "On Amendments to Some Regulatory Legal Acts of the Republic of Kazakhstan on the Matters of Prudential Regulation of the Activity of Mortgage Organizations and Organizations Engaged in Certain Types of Banking Operations" (effective since April 1, 2008).

organizations engaged in certain types of banking operations, 11 organizations were represented by organizations with state participation, among them the following may be noted: JSC Sustainable Development Fund "Kazyna", JSC Entrepreneurship Development Fund "Damu", JSC KazAgro Finance, JSC Agriculture Financial Support Fund, JSC Agrarian Credit Corporation, etc. (Table 6.3.1).

**Table 6.3.1**

**Number of Non-banking Organizations (units)**

| | Jan 1, 2006 | Jan 1, 2007 | Jan 1, 2008 | Apr 1, 2008 | Jul 1, 2008 | Oct 1, 2008 |
|---|---|---|---|---|---|---|
| Organizations engaged in certain types of banking operations | 32 | 16 | 23 | 23 | 22 | 23 |
| Mortgage organizations | 7 | 10 | 12 | 12 | 12 | 12 |

*Source: FSA*

### *Organizations Engaged in Certain Types of Banking Operations*

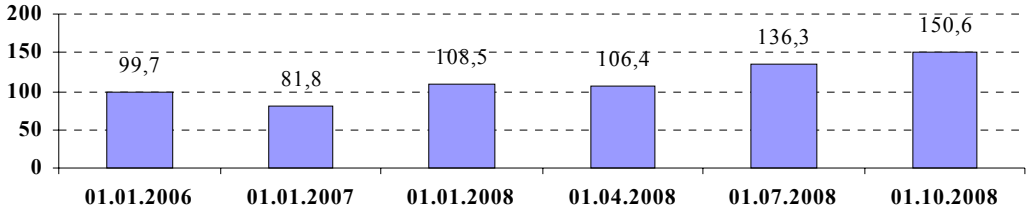
Comparing to the banking sector, a growth of loans issued by the organizations engaged in certain types of banking organizations was comparatively high relative to the beginning of this year and was 38.8%, or in absolute terms the increase was KZT42.1 bln. (Figure 6.3.1).

In the structure of the credits granted by non-baking organizations, the main part is taken by loans to financial organizations (42.2%) and loans to individuals (33.0%), 24.8% comes to the share of other legal entities (Figure 6.3.2). The increase of the share of loans to financial organizations from 18.9% to 42.2% in the structure of non-banking organizations credits was linked with expansion of crediting on support of the real sector of economy and small and medium-size entities through second-level banks as part of the Top Priority Actions Plan on ensuring stability of the socio-economic development of the Republic of Kazakhstan approved by the Resolution of the RK Government last November that, in turn, has also affected the quality of loan portfolio of non-banking organizations.

Thus, the loan portfolio quality has changed positively since January 1, 2008. The share of standard loans in the loan portfolio increased from 95.8% to 97.8%, and the share of doubtful loans (from 1.6% to 1.2%) and bad loans (from 2.6% to 1.0%) decreased (Figure 6.3.3).

**Figure 6.3.1**

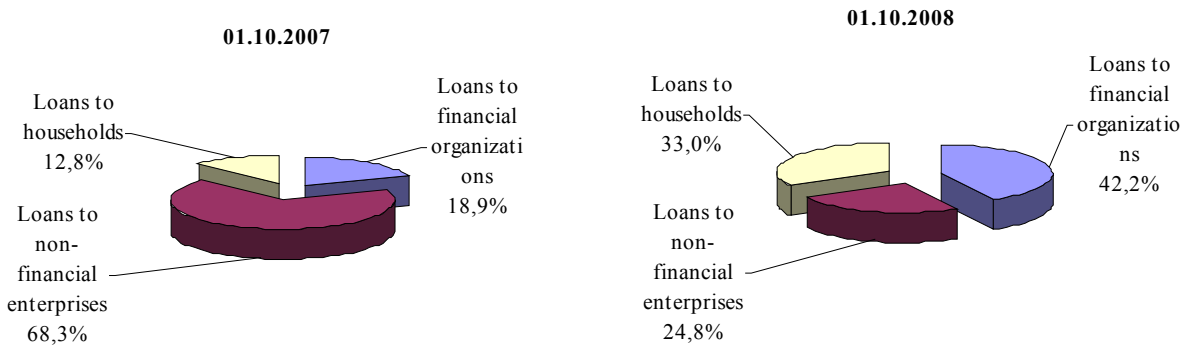
**Loans of Non-banking Organizations to Enterprises and Households (bln. KZT)**




*Source: FSA*

**Figure 6.3.2**

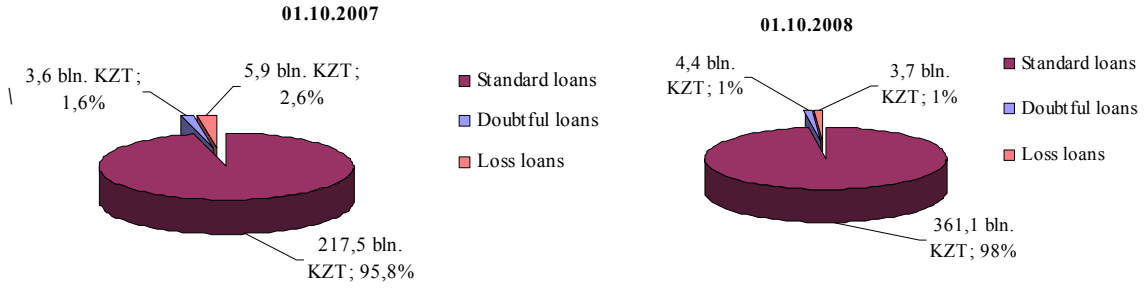
**Structure of Non-banking Organizations' Loan Portfolio (%)**




*Source: FSA*

**Figure 6.3.3**

**Quality of Non-banking Organizations' Loan Portfolio**

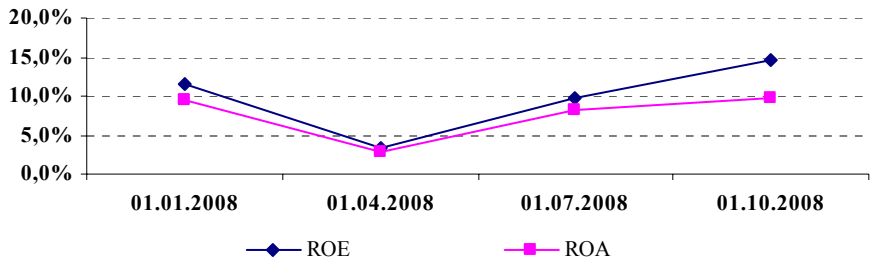



*Source: FSA*

Comparatively active crediting by the organizations engaged in certain types of banking operations also affected the indicators of profitability that from July of this year started to demonstrate a positive trend (Figure 6.3.4).

**Figure 6.3.4**

**Return on Assets and Equity of Non-banking Organizations**




*Source: FSA*

The qualitative and quantitative change in the composition of non-banking organizations, establishing prudential requirements for non-banking organizations with state participation in capital revealed possible risks of solvency and liquidity.

The degree of covering liabilities with capital decreased as of October 1, 2008 which is characterized by the growth of a liability to capital ratio in the third quarter of this year comparing to the previous quarter.

At the same time, sustainability to the risk of liquidity is inclined to weaken because the share of short-term assets meant for covering short-term liabilities is noticeably decreasing. The share of high-liquid assets in the total amount of assets was 9.4% which is much lower than the same indicator on the banking system (Table 6.3.2).

**Table 6.3.2**

**Solvency and Liquidity Risks of Non-banking Organizations**

| | Oct 1, 2006 | Oct 1, 2007 | Jul 1, 2008 | Oct 1, 2008 |
|---|---|---|---|---|
| Share of high-liquid assets in the total sum of assets, in % | 13.67 | 8.13 | 12.7 | 9.4 |
| Ratio of short-term assets to short-term liabilities | 0.39 | 1.89 | 0.46 | 0.40 |
| Ratio of liabilities to capital | 0.76 | 0.28 | 0.5 | 0.6 |

*Source: FSA*

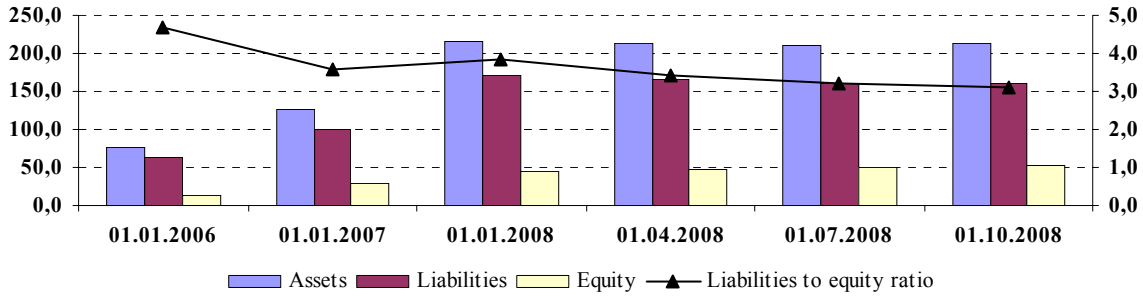
### *Mortgage Organizations*

This year mortgage organizations have appeared to be under the influence of the tendencies occurring in the banking sector and on the real estate market. In the dynamics of assets and liabilities of mortgage organizations, the latter decreased by 1.8% (from KZT216.1 to KZT212.2 bln.) and by 6.6% (from KZT171.6 to KZT160.3 bln.) respectively in contrast to the similar indicators of the organizations engaged in certain types of banking organizations. The decrease of liabilities was caused by a reduction from the beginning of the year of the loans received from other banks and non-banking organizations by 15.7% and the securities issued by 6.0%.

The mortgage organizations capital grew by 16.4% to KZT51.9 bln. The level of covering of liabilities with capital remains low even with leverage value reduction from 3.85 to 3.09 (Figure 6.3.5) because the capital value covering the liabilities increased only from 26.0% to 32.4%.

**Figure 6.3.5**

**Data on Assets, Liabilities and Equity of Mortgage Organizations (bln. KZT)**

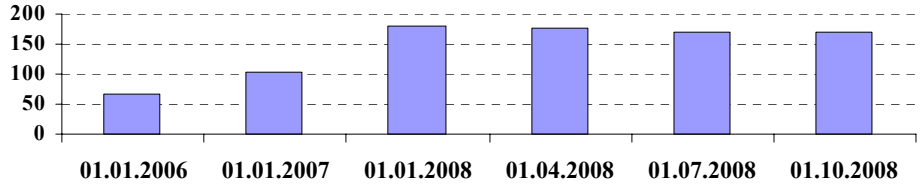



*Source: FSA*

Dynamics of the loan portfolio of mortgage organizations from the beginning of the current year demonstrates reduction by 5.5% from KZT180.3 to KZT170.5 bln. which was conditioned to a greater extent by reduction of 'reverse REPO' operations by 42.5% to KZT9.1 bln. and to a less extent by reduction of loans to clients by 1.9% to KZT161.4 bln. (Figure 6.3.6).

**Figure 6.3.6**

**Loan Portfolio of Mortgage Organizations (bln. KZT)**

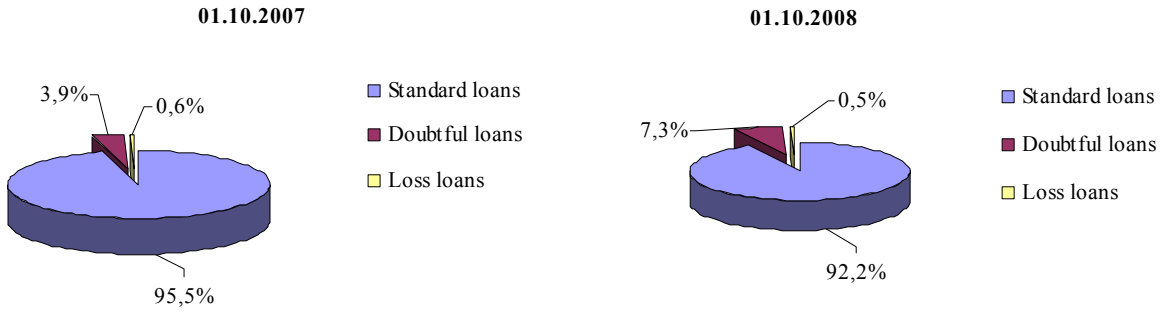



*Source: FSA*

The quality of the loan portfolio of mortgage organizations has undergone a considerable change. In the structure of the loan portfolio from the beginning of this year the share of standard loans reduced by 0.3 percentage points to 92.2% with movement to the category of doubtful loans the share of which increased by 3.4 percentage points to 7.3%. The specific weight of doubtful loans in the loan portfolio insignificantly decreased from 0.6% to 0.5%. In spite of decrease in quality of the mortgage organizations loans, their level remains rather high in comparison with quality of the banking sector loans (Figure 6.3.7). In this background the indicators of profitability of mortgage organizations remain in general positive (Figure 6.3.8).

**Figure 6.3.7**

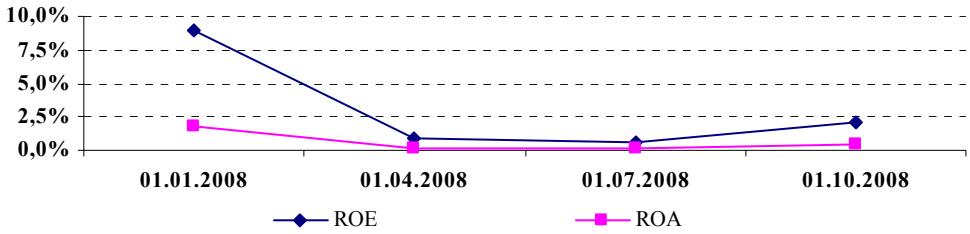
**Quality of Mortgage Organizations' Loan Portfolio (bln. KZT)**




*Source: FSA*

**Figure 6.3.8**

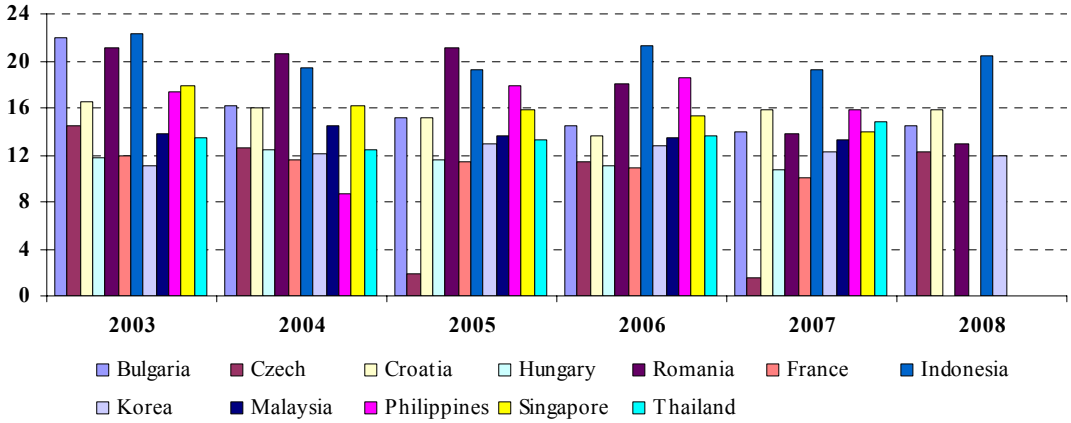
**Return on Assets and Equity of Mortgage Organizations**




*Source: FSA*

**Figure 5.5.5**

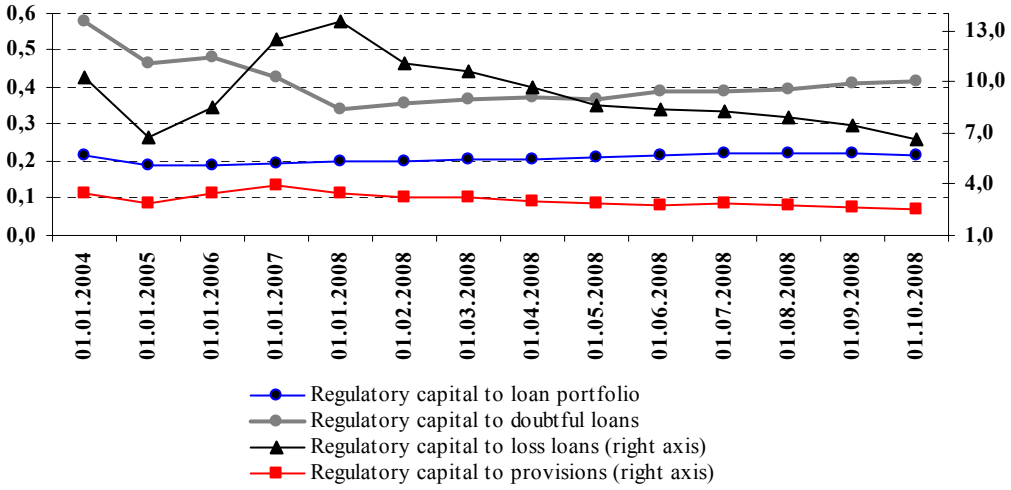
**Capital Adequacy of Banks Across Countries (ratio of regulatory capital to risk weighted assets (k2), %)**




*Source: IMF (GFSR 2008)*

**Figure 5.5.6**

**Capital Adequacy Indicators of the Banking Sector**




*Source: FSA*

# 7. Financial Market Infrastructure

## 7.1. Payment Systems

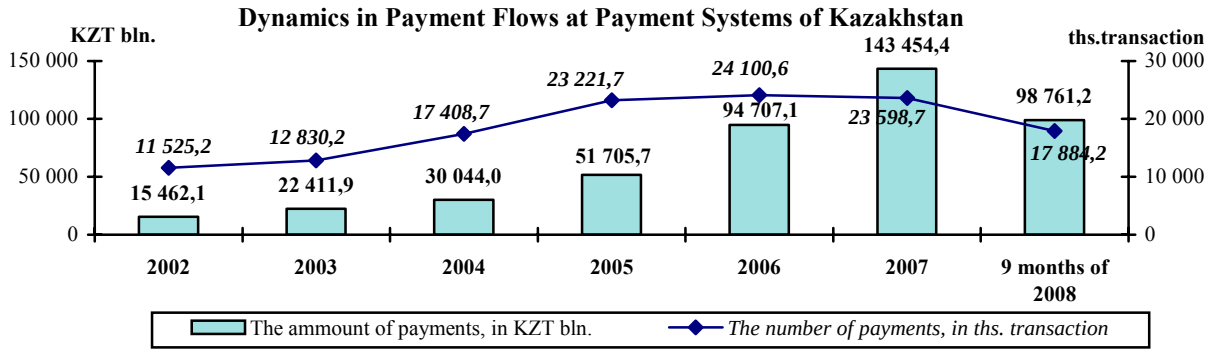
Influence of the global financial crisis on the payment systems of Kazakhstan has manifested itself in the 10.9% decrease comparing to the previous year in liquidity of STB and organizations engaged in certain types of banking operations, which used for payments and money transfers. However, the decrease in the liquidity in the payment system has not entailed growth in STB insolvency, which is related to continuous monitoring of payment systems, use of such methods of risk management as management of turn of payments, money transfers from the correspondent account of the participant to his position in the system and use of interbank credits.

Also in 2008 NBRK paid a special attention to the payment systems oversight with a view of maintenance of their effective functioning that promotes efficiency of use of financial resources and ensure the financial market liquidity.

### 7.1.1. Development of Payment Systems in Kazakhstan

In 2008 NBRK continued to work on developing the regulatory legal acts in the sphere of payments and money transfers and further development in the payment systems of Kazakhstan. Over 9 months of 2008, 17.9 mln. transactions in the amount of KZT98.8 trln. (Figure 7.1.1.1) were passed via the payment systems. In comparison with a respective period of the last year, the number of payments within the payment systems increased by 3.8% (or 651.0 thousand transactions), with the decrease in the amount of payments by 10.6% (or KZT11.7 trln.).

**Figure 7.1.1.1**




*Source: NBRK*

When considering functional features of the payment systems of Kazakhstan it should be noted that each of them has its own designation and directed to certain markets of goods and services.

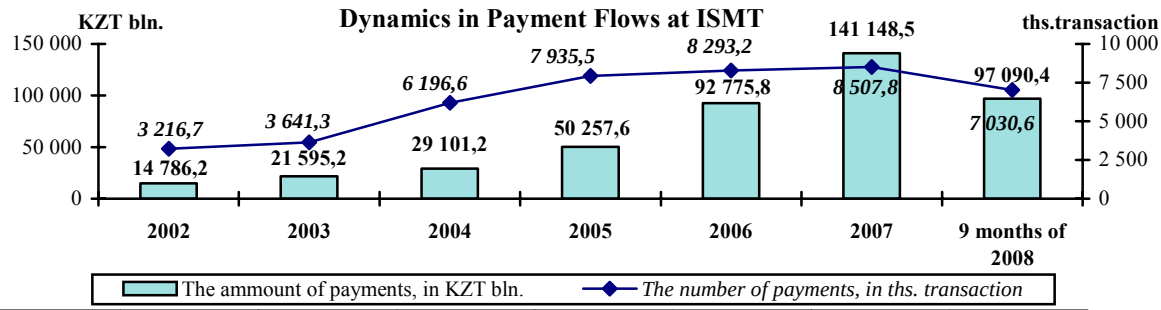
Interbank System of Money Transfers (hereinafter *ISMT*)

The ISMT is a systemically important payment system in Kazkahstan and is intended for passing large and high-priority payments in the country on financial sector operations (payments on transactions with interbank deposits and credits, securities and foreign currency). Therefore, this payment system has a largest share of the total amount of non-cash payments in the country (over 9 months of 2008, 98.3% of the total value of non-cash payments and 39.3% of total volume were passed through ISMT).

On the whole, over 9 months of 2008, 7.0 mln. transactions in the amount of KZT97.1 trln. were passed through ISMT. In comparison with the same period of 2007, the volume of payments

increased by 14.5%, and the amount of payments decreased by 10.7% (Figure 7.1.1.2). An average amount per one payment document in ISMT in January-September 2008 was KZT13.8 mln.

**Figure 7.1.1.2**




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| The number of participants, in units | 72 | 69 | 52 | 51 | 50 | 49 | 51 |
| Average amount of 1 payment, in KZTmln. | 4,6 | 5,9 | 4,7 | 6,3 | 11,2 | 16,6 | 13,8 |

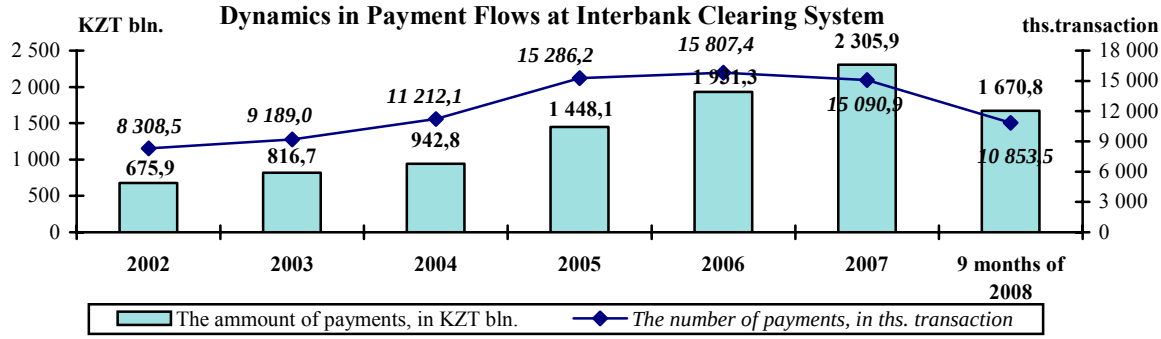
*Source: NBRK*

## *Interbank Clearing System*

In the Interbank Clearing System the payments are carried out on net (clear) basis and mainly receive retail payments of little amounts, which contributes to passing of more than a half of all non-cash payments through the system (over 9 months of 2008 60.7% out of the total volume of all non-cash payments, or 1.7% of the total value, passed through the system). The system is highly important for the economy due to safety of the main quantitative flow of retail payments in the country. The system is mainly used for economic entities' non-priority and not urgent payments is primarily applied to enter non-priority and non-prompt payments for goods and services, budgetary payments, and the low cost of tariffs make processing of such payments economically efficient.

Over 9 months of 2008, the amount of payments within the system decreased by 0.8% in comparison with the same period of the last year, and the number of payments by 2.2% (Figure 7.1.1.3). An average amount per one payment document in the Interbank Clearing System over 9 months of 2008 was KZT153.9 thousand.

**Figure 7.1.1.3**




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| The number of participants, in units | 51 | 47 | 32 | 34 | 33 | 33 | 36 |
| Average amount of 1 payment, in KZT mln. | 81,4 | 88,9 | 84,1 | 94,7 | 122,2 | 152,8 | 153,9 |

*Source: NBRK*

### 7.1.2. Liquidity Risk and System Risk

The main financial risks specific for the payments systems are liquidity risks[48] and systemic risks[49] that influence on timely fulfillment of payments. Each system has its own features and risk management methods.

*Interbank System of Money Transfers*

The ISMT provides settlement of payments in a real time mode within amounts at participants' positions in the system, therefore, rapt attention is drawn to the liquidity risk

To manage this risk the queue management mechanism (the settlement of payment documents priorities and changing queue of payment documents) is being applied and additional money tranfers from the corresponding account of the participant to his system position are being carried out. Moreover, NBRK calculates ISMT's money turnover ratio (hereinafter referred to as MTR) and liquidity ratio (hereinafter referred to as MLR), and analysis of their conformity to fixed parameters[50].

An average daily ISMT' money turnover ratio[51] (MTR) was 0.98. An average system' money liquidity ratio[52] (MLR) equaled 1.11, with no excess of average monthly MTR and MLR fixed margin parameters.

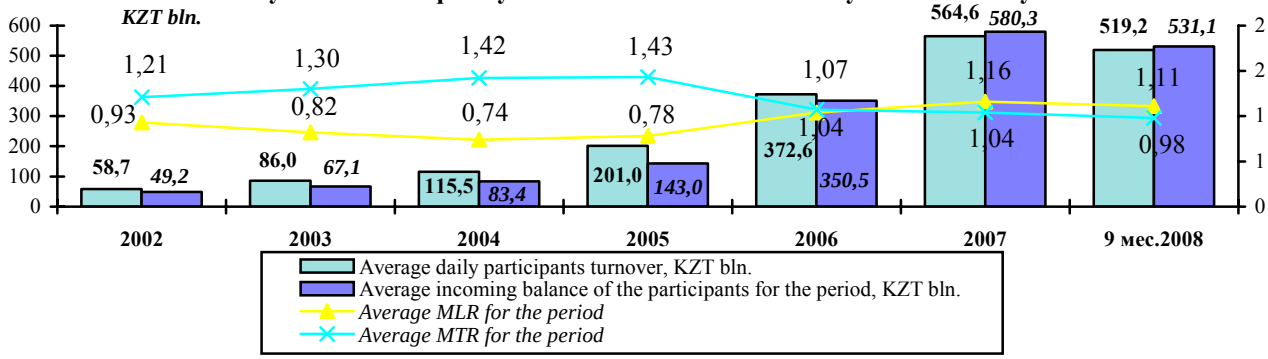
However, ISMT participants' liquidity is recorded to be falling. An average daily ISMT participants' liquidity (incoming balance in ISMT[53], permitting the participants to fulfill payments) over 9 months of 2008 reached KZT531.1 bln, having fallen by 10.9% in comparison with the corresponding period of 2007 (Figure 7.1.2.1).

56.5% of total liquidity value was provided for with the resources of NBRK. An average daily system participants' liquidity, without account of NBRK resources, over 9 months of 2008 reached KZT231.1 bln, which is 49.2% lower than the average turnover sum of the participants.

At the same time monitoring of queue of payment documents contributed to the decrease in the number of rejected payments. Over 9 months of 2008, 9 payments to the sum of KZT133.5 bln. were rejected (withdrawn) due to lack of liquidity in ISMT, with 15 payments to the sum of KZT35.7 bln. rejected for the same reason in the corresponding period of 2007 (Table 7.1.2.1). All rejected or withdrawn payment documents were passed by ISMT participants the same day or on the operational days additionally.

**Figure 7.1.2.1**

**Dynamics of Liquidity indicators at the Interbank System of Money Transfer**




*Source: NBRK*

[48] Liquidity risk is the potential that a payer will be unable to meet his obligations to transfer money as they come due.

[49] Systemic risk is the potential that a payment system participant's default on money transfer will entail a consequent default by other participant or participants of the payment system.

[50] To manage the liquidity risks the following margins of the system liquidity and money turnover ratios are set within the system: upper bound MLR>1.5 @ MTR<0.5, lower bound MLR<0.5 @ MTR>1.5.

[51] Money turnover ratio is directly proportional to debit turnover within ISMT in the system liquidity.

[52] Money liquidity ratio is the ratio of the system liquidity (incoming remainder of all the participants) to the sum of debit turnover within ISMT and rejected (recalled) payments within ISMT.

[53] Incoming balance of a participant is the money remitted by the participant from the correspondent account to the system position.

**Table 7.1.2.1**

**Rejected Payments in Interbank System of Money Transfers**

| Description | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 9 months of 2008 |
|---|---|---|---|---|---|---|---|
| Volume, in units | 239 | 163 | 2,185 | 27 | 39 | 26 | 9 |
| Amount, KZT mln. | 133,890.1 | 18,206.4 | 8,995.1 | 716.6 | 48,088.6 | 224, 952.2 | 133,491.2 |
| Number of participants with rejected (withdrawn) payments, in units | 20 | 27 | 12 | 8 | 12 | 15 | 7 |
| Number of days in a year when the payments were rejected (withdrawn), in units | 48 | 33 | 27 | 9 | 17 | 20 | 7 |

*Source: NBRK*

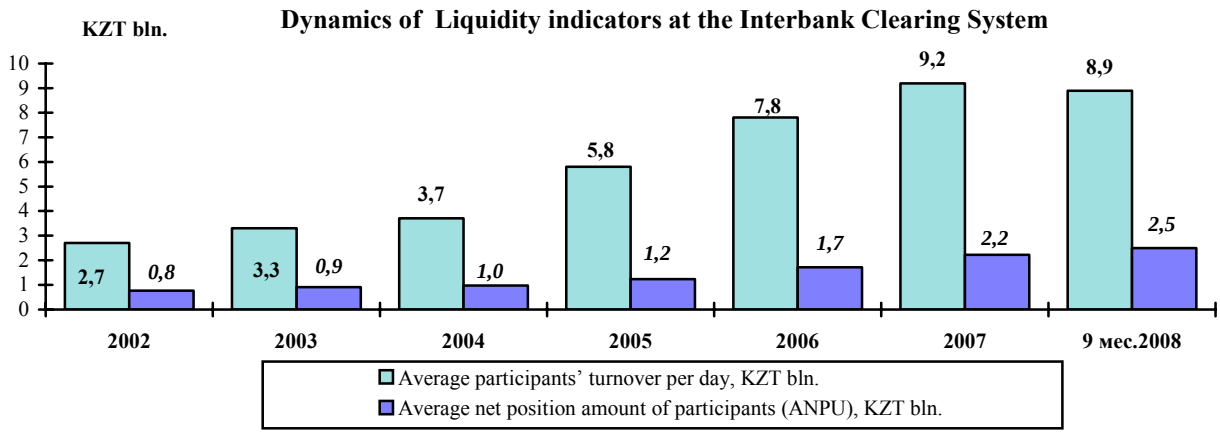
*Interbank Clearing System*

In order to manage liquidity and systemic risks in the Interbank Clearing System the queue "unwinding" method is applied, when the payment documents for the outstanding sum with a lower priority are cancelled, also the MTR (money turnover ratio) calculation and participants' net position amount analysis are carried out daily.

Over 9 months of 2008 an average daily MTR was 3.9, being 4.5 in the corresponding period of 2007. The payment value rise in the payment systems coincided with the corresponding increase in the average sum of participants' net debit position in clearing. In comparison with the corresponding period of 2007 the average sum of net position grew by 15.2% and reached KZT2.50 bln. over 9 months of 2008 (Figure 7.1.2.2). The participants' net position in clearing compared to the sum of average daily participants' turnover within ISMT[54] remains insignificant (0.5% over 9 months of 2007).

However, due to an overall liquidity cutback in the payment system 111 payment documents in the amount of KZT66.6 mln. were cancelled owing to insufficient liquidity over 9 months of 2008 in the Interbank Clearing System (Table 7.1.2.2).

**Figure 7.1.2.2**




*Source: NBRK*

[54] An average sum of the participants' net debit position corresponds to an average daily amount of participants' turnover within ISMT, as the calculation of the participants' net position in clearing is done with the available resources of participants within ISMT.

Table 7.1.2.2

**Cancelled payments in Interbank Clearing System**

| Description | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 9 months of 2008 |
|---|---|---|---|---|---|---|---|
| Volume,in units | 392.0 | 515.0 | 164.0 | 141.0 | 156.0 | 47 | 111 |
| Value, KZT mln. | 57.9 | 107.4 | 27.8 | 44.9 | 83.9 | 29.9 | 66.6 |
| **Number of participants with cancelled payments, in units** | **8** | **9** | **5** | **4** | **1** | **3** | **5** |
| **Number of days in a year when payments were cancelled, in units** | **16** | **10** | **5** | **4** | **1** | **3** | **5** |

*Source: NBRK*

### 7.1.3. Operational and Technical Risks

In order to manage technical risks caused by possible breakdowns and failures of software and means of communication, and operational risks caused by possible executive errors of a participant's or an operator's personnel, NBRK applies such methods as the payment system reserve centre, authorised access to servers and communications, verification of the payment system participants, and differentiation of tasks for the personnel of the payment systems operator.

Thus, in 2008 was decided to purchase new servers for the reserve centre with the performance attributes identical to those of the servers at the main payment systems centre. Also carrying out works on creation new reserve centre in Astana, which is to secure sustainable work of NBRK and the payment systems in case of emergency within the main centre area.

In 2008 for providing safety of the working place of the payment systems participants *Alliance Bank* JSC, *Metrocombank* JSC, *Masterbank* JSC, *Tsesnabank* JSC and State Communal Enterprise *The State Centre for Pension Payment* were inspected, and recommendations were provided on organizing a working place, using means f protection and job organization for the personnel of the payment systems.

## 7.2 Financial System Risk Management

***State measures to stabilize the economy and the financial system in 2007-2008 were mostly short-term and not intending to diversify the economic system. However, the measures proved to be efficient enough to mitigate the negative influence of the global financial crisis. One of the state-controlled macro-risk management system weaknesses can be limited possibilities of safety net institutions.***

State stabilization measures include both those of providing direct support to the economy and financial sphere and those of regulatory type, among which is a number of adopted laws and legislative acts, and amendments to the prudential norms.

### NBRK Measures on Banking System Support

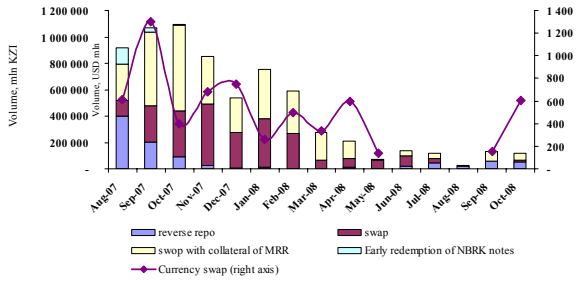
Since August 2007, NBRK has undertaken a raw of measures aimed at supporting the banking system liquidity. During August-September STB were actively supported via provision of short-term liquidity in the form of reverse REPO, swap, swap on the security of MRR, and currency swap. During August-October NBRK notes worth KZT162.5 bln. were redeemed ahead of term. Aggregate sums of refinancing in the national currency in 2007 reached KZT4,473.2 bln., and of currency swap USD3.7 bln., during January-October 2008, KZT2.4 bln. and USD2.6 bln. respectively. The total debt of the banks on these operations in the NBRK's balance was KZT20.8 bln. at the end October 2008, and USD155.5 mln. in the foreign currency. Additionally, NBRK brought in a range of regulatory changes aimed at facilitating of gaining the STB liquidity. E.g.,

bank loan limits for loans against pledge of remainders on the correspondent accounts were reduced from not more than 70% of remainder on the day of the request for loan and not more than 70% of an average remainder MRR in the last period under review up to 50%. In November 2007, the Cooperation and interaction agreements on the matters of granting bank loans were signed by NBRK, AFN and STBs. According to this agreement, STBs assumed obligations on maintaining external liabilities and assets volume at a level not higher than that of November 1, 2007, on increasing the authorized capital and running conservative credit and moderate deposit policy.

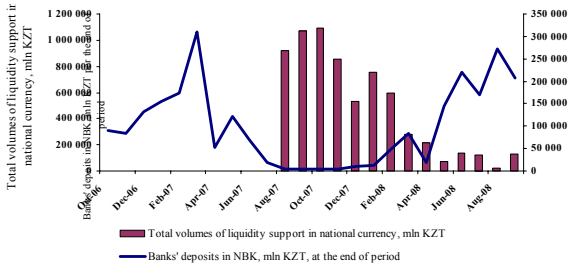
In the end of September 2008, STBs' deposits in NBRK had increased since the beginning of the year (KZT9.9 bln as of the end of 2007) and reached KZT208.3 bln. In 2007-2008, an absolute maximum of this indicator could be observed in the end of March 2007 (KZT309.3 bln.), with a further abrupt fall down, and only KZT4.6 bln worth deposits by the end of August 2007. The situation has changed in the current year: in January-August the deposits grew considerably and reached KZT271.4 bln. by the end of August 2008. Thus, by the August 2008, the banking system had considerable volumes of liquidity; no additional NBRK support was required. (Figures 7.2.1 – 7.2.2).

**Figures 7.2.1 and 7.2.2**

**Liquidity support from NBRK to banking sector**




*Source: NBRK*



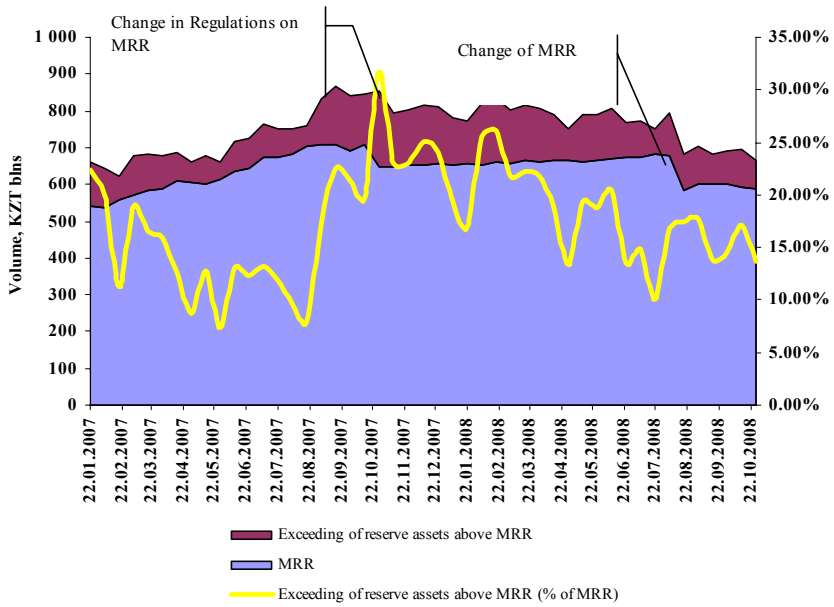

*Source: NBRK*

In 2008 NBRK have essentially widened the list of possible collaterals for refinancing transactions for two times. On February 4, 2008 the following securities were included in the list of possible collaterals for reverse REPO: Kazakhstani national companies' securities, securities of foreign countries and international financial organizations' securities admitted to purchase by STBs according to the requirements of the Agency for Regulation and Supervision of Financial Market and Financial Organizations. However, in February-March 2008 there were no reverse REPO transactions with STBs, and during the subsequent months their volume was incomparable to that of August 2007. This proved the measure to be a preventive one: in case STBs have an urgent demand in KZT liquidity the volumes of liquidity support can be higher now than if the previous securities list used. Additional possibilities to extend financing are to be acquired due to the adoption of the expansion in the list of assets to be collateral for NBRK's refinancing transactions on May 12, 2008. The list of collaterals for reverse REPO transactions was expanded with certain STBs' bonds issued by May 1, 2008, and agent's debt securities of *Kazakhstan Mortgage Company* JSC.

In August 2007, NBRK brought in changes into Regulations on minimal reserve requirements aimed at reducing the reserve liabilities base and expanding the reserve assets structure to allow STBs to release, by preliminarily estimation, additional KZT150 bln. The amendments came into force on October 9, 2007. They took effect on reserve assets structure, list of internal and other liabilities of STBs, and norms of Regulations concerning control over compliance with the MRR regulations. However, the STBs benefited from the possibility of liquidity release later and not fully, which is confirmed with significant gap between reserve assets and MRR (on October 29 it was estimated as 31.7% of MRR value). A minimum gap between MRR and reserve assets was noticed in May and August 2007 (7.3% on May 28, 7.9% on August 20).

**Figure 7.2.3**

**Comparison of Assets and MRR Dynamics**




*Source: NBRK*

MRR regulations amendments (on internal liabilities lowered from 6% to 5%, on other liabilities from 8% to 7%) that come into force on July 29, 2008 had more significant effect. As of July 21, 2008 an estimated value of reserve assets exceeding MRR reached a local minimum and made up 10.1%, with the decrease in reserve assets from KZT793.7 bln. on August 4, 2008 to KZT683.8 bln. on August 18, 2008. In other words, STBs managed to release more than KZT109 bln. (Figure 7.2.3). For the period from the beginning of October 2008 (1.10.2007) to the end of September 2008 (29.09.2008) the downdrift in MRR or release of resources was about KZT151 bln. Taking into account MRR reduction, potential release of money resources during the period could reach KZT239 bln. The last MRR change in November, 18 was its reduction from 5% to 2% on internal liabilities and from 7% to 3% on other liabilities, which is presumably to allow release of about KZT350 bln.

## Prudential and Legislative Measures Implemented by the Agency for Regulation and Supervision of Financial Market and Financial Organizations

Possible negative after-effect of 'contagion' demanded amendments in prudential norms in order to lower the financial system risks level. This forced AFN to take a number of measures aimed at decreasing external economic risks, liquidity and capital adequacy risks. (Table 7.2.1).

**Table 7.2.1**

**Anti-crisis Prudential Measures by AFN**

| Norm | Normative/Legislative act | Adopted as of | Amendments come into force as of | Description of amendments |
|---|---|---|---|---|
| Reserve capital size | AFN decree No. 256 *On amendments to National Bank of Kazakhstan Managerial Enactment* No. 70 of February 26, 2000 *On min. size of STBs' reserve capital.* | November 30, 2007 | May 1, 2008 | Cut in reserve capital share from 5% of STBs' total assets not to be classified to 2% of credit portfolio to be classified. |
| Size of attracted and equity asset base of STBs, subject to obligatory placing in | AFN Decree No. 8 *On amendments to National Bank of Kazakhstan Managerial Enactment* No. 262 as of June 2, 2000 *On Regulation on* | January 25, 2008 | July 1, 2008 | Extending base of attracted and equity assets of STBs, subject to obligatory placing in assets in Kazakhstan. In particular, base of attracted liabilities of |

| | | | | |
|---|---|---|---|---|
| assets in Kazakhstan | *placing part of bank assets into internal assets.* | | | bank is supplemented with unlimited financial instruments and bonds issued by bank |
| Imposition of quick and quick currency liquidity <7 days ratios and change in calculation of quick and currency liquidity <30 and 90 days ratios | AFN Managerial Enactment No. 20 *On amendments to Decrees* of *Agency for Regulation and Supervision of Financial Market and Financial Organizations* No. 358 as of September 30, 2005 *On Regulation on margin values and calculation of prudential norms for STBs* | February 26, 2008 | July 1, 2008 | Admissible level in quick liquidity and quick currency liquidity of <7 days cannot be below 1, <30 days cannot be below 0.9, <90 days cannot be below 0.8. |
| Increased requirements on min. authorized and equity capitals of STBs | Decree No. 140 of Agency for Regulation and Supervision of Financial Market and Financial Organizations *On min. size of authorized and equity capitals of STBs.* | September 2, 2008 | The amendments will come into force gradually | Requirements to size of authorized and equity capitals of newly created banks increased to KZT5 bln, for operating banks gradual increase in min. equity capital as of July 1, 2009 to KZT5 bln, as of July 1, 2011 to KZT10 bln; for banks outside Astana and Almaty to KZT3 bln and KZT5 bln respectively. |
| Change in equity capital adequacy coefficients (k1 and k2), cut in the normative value of capitalization index k9 | Agency's Decree No. 146 *On amendments to Managerial Enactment* of *Agency for Regulation and Supervision of Financial Market and Financial Organizations* No. 358 as of September 30, 2005 *On Regulation on margin values and calculation of prudential norms for STBs.* | October 2, 2008 | Supposedly as of July 1, 2009 | Values of equity capital adequacy coefficients should be for κ1 >0.06 and κ2 >0.12, for a bank not having a large individual participant values equity capital adequacy coefficients should be for κ1 >0.07 and κ2 >0.14; for a bank having a banking holding or parental bank as participant, and a rating set according to legislation regulations κ1 > 0.05 and κ2 >0.10. For a bank where 50% of placed assets are state-owned, the value of the coefficients is for κ1 >0.06 and κ2 >0.12. Normative value of capitalization index k9 was cut from 4 to 3. |

*Source: AFN*

Additionally, in October 23, 2008, there was adopted Law of the Republic of Kazakhstan No. 72-IV "On Amendments to Some Legislative Acts of the Republic of Kazakhstan on the Financial System Sustainability". The Law is aimed at improving early diagnostic mechanisms of the financial system risks, expanding the authorized body competence in case shareholders of the financial organizations fail to comply with the requirements of the authorized body on improving the financial state of a financial organization. It is also aimed at increasing responsibilities of executives and larger participants of the financial organization with a view of increasing the financial organization responsibility for their liabilities. The following norms aimed at assuring the financial sustainability are to be singled out:

- Increase in the sum of a guaranteed refund on the deposits of individuals up to KZT1 mln. and as a stabilizing measure up to KZT5 mln. till January 1, 2012.
- Ban on reception of deposits from individuals and opening accounts for individuals by STBs not having large participants, i.e. individuals, or a parent bank, or a holding company, not having a particular rating of a rating agency included in the list, and the min. permissible rating established by the authorized body. The ban is planned to be put into force from January 1, 2010.
- Prohibition on the change in rates for the period of three years from the date of the official publication of the Law (October 24, 2008), i.e. STB and the organizations carrying out particular types of bank transactions, having concluded bank loan agreements (including mortgage loan) with individuals have no right to increase the rate above the value established by provisions of agreements during the specified term.
- Norm by which the Government of Kazakhstan upon agreement with the authorized body has the right to make a decision on purchasing by the Government or the National management company of the announced STB's shares in the amount of not less than 10% of total amount of placed shares with the aim of timely reaction to the arisen problems within STB which have manifested themselves in significant violation of prudential norms

and/or other mandatory norms and limits. In case the financial state of STB improves, the Government takes measures on the sale of the acquired shares of STB.

## Budgetary Financing of Stabilization Programs

In 2007, KZT122 bln. has been allocated from the budget, of which about USD93.4 bln. (financing the target branches) was implemented as of October 1, 2008. All money allocated in 2007 formed the authorized capital of *Kazyna Sustainable Development Fund* JSC that used it to support the construction sector, small and average business and agriculture.

On the whole, over 3 quarters of 2008, KZT236.1 bln. was allocated to stabilize the economic development, of which KZT155.2 bln. was implemented as of October 1, 2008. (Table 7.2.2).

**Table 7.2.2**

**Stabilization Measures of Government in 2008**

| Measure description | Allocated resources (bln KZT) | Implementation of resources as of October 1, 2008 (bln KZT)* |
|---|---|---|
| **Allocated money as of October 1, total** | **236.1** | **155.2** |
| Support to agriculture | 41.4 | 27.9 |
| Food security provision (state food reserve formation) | 10.3 | 4.3 |
| Support for building sector and completion of building projects to protect the shareholders, including: | 114.5 | 53.1 |
| *Target current transfers to akim of Astana for purchase of accommodation* | *41.0* | *14.5* |
| *Target transfers to Almaty and Astana for participation in completing building projects with the participation of shareholders* | *27.2* | *27.2* |
| *Increase in the authorized capital stock of Kazyna Fund to complete building projects in the housing sector* | *46.3* | *11.4* |
| Support to small and medium business, including: | 70.0 | 70.0 |
| *Increase in the authorized capital stock of Kazyna Fund for preferential financing of entities in small and medium businesses* | *66.0* | *66.0* |
| *Increase in the authorized capital stock of Social-Entrepreneurship Corporation Ontustyk National Company JSC to support entities of small and medium businesses and agriculture* | *4.0* | *4.0* |

*Source: MF*

**Implementation in certain cases means the sum contributed to financing of purpose-oriented projects, in other cases the fact of a complete transfer of money to local budgets for regional and municipal programs.*

Thus, the sectors receiving priority support are agriculture, construction industry, and small and medium business. Support provided to these sectors can solve the problem of stabilizing the country's economy both in a short and long term. However, this is not aimed at structural reconstructing the economy, in order to decrease the system macro-risks, or reduce disparity in the development of the economy.

## Stabilization Measures of *Kazyna Sustainable Development Fund* JSC (*Sumruk-Kazyna National Welfare Fund* JSC)[55]

100% of money resources allocated in 2007 from the State Budget to implement stabilization measures were consigned to support the economy through *Kazyna* Fund. In 2008 to implement measures in co-operation with the Fund KZT112.26 bln. was allocated, accounting for 47.5% of total allotments to stabilization programs this year[56]. *Kazyna* Fund became the structure bearing the main responsibility for implementing the stabilization measures. The support mechanism implies placement of capital on the deposits in STBs, and its subsequent allocation to

[55] According to the governmental order *Measures to implement Order of the President of RK No.669 of October 13, 2008 on founding Sumruk-Kazyna Fund,* the National Holding *Sumruk* merged with the National Management Company *Kazyna*, as a result of which *Sumruk-Kazyna National Welfare Fund* JSC was founded

[56] According to the Ministry of Finance

end-use financing. The basic directions of *Kazyna* Fund activity are support for the small and medium business[57], agriculture and construction industry (Table 7.2.3).

**Table 7.2.3**

**Stabilization Activity by *Kazyna Fund***

| *Economy Description* | *Forecasted volumes and terms of investment in STB* | *Rates of bank investment in economic entities* | *Implementation of money allocated by banks as of October 1, 2008, bln KZT* | *Effect (as of October 1, 2008)* |
|---|---|---|---|---|
| | | ***2007*** | | |
| Construction sector (completing projects with individual co-investors' participation) | KZT48.8 bln @10.6% to 10.85%[58] in 6 STB | 15 - 19%[59] | 31.24 (implementation according to plan of financing) | Financing continues for 26 units, completed for 5 units, stopped for 6 units due to lack of collateral or choice of other sources |
| Small and medium businesses (via *Damu* Fund) | KZT48.8 bln @10.7% to 10.85% (incl. *Kazyna* rate of 7%) in 7 STBs (1st tranche) | Average rates in banks 16.3% - 18.3% (simple average rate 17.7%) at average credit term of 39 months | Complete | 1989 projects were financed, and 2332 workplaces created |
| Agriculture | KZT24.4 bln with the term of 14 months at average rate of 10.22% | Rate <16% term of 14 months (Ministry of Agriculture subsides up to 80% of interest) | 13.36 | 34 agricultural projects of priority branches were financed (production of vegetable oil, sugar, dairy products and meat) |
| | | ***2008*** | | |
| Construction sector (completing projects with individual co-investors' participation) | KZT46.26 bln @10.6% to 10.85%[60] in 6 STB | 15 - 19%[61] | 11.36 | Astana: of 37 projects (15.6 thousand flats, 8.5 thousand individual co-investors) 6 are completed (2.6 thousand flats, 1.7 thousand individual co-investors)<br>Almaty: of 14 projects (4 thousand flats, 1.7 thousand individual co-investors) 2 are completed (450 flats, 105 individual co-investors) |
| Small and medium businesses (via *Damu* Fund) | KZT50 bln @7.5% (incl. *Kazyna* rate of 6%) for 84 months[62] (money allocated in end-August) | 12.5% per project, average credit amount KZT30.9 mln average credit term 47.2 months | Allocated credits worth KZT3.2 bln as of October 1, in October 9.2 bln | As of October 1, 96 projects received financing. In October 306 projects were financed.<br>As of end-October, 703 workplaces were created |
| Small and medium businesses (via *Damu* Fund with co-operation of local executive bodies) | KZT28 bln is planned to be invested (as of October 1 *Damu* Fund was allocated KZT9.4 bln from *Kazyna* Fund).<br>KZT4.5 bln was placed by *Damu* Fund in banks; local executive bodies placed KZT6.1 bln @8.46% to 8.51%[63] (with local bodies' money @1.5%) in 4 STB (as of November 1) | Average rate 13.4% at average credit term 13.3 months | Allocated credits worth 1.26 bln KZT | 66 projects were financed |

*Source: MF, MEBP, Kazyna, Damu*

The following projects have also been financed:

- Construction of 4 infrastructure projects in Astana (Stadium, Congress Hall, Concert Hall, Presidential Park) in the amount of KZT12.7 bln. via *Astana Finance* JSC (refund from the state budget in 2009)

[57] Carried out through *Damu Entrepreneurship Development Fund*, with *Kazyna* Fund allotting money to *Damu Fund* and its subsequent placement in the banks
[58] Rate on investment of money allocated in 2007 – 2008
[59] On crediting with money allocated in 2007 – 2008
[60] Rate on investment of money allocated in 2007 – 2008
[61] On crediting with money allocated in 2007 – 2008
[62] Money for crediting is allocated with the participation of banks, with 1:1 Ratio
[63] Data provided by *Damu Fund* as of 01.11.2008

– Refinancing of 18 large-scale projects in non-raw-material industries from the resources of Development Bank of Kazakhstan, which contributed to granting additional liquidity to STBs in the amount of KZT38.2 bln.

On the whole, at present *Sumruk-Kazyna* Fund (*Kazyna* Fund) rather successfully implements short-term measures to stabilize the economy and mitigate the shocks of fall-down in the financing of the economy. This conclusion is supported by the results in implementing the resources allocated in 2007 for financing the priority branches of economy. However, the current activity of the Fund does not settle the problems of infrastructural reconstruction in the economy and reduction of disparity in its development. For example, with the first tranche transferred in the end of 2007 to support the small and average business 1,200 projects in the sphere of trade were financed to the sum of KZT30.5 bln., with the total amount of 2,005 projects (KZT50.5 bln. including a small share of STB resources)[64].

## Individual Deposits Guaranteeing

At present the government implements a number of measures to develop the system of obligatory deposit insurance. During 2007 – 2008 the authorized capital of *Kazakhstan Deposit Insurance Fund* JSC increased a number of times, and made up KZT6 bln. as of June 29, 2007, KZT16 bln. as of December 25, 2007, and KZT30 bln. as of August 1, 2008. By now NBRK have decided to increase the authorized capital of the Fund to KZT100 bln. The major measure to ensure a high level of trust to the banking system in Kazakhstan, however, is to increase the sum of guaranteed payments of deposits from 700 thousand (98.6% of an aggregate number of accounts) to KZT5 mln. (99.7% of an aggregate number of accounts).

However, the Fund has difficulties with the volumes of the special reserve of compensation which should make not less than 5 % of the sum of all guaranteed deposits according to Law "On Obligatory Guaranteeing of Deposits Placed in Kazakhstani STBs". As of November 1, 2008 the special reserve of compensation made up KZT33.8 bln., accounting for about 2% of the guaranteed deposit base. Prior to the increase in the guaranteed sum, the special reserve of compensation covered 6.13% of the aggregate sum of compensation for all the STBs, after it this coverage made up KZT5 mln. which accounted for 4.1%[65].

## Support to Mortgage Market

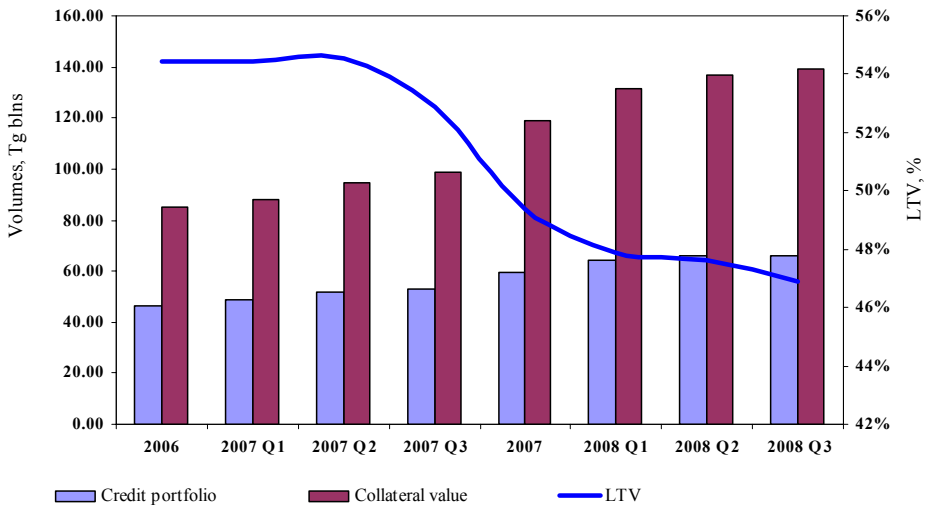
A sustainability of the mortgage market is ensured by *Kazakhstan Mortgage Company* JSC, allotting credits via partner banks. During November 2007-March 2008, in order to develop the mortgage market the authorized capital of the company was increased by KZT11.1 bln. through emission of equities reaching KZT28.9 bln. as of October 1, 2008. Additionally, in 2007-2008 certain resources were attracted owing to the placement of bonds to the sum of KZT12.5 bln., in spite of problems in the banking system with the liquidity, i.e. in August-December 2007. As of October 1, 2008 the aggregate assets of the company reached KZT107.1 bln.

During 3rd quarter of 2007 – 3rd quarter of 2008 the credit portfolio grew from KZT53.12 to 66.2 bln, with the share of standard credits making up 98.4% of it. The LTV ratio witnesses to its certain improvement, as it has dropped from 53% to 47% during the period (Figure 7.2.4). The drop could be due to two possible reasons. The first is an increase in the share of credits allocated via state preferential mortgage programs (state mortgages are lower than average in the market, and the collateral value is market-value). The second lies in shift in preferences of *Kazakhstan Mortgage Company* JSC in credit redemption, i.e. re-buying of more secured credits. Cf. according to AFN as of October 1, 2008 only 40% of LTV mortgages did not exceed 70%.

[64] Data provided by *Damu Entrepreneurship Development Fund* JSC
[65] Data provided by *Kazakhstan Deposit Insurance Fund* JSC

**Figure 7.2.4**

**Structure of KMC's Credit Portfolio**




*Source: KMC*

The institution which guarantees payments of mortgages in Kazakhstan is *Kazakhstan Mortgage Guarantee Fund* JSC partially covering the mortgages. By the end of 3rd quarter of 2008 the aggregate volume of insured mortgages made up about KZT47.7 bln., with 15,196 insured credits.

The Fund mainly guarantees mortgages to buy inexpensive accommodation built within the State Programs with the resources from the state budget on one of the five schemes:

1. 30% of primary mortgage
2. 40% of the sum required by a creditor
3. 50% of the creditor's net losses
4. 100% of the creditor's net losses
5. 40% of the mortgage

It is worth mentioning that since its founding there has not been any payment of insured liabilities yet, mostly owing to the fact that the Fund does not insure any of a mortgage allocated at the Kazakhstani mortgage market. In other words, the Fund is not an institution capable of solving the problems of STBs and mortgage companies, should mass defaults on mortgages.

## Action Plan on Stabilizing the Economy and Financial Sector for 2009 – 2010

On November 25, 2008 the Government, the National Bank and the Agency for Regulation and Supervision of Financial Market and Financial Organizations adopted the Action Plan on stabilizing the economy and the financial sector for 2009 – 2010. The resources of the National Fund of Kazakhstan in the amount of USD10 bln. (KZT1,200 bln) will be used to provide for financing the Action Plan. The Action Plan has five directions of activity:

1) The financial sector stabilization, with USD4 bln. (KZT480 bln.) allocated.
2) The housing sector development, with USD3 bln. (KZT360 bln.) allocated.
3) Support of small and medium business, with USD1 bln. (KZT120 bln.) allocated.
4) The development of agriculture, with USD1 bln. (KZT120 bln.) allocated.
5) Implementation of infrastructure and breakthrough projects, with USD1 bln. (KZT120 bln.) allocated.

The measures on stabilizing the financial sector will, firstly, include buying ordinary shares of the four system-forming STBs in the amount of not more than USD1 bln., with extra USD3 bln. allocated in the form of subordinated debt and via buying of privileged shares. Second,

capitalization of the stress assets fund which is planned to be created via financing from the 2008 budget in the amount of KZT52 bln., and the capitalization will be brought up with the state budget resources to KZT122 bln. Third, the National Bank will continue to support the liquidity level of the banking sector. In addition, the mechanisms of state regulation of the financial sector will be improved, including that of the pension accumulation system.

*Sumruk-Kazyna* Fund is allotting the sum of USD5 bln. to support the housing market and construction industry. The amount is to be collected through attracting resources from pension accumulation funds and the National Fund. As the pension assets are of great social value their attraction should be done under minimum risk levels.

Programs of crediting small and medium business entities and agricultural sector via STBs will continue to be implemented. And finally, large-scale infrastructure projects worth about USD4 bln., of which 1 bln. will be allocated by the National Fund, and 3 bln. will be raised by *Sumruk-Kazyna* from the external markets, are to be implemented.

# IV. Special Research in Financial Stability

## 8. Monitoring the Financial Stability of Banking Sector with *Aggregated Financial Stability Index*

***An Aggregated Financial Stability Index of the banking sector was worked out to assess the degree of financial stability through the analysis of indicators' system that reflect the specific risks of the Kazakhstani banking system. Development in aggregated index parameters witnesses about a decline in the financial stability of banks, which is mainly caused by the assets quality deterioration.***

The latest events at the global financial markets have required creation of flexible analytical tools to assess the strengths and reveal the weaknesses of the banking sector for further supervisory focused monitoring including prudential one. In response the Board of FSA adopted in April 2008 a new edition of the Action Plan in case of increased risks at the financial market. The Plan stipulated assessment of the financial stability of financial organizations and parameters of their stable functioning, and a complex of preventive measures to settle down problems of financial organizations (Contingency Planning).

Much scope in the Plan is given to assessment of the stability of the banking sector as the largest segment of the financial market which development has a direct impact on the financial sector as a whole. Within the Plan a summary aggregated financial stability index is constructed on the basis of the specifically created system of indicators defining the current financial state and stability of STB[66].

In order to construct the aggregated financial stability index there were selected specific indicators that reflect risks characterized the domestic banking system. The system of indicators is applied to analyze the financial stability, which is divided into the following groups:

*1) Capitalization indicators;*
*2) Loan portfolio quality indicators;*
*3) Credit risk indicators;*
*4) Market risk indicators;*
*5) Profitability indicators;*
*6) Liquidity risk indicators.*

Each indicator, excluding prudential indicators[67], gets the threshold parameter on the basis of statistical methods and international practice, achieving and/or exceeding of which indicates an increase, or presence of certain risks. This could require from the supervisory body undertaking of necessary measures to restrict or eliminate risks. The correlation analysis was carried out between indicators to assess the quality of them. In order to identify the indicators' thresholds analysis of the indicators for the period of 01.01.2003-01.04.2008 (quarterly) which comprised of 21 time series of variables was provided. The indicators threshold values are simple average value corrected on standard deviation in the range of 1.5-3 frequency rate. The formats of indicators calculation are ratio and growth rates. Each indicator gets its rating and weight within the range of 1-4 and 1-2 respectively (Table 1). The summary result per group is defined as weighted average value of indicators in the group. The aggregated financial stability index is calculated as a simple average of values of groups of indicators.

[66] AFSI calculation methodology was developed by FSA and further worked out with the assistance of Financial Stability Division of NBRK and Ifo Institute for Economic Research at the University of Munich, on the basis of IMF research and practice of the European System of Central Banks, RF, and etc.
[67] Critical thresholds is based on the normative values established by authorized body

**Table 1**

**The Indicators System of Aggregated Financial Stability Index of Banking Sector (AFSI)**

| № | Indicator description | Threshold value, % | | | | Weight |
|---|---|---|---|---|---|---|
| | | Score 1 | Score 2 | Score 3 | Score 4 | |
| **I. Capitalization Indicators** | | | | | | |
| . | *Capital adequacy ratio k1* | > 10 | 10 – 9.5 | 9.5-6.5 | < 6.5 | 2 |
| . | *Capital adequacy ratio k2* | > 14 | 14 – 13 | 13 –12.5 | < 12.5 | 2 |
| **II. Loan portfolio quality indicators** | | | | | | |
| . | *Ratio of bad loans(loss) to loan portfolio* | < 2 | 2 – 3 | 3 – 4 | > 4 | 1 |
| . | *Ratio of loan provisions to loan portfolio* | < 4 | 4 – 5 | 5 – 7 | > 7 | 2 |
| . | *Increase in overdue loan indebtedness*[68] *(debt and interest))* | < 9 | 9 – 14.5 | 14.5 – 20 | > 20 | 2 |
| . | *Ratio of loans with overdue outstanding debt >90 days to loan portfolio* [69] | < 2 | 2 – 4.5 | 4.5 – 7 | > 7 | 2 |
| . | *Ratio of non-performing loans to total assets* | < 2 | 2 – 3 | 3 – 5 | > 5 | 2 |
| . | *Ratio of non-performing loans to loan portfolio* | < 4 | 4 – 6 | 6 – 8 | > 8 | 2 |
| **III. Credit risk indicators** | | | | | | |
| . | *Ratio of loans to non-residents to loan portfolio* | ≤ 10 | 10 – 15 | 15 – 20 | > 20 | 1 |
| . | *Ratio of loans collaterazed by real estate to loan portfolio* | ≤ 20 | 20 – 30 | 30 – 40 | > 40 | 2 |
| . | *Ratio of loans to construction sector to total loans to economy* | ≤ 15 | 15 – 25 | 25 – 35 | > 35 | 2 |
| **IV. Market risk indicators** | | | | | | |
| . | *Ratio of loans in foreign currency to loan portfolio* | ≤ 35 | 35 – 40 | 40 – 45 | > 45 | 2 |
| . | *Ratio of liabilities sensitive to interest rate fluctuations to equity capital (interest rate position)* | < 100 | 100 – 110 | 110 – 120 | > 120 | 2 |
| . | *Ratio of FX net-position to equity capital* | < 15 | 15 – 20 | 20 – 25 | > 25 | 1 |
| **V. Efficiency indicators** | | | | | | |
| . | ROA | ≥ 3 | 3 – 2.5 | 2.5 – 2 | < 2 | 1 |
| . | ROE | ≥ 25 | 25 – 20 | 20 – 15 | < 15 | 1 |
| **VI. Liquidity indicators** | | | | | | |
| . | *Current liquidity ratio k4** | ≥ 50 | 50 – 40 | 40 – 30 | < 30 | 1 |
| . | *Short-term liquidity ratio k5** | ≥ 70 | 70 – 60 | 60 – 50 | < 50 | 1 |
| . | *Quick liquidity ratio k4-1 (<7 days)* | ≥ 200 | 200 – 150 | 150 – 100 | < 100 | 1 |
| . | *Quick liquidity ratio k4-2 (<1 month)* | ≥ 190 | 190 – 140 | 140 – 90 | < 90 | 1 |
| . | *Quick liquidity ratio k4-3 (<3 months)* | ≥ 180 | 180 – 130 | 130 – 80 | < 80 | 1 |
| . | *Ratio of total loans to deposits of legal entities and individuals (excluding interbank operations and SPV deposits)* | ≤ 125 | 125 – 175 | 175 – 225 | > 225 | 2 |
| . | *Ratio of liabilities to non-residents (excluding deposits of SPV) to total liabilities* | ≤ 15 | 15 – 25 | 25 – 35 | > 35 | 2 |
| . | *Ratio of liquid assets to total assets* | ≥ 20 | 20 – 17 | 17 – 14 | < 14 | 1 |

** measured up to 01.07.2008, as of 01.07.2008 new liquidity ratios were introduced*
*Source: FSA*

The banking sector stability is rated as follows: with the aggregated index parameter within 1-1.5 the financial stability of banks is classified as stable; within 1.5-2 - normal (medium level of

[68] The index was measured up to 01.07.2008
[69] Included into the model due to the new report form as of 01.07.2008

risks); within 2-2.5 - satisfactory (with the upward trend in risk level); within 2.5-3 - satisfactory (with an excessively high level of risks); within 3-3.5 - unstable; and above 3.5 as critical.

According to the results of the research, the loan portfolio quality and profitability indicators are most sensitive to AFSI as result of increase in the level of reservation caused by a deteriorating of the credit portfolio quality that has a direct impact on the profitability of the banking sector.

The profitability index has changed since April 2008 from 3.0 to 4.0, and the index of loan portfolio quality from 2.2 to 3.0. The dynamics of the indices of capitalization, credit and market risks remains stable.

The stability of the capitalization index is specified by the fact that the ratios of capital adequacy of Kazakhstani banks surpass normative requirements established by the authorized body. It is evidence of a safety factor that has been generated through implementation of measures on tightening the requirements to capitalization in relation to risks resulting from an active inflow of external loans in periods of a rapid growth of the banking system.

Thus, the stability of credit and market risks indicators is connected with substantial slowdown of the growth rates of credits to economy under the deficiency of liquidity in the banking sector. On the contrary , the index of liquidity is volatile enough which is adequate to the current conditions as a whole (Figure 1).

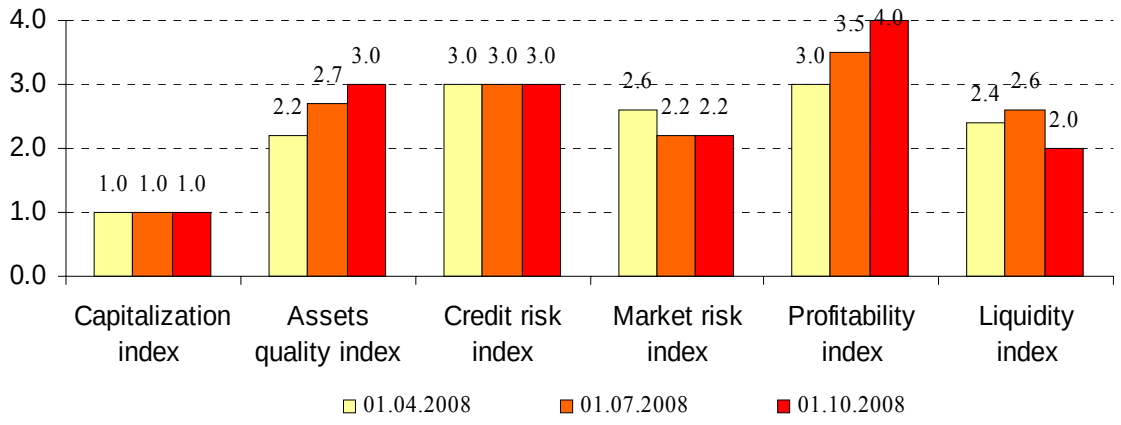
According to the assessment results the quality of the loan portfolio causes particular concern as it impacts the banking sector profitability, which will obviously influence the level of capitalization of the banking sector in case of tendency intensification (Figure 2).

The index dynamics argues the decline in the level of the financial stability of banks under the impact of quality of bank assets. As of 01.10.2008 the AFSI value made up 2.53, having risen in comparison with the previous month by 0.05 points. However, AFSI index value dropped by 0.15 points in comparison with the end of the first quarter. Thus, the financial stability of Kazakhstani banks is characterized as satisfactory with an excessively high level of risks (4th rating of 6) (Figure 3).

In order to identify vulnerability of banks to various risks the aggregated index system requires an expansion of the list of indicators. The spectrum of risks and their display can be rather diverse. These issues are the subject of enhance this tool with aim to increase its accuracy and efficiency for the supervision purposes.

**Figure 1**

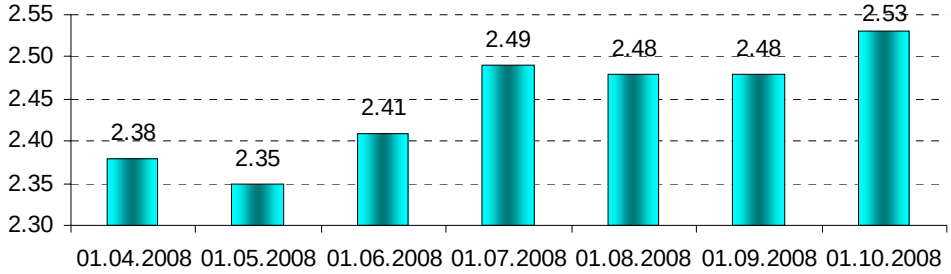
**Dynamics in Financial Stability Indices**




*Source: FSA*

**Figure 2**

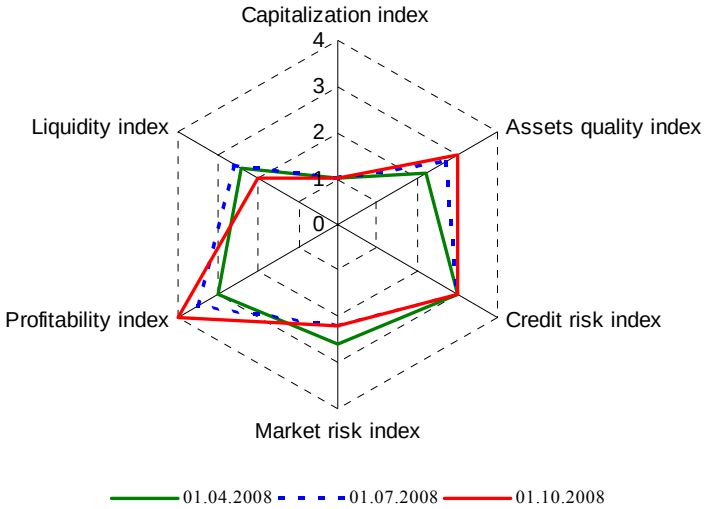
**Dynamics in Aggregated Financial Stability Index**




*Source: FSA*

**Figure 3**

**Mapping of AFSI at the Risk Map****




***N.B. The higher is the index, the lower is the financial stability level and vice versa.*
*Source: FSA*

## 9. Banking Sector Stability Assessment with the Z-score[70]

***Stable performance of the financial sector is a main aspect of the sustainable economic development of the country. The global financial crisis revealed a numerous vulnerability factors in the financial system of Kazakhstan, and has considerably raised risks of its functioning. In these conditions studying of the primary risks would allow to reveal the most significant factors necessary for maintenance of the stable performance of financial institutions and a financial system of the country as a whole.***

Due to the raised importance of issues of analyses and assessment of financial stability new approaches and methodological tools are being applied for the purpose of more profound studying and revealing of specific risks for STB. One of these approaches is z-score method, measuring risks of the banking system based on the bank by bank data. Based on econometric analyses the method defines the types of risks and shocks likely to affect the financial system of the country as a whole.

### *Z-score Methodology*

Z-score has lately become an especially popular method to assess bank stability due to the fact that it has a direct relation with an estimation of probability of bank insolvency. Z-score methodology is mainly applied to analyse the stability of a bank through a variety of financial risks and economic factors that can affect financial institution.

Generally z-score can be considered as an indicator of financial institution stability, or as measure of «distance-to-default». The advantage of the indicator is that its calculation includes the components related to the bank solvency and statistically represents a number of standard deviations when the decline of profitability, or a risk of bank insolvency, can result in the capital exhaustion. Z-score formula is as follows:

$$z = \frac{(\mu + k)}{\delta}$$

where $\mu$ is an average of return on assets (*ROA)* for the period, $k$ - ratio of capital to assets and $\delta$ - standard deviation of *ROA* for the period, which is also viewed as profitability volatility index. High z-score indicates a larger distance to the exhaustion of the capital and a lower probability of the bank insolvency. Consequently, the higher is z-score, the more stable is the bank.

Initially the most popular version of z-score was distance-to-default (DD) index in which calculation the data of bank shares prices was used in order to assess the effect of volatility on the bank capital. Later however, in order to cover all the financial institutions, reported data of commercial banks have started to apply as the data on commercial prices of equities of most of the banks, particularly of small and medium, were unavailable.

The main idea of the z-score is that this method allows on a basis of econometric analyses to estimate the correlation of the bank stability, various financial risks and factors of the external environment.

In practice z-score methodology has found the wide application in various areas of the analysis of risks of financial institutions. For example, Heiko Hesse and Martin Cihak [71] used this formula in their research in order to forecast the role of cooperative banks in achieving the financial stability. In their research they analyzed above 16 thousand cooperative, savings and commercial banks in 29 developed and developing countries. Thorsen Beck and Luc Laeven, in their turn, applied z-score to predict bankruptcy of commercial banks with the Deposit Guarantee Institution operating within the system. Analyzing the data on 1700 banks of 57 various countries, authors have made the conclusion that the most stable are the banks in those countries where there is an established Deposit Guarantee Institution authorized to capitalize a bankrupt bank and except its

[70] Z-score Financial Analysis Policy is worked out by the Financial Stability Division in NBK within the framework of the joint project with the Ifo Institute for Economic Research at the University of Munich

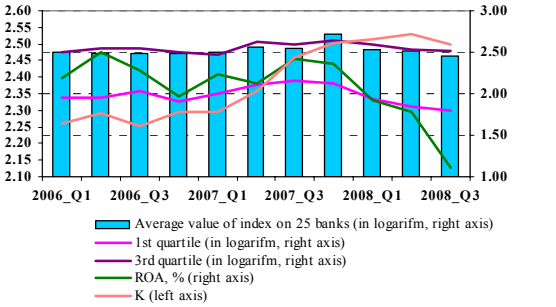
[71] Heiko Hesse, Martin Cihak, «Cooperative banks and financial stability», 2006.

membership in system of warranting[72]. Finally, the IMF experience in assessing and decomposing the risks in the Eastern European countries[73] and Deutsche Bundesbank's experience have been studied to estimate the possibility of applying z-score methodology for Kazakhstan's banks. Thus, after studying experience of creation of system of an assessing the banks stability, z-score methodology has been applied for the purpose of an estimation of the level of stability of Kazakhstan's STB.

### *Practical Application of z-score for Kazakhstani Banks*

**Figure 1**

**Z-score Index for Kazakhstani Banking System**




The values of an index received as a result of calculations of z-score indicates that at present moment the level of stability in the banking sector of Kazakhstan have been gradually decreases. This slowdown marked from the beginning of 2008 has been directly affected by the decline of the profitability of banks.

In order to assess the level of the Kazakhstani banking system stability the z-score was applied to reveal the financial risks and economic conditions affecting the vulnerability of banks in Kazakhstan. For the z-score index the regression model was estimated on the basis of panel data on micro-prudential indicators and economic variables of the following type:

$$Z\text{–}index_{it} = \alpha + \beta_1(Size_{it}) + \beta_2\,(fod_i) + \beta_{Br}BR_{it-1} + \beta_M Mac_{it-1} + \varepsilon_{it}$$ [74],

where $i$ is an individual bank and $t$ is a period.

In the presented model variables are grouped by various factors of influence: the size of bank (Size), foreign participation in bank (fod), variables specific to bank activity (BR) and variables of macroeconomic (Mac) environment.

All z-score components and bank indicators values were calculated for each STB on a quarterly basis for the period of 1st quarter of 2004 to 3rd quarter of 2008 with FSA data. Macroeconomic indicators were calculated for the same period according to NBRK and SARK data.

Z-scores analysis covers the period of gradual development of the Kazakhstan banks, the period of rapid growth and high incomes, and also the period of activity slowdown due to development of crisis of liquidity in August, 2007. Within the analysis the data of twenty-five banks out of thirty-six second tier banks of Kazakhstan have been used due to their sufficiency.

The most important stage in working out of the model is selecting the most significant indicators. The choice of risk indicators was based on empirical study and indicators specific to the development of the banking sector in Kazakhstan. Thus, from all indicators it is much more difficult to define a set of the macroeconomic indicators, capable to show what factors of an environment can affect decrease in stability of bank and moreover what external factor can represent a potential shock for loss of stability of bank.

In order to construct the z-score model there was compiled a list of independent variables grouped into indicators of the bank's current situation, bank risks and macroeconomic variables.

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[72] Thorsen Beck, Luc Laeven, «Resolution of failed banks by deposit insurers»

[73] Andrea M. Maechler, Srobona Mitra, DeLisle Worrell, «Decomposing Financial Risks and Vulnerabilities in Eastern Europe», IMF Working paper, October 2007.

[74] All variables, incl. a dependent variable, are in natural logarithms, aimed at possibility to read ratios in the form of elasticity. The model is evaluated with the panel OLS, and the variable vectors of the banking sector risks and the macroeconomic parameters are presented in the lag term to estimate the influence of the previous period trends.

### 1) *Indicators of the bank current situation: the size of the bank and the foreign participation.*

The banking system of Kazakhstan is characterized by high degree of concentration of the largest 6 banks whose share in total assets of the banking system is from 8 to 24%. The G6 banks define the main policy of the financial sector development in the country, and play an active role in other sectors of the financial system. A priori a sign of *Size* variable is not defined as the concentration can have both a stabilizing effect and bear a risk for the stability in the banking sector as the insolvency of a large bank can lead to the deterioration in the balance of another as a result of presence of positions under mutual liabilities.

Similarly, foreign participation can have a double effect. On the one hand, this process has many advantages and can positively impact the development and improvement of a bank performance. In case of excessive turbulence a foreign investor can also inject extra capital to support the bank and protect it from losses. Another positive factor can be considered as a conservative credit policy which does not imply aggressive strategies. On the other hand, the presence of a foreign capital may be characterized by certain restricted factors, e.g. customer service selectivity, restricted dynamics of growth and low profitability.

**Table 1**

**Bank Current Situation Indicators**

| № | Variable | Format |
|---|---|---|
| 1 | Bank size | Share of the bank in total assets of the banking system |
| 2 | Foreign participation | Dummy variable equals 1 if a bank with foreign participation (according to FSA), and 0 in otherwise |

### 2) *Variables reflecting bank risks.*

The indicators reflecting the following main financial risks for bank have been chosen: credit risk, risk of liquidity, market risk and risk of profitability decline.

Bank activity on lending to the economy in case of balanced credit policy of financial institutions is the basic source of incomes of bank. Theoretically influence of growth of economy lending on z-score should be positive. However, galloping growth rates of banks' lending of economy bear the threat of a high income volatility that has negative impact on the stability of financial institutions, and predetermine the negative sign of the coefficient. Favorable conditions of external financing have encouraged the Kazakhstan banks to widely use of external resources for financing the domestic economy. As a result it has led to growth of lending to economy at the average rate of 65 % per year for the period of 2000-2007. As a result the credit boom made the credit risk as one of the main risks for a sustainable bank development.

For a bank sustainable development an adequate level of liquid assets for a timely coverage of the current liabilities is not less important and a priori expected sign is positive. Despite it, excess liquidity can have negative impact due to inefficient cash flow management or absence of enough liquid secondary market, which further can result in structural problems of the bank's balance sheet and directly causes the decline of the z–score index.

The market risk is also essential for the bank profitability. High exchange rate volatility becomes a significant vulnerability factor in case of bank's sizeable negative open foreign exchange position. However the effective policy of risk management and monitoring of market risks can mitigate negative effect of such fluctuations of the exchange rate.

For the purpose of an estimation of influence of banking activity in lending and deposits attraction the ratio of interest income to gross income has been included in system of indicators of model. The indicator can be directly affected by the ratio of the capital to assets of the bank. The influence of the parameter on the z-score index is expected as positive, as at a given level of assets a higher capital volume leads to decrease in demand for borrowed funds, thereby, reducing interest expenses and increasing net interest income.

**Table 2**

**Indicators Reflecting Bank Risks**

| № | Variable | Format |
|---|---|---|
| 1 | Credits to economy | Loan portfolio growth rate to the relevant period of the previous year |
| 2 | Non-performing loans | Share of loans classified as non-performing in loan portfolio |
| 3 | Current liquidity | Ratio of high liquid assets to short-term liabilities |
| 4 | Exchange rate volatility | Standard deviation in daily exchange rate fluctuations according to KASE |
| 5 | Provisions for NPL | Share of provisions for non-performing loans to gross income |
| 6 | Interest income | Ratio of net interest income to gross income |

### *3) Macroeconomic indicators*

The impact of the macroeconomic environment on the stable functioning of bank is various. If the effect of bank risks variables can be in advance defined by virtue of understanding the nature of threat from the risks, the influence of economic factors on bank stability is difficult to define in advance. The macroeconomic environment creates conditions and tendencies for further development of banks and can play a stabilizing role for increase of bank stability and vice versa. Originally, a wider list of indicators was formed for the purpose of coverage of various factors.

**Table 3**

**Macroeconomic Indicators**

| № | Variable | Format |
|---|---|---|
| 1 | Financial Depth | Ratio of credits to economy to GDP |
| 2 | Inflation | CPI (to the relevant period of the previous year) |
| 3 | International interest rates | LIBOR 3 months in USD |
| 4 | Debt burden | Share of STB in gross external debt |

## Statistical Parameters of Z-score Index

Influence of independent variables on the z-score index was estimated with the regression model. The z-score estimation has represented the following results for all (25) banks of Kazakhstan. Moreover, from the point of view of influence of selected variables on a z-score index separately the equation for large and medium banks only which attracted external loans more actively in comparison with other banks has been constructed.

**Table 4**

**Statistical Parameters**

| Variables | Statistical parameters in all banks | | | Statistical parameters in 11 banks | | |
|---|---|---|---|---|---|---|
| | Equation 1 | Equation 2 | Equation 3 | Equation 1 | Equation 2 | Equation 3 |
| C | 1.022** (2.343) | 1.449* (3.865) | 1.478* (4.430) | 2.674* (6.98) | 3.193* (10.04) | 2.673* (8.541) |
| Bank size | -0.070* (-4.305) | -0.070* (-4.307) | -0.058* (-3.976) | 0.095* (5.449) | 0.093* (5.403) | 0.0816* (4.330) |
| Foreign participation | -0.178* (-3.695) | -0.177* (-3.65) | -0.220* (-4.568) | -0.067+ (-1.71) | -0.067+ (-1.680) | -0.065+ (-1.666) |
| Credits to economy | -0.096* (-3.033) | -0.096* (-3.024) | | -0.097* (-3.807) | -0.099* (-3.772) | |
| Liquidity | 0.218* (4.177) | 0.220* (4.127) | 0.283* (5.458) | -0.062 (-1.603) | -0.063+ (-1.665) | -0.028 (-0.830) |
| Interest income | 0.144** (2.527) | 0.145** (2.542) | 0.105** (1.974) | -0.102+ (-1.791) | -0.094+ (-1.667) | -0.098 (-1.539) |
| Provision for NPL | 0.030 (1.593) | 0.032+ (1.703) | | -0.100* (-3.618) | -0.094* (-3.259) | |
| Financial Depth | 0.226+ (1.626) | 0.444+ (1.556) | 0.259 (0.787) | 0.413* (3.327) | 0.584** (2.225) | 0.601+ (2.167) |
| International interest rates | -0.093 (-1.323) | | | -0.135+ (-2.235) | | |
| Inflation | -0.172 (-1.564) | -0.136 (-1.159) | -0.125 (-1.056) | -0.240+ (-1.90) | -0.215+ (-1.650) | -0.190+ (-1.857) |
| Debt burden | | -0.380 (-1.460) | -0.313 (-1.057) | | -0.381+ (-1.645) | -0.471+ (-1.880) |
| Exchange rate volatility | | 0.048+ (1.198) | 0.049 (1.120) | | 0.032 (0.984) | 0.038 (1.106) |
| Non-performing loans | | | 0.021 (1.26) | | | -0.077+ (-1.966) |
| **$R^2$** | **0.345** | **0.348** | **0.269** | **0.207** | **0.201** | **0.164** |

*N.B. statistical significance at 1%- *, statistical significance at 5% -**, statistical significance at 10%- +. t-statistics is in brackets.*

For z-score some specifications of the equations have been estimated for the analysis of the various tendencies influencing stability of bank. For the purpose of an assessment and verifying the significance of the risk related to the accumulated debt burden in addition the alternatively equation has been estimated which supported the hypothesis that both the accumulated debt burden of the banking sector and its service costs have negative impact on bank stability. Another equation was estimated in order to verify significance of loan portfolio quality indicator's direct impact, i.e. non-performing loans, on the z-score index.

## Main Conclusion on Z-score for Banking System of Kazakhstan

Z-score results received on the basis of model have reflected the factors directly influencing stability of bank.

1) According to the z-score results the size of the bank has a significant impact on the bank stability. The summary data on all the banks defined the sign of the ratio as negative. In practice the size of bank positively impacts bank stability as a large bank due to the size of its assets has possibility to carry out multi-vector activity in order to maximize the profitability. Due to the fact that the whole range of entities was analyzed, i.e. large, medium and small banks, the negative effect of the parameter on the z-score index can be explained by a significant gap in their market share that has created different conditions for their development. Besides, each type of banks has access to different sources of financing and has different dynamics of growth. Thus, estimating model on z-score based on the data of large and medium banks, it is possible to see that the given variable has changed a sign towards positive value. This can be explained by the fact that within large and medium banks only more possibilities exist for stable and high profitability depending on a market share.

The variable of the banks with foreign participation also showed the negative sign of the elasticity coefficient. Foreign capital participation can impose certain restrictions on potential directions of bank business, which, as a consequence, declines its opportunity in getting extra profit.

2) A number of independent variables such as growth rate of STB loan portfolio and non-performing loans were used in the model to estimate credit risk factors that affect z-score index. The results showed that the high credit growth to economy increases the vulnerability of banks to credit risk. Respectively, the indicator estimating directly the quality of banks assets –" non-performing loans" has shown the weak statistical significance and economically inconsistent sign of elasticity coefficient for all banks. In large banks, on the contrary, deteriorating quality of the loan portfolio creates additional costs for creation adequate provisions. Variability of a sign in this case indicates ambiguity in the effect of the variable on bank stability.

3) By results of model estimation the indicator of a share of interest income shows high statistical significance and has a positive sign. These indicate firmer bank stability at a greater degree of importance of the main function of financial intermediary for bank profitability. On the other hand, the negative sign for large banks can mean smaller efficiency that reduces their potential incomes as well as their higher dependence on external financing, which, consequently, results in higher interest expenses.

In its turn, reservation of funds for potential losses of banks is directly aimed at creating a "safety cushion" which has positive effect on bank stability. However creation of additional reserves negatively impacts z-score in case of large and medium banks, which is proven by the negative sign of the share of provisions in gross income. For this category of banks the creation of provisions imposes burden on the part of income which could otherwise be used to effectively expand their activity. The statistical significance of this parameter is comparatively lower than that of other parameters of bank risks.

4) Apart from the credit risk variable, the liquidity risk indicator has also shown high positive statistical significance for the z-score index, which was corroborated by the liquidity crisis in August 2007. Taking into account the high importance of the liquidity risk it is necessary to understand that increase in volumes of liquid assets to cover current liabilities is inefficient as it

incurs direct costs of the lost benefits. More significant for strengthening of bank positions is the effective policy on liquid asset management taking into consideration the volume of short-term liabilities, as result for 11 banks shows.

5) Influence of a market risk on bank stability is ambiguous due to weak statistical significance and the positive sign. It is necessary to notice that due to negative consequences of liquidity crisis most banks have started to conduct a conservative policy concerning open positions, including maintenance of low gap in a foreign currency.

6) Particularly interesting is the result of analysis on macroeconomic indicators. The economic variables in the model were such parameters as real GDP growth rate, financial depth (ratio of credits to economy to GDP), indicator of economic openness (ratio of trade turnover to GDP), indicator of financial openness (ratio of external assets and liabilities to GDP), deposits of STB, real estate price index, share of STB liabilities in gross external debt, oil prices, inflation, international interest rates and the Herfindahl-Hirschman concentration index. On the basis of the model construction a number of most significant indicators were selected for the z-score. First of all, it is the financial depth. This parameter is positively related to the z-index as favorable environment for business development reduces the probability of any major risks bearing the threat of destabilization in the financial sector. In its turn, the high rate of inflation as an assessment indicator of the monetary policy efficiency causes depreciation of assets in real terms. The international interest rates are presented in the system as an indicator reflecting the influence of the external world. In the model the coefficient of this indicator is characterized by the negative value. Increase in the international interest rates deepens vulnerability of banks and reduces their ability to refinance the accumulated external liabilities. At the same time the indicator presents the greatest significance directly for the large and medium banks actively participated in attraction of foreign capital.

## Conclusion

As a whole, the approach on a basis of z-score in the area of bank stability assessment is a new direction. That is why it is being continuously improved and finds a wider application in various areas of vulnerability analysis. Initially obtained results have indicated most significance of credit and liquidity risks for banks of the Kazakhstan. Also analysis based on bank ranging has revealed that risk profile of large, medium and small banks considerably differs.

The analysis has been the first attempt to study the influence of certain types of risks on stability in the banking sector as a whole and each bank in particular. It is necessary to notice that especial importance for the z-score plays both quality of the data, and their sufficiency. In spite of the fact that the analyzed period covers the three development stages of the banking sector (growth, peak and slowdown), the historical times series are short for construction of the model which could be completely adequate for its tasks. However, the results give an accurate picture of banks vulnerability to particular risks.

Further application of the z-score analysis has a number of prospects, such as studying of bank vulnerability at level of more specific indicators on the basis of banks' balance sheets, and analysis of transformation of various shocks through the factors of vulnerability of individual bank, as one of alternative approaches to bank stress-testing.

# 10. Qualitative Features of Credit Market During Financial Turbulences

***Recent turbulences on global financial markets have raised the importance of qualitative features analysis, that is demand on bank loans and supply of credit resources on the credit market. In this respect an all-important assessment instrument of the lending market is conducting of bank lending surveys, which is a common practice in foreign central banks. Such surveys focus on obtaining essential data for analysis of the qualitative features of the market, financial stability factors, and they have influence on decision-making in monetary policy and anticipations.***

## 1. Methodology of Bank Lending Survey

Since July 2007, the National Bank of the Republic of Kazakhstan conducts bank lending survey on a regular basis[75] in order to improve its system of financial stability monitoring.

The main focus of the survey is to single out factors of bank credit demand and supply, bank risk management assessment, evaluation of price and non-price parameters impact on the bank pricing policy, and credit market expectations. Regular monitoring provides data for the analytical survey and a comprehensive assessment of bank interrelations. Qualitative parameters enrich and, in certain cases, explain quantitative data for a particular time period.

The National Bank questionnaire is a set of questions divided into three parts (1) Bank Lending Market; (2) Risk Assessment Map; (3) Data and Information for Qualitative Assessment of Risks and Trends.

Questions in *Bank Lending Market* part are divided into subparts of *corporate sector* and *households* by bank loan segments and relate to current assessment of demand and supply, loan portfolio quality assessment and anticipations.

The questions in *Risk Assessment Map* part relate to banks' activity in terms of risk vulnerability, and sources of additional funding.

The third part of the questionnaire aims at obtaining qualitative data from banks to be used in other researches concerning banks' activity, e.g. contagion effect in interbank market.

Survey results are calculated and analyzed through 4 indicators:

$$1.\ \textit{Percentage change} = \frac{\textit{Number of responded banks}}{\textit{Total number of interviewed banks}}$$

*2. Net percentage change (NPC) = (% of respondents selecting an increase/easing in the value) – (% of respondents selecting a decrease/tightening in the value)*

*3. Diffusion Index[76] (DI) = (% of respondents selecting «eased considerably» + % of respondents selecting «eased slightly»*0.5) - (% of respondents selecting «tightened considerably» + % of respondents selecting «tightened slightly»*0.5).*

*4. In respect of demand and supply factors (lending policy) mean values are calculated per each factor. Mean values are calculated as an arithmetical average without taking into account specific weights of banks.*

[75] At present the survey is carried out on a quarterly basis in the form of an interview with bank managers and specialists.

[76] The index value fluctuates between -1 and +1. If the value is 0, the respondents' assessment of the current situation has not changed in comparison with the previous survey. If their assessment changes in either direction, this affects the results, which reflects in their increase/decrease, and easing/tightening respectively.

## 2. Change in Qualitative Parameters of Credit Market

Conducting bank lending surveys since July 2007 with accumulation of historical data allows analyzing the situation in credit market from the position of key parameters development. Thus, ***the share of banks that observed high demand[77] from non-financial organizations in the mid-2007 gradually decreased during subsequent periods together with desire of banks to credit their corporate clients*** (Figure 1). As banks started having difficulties with foreign funding, a marked downfall in the *desire to credit* had happened. The large banks were affected most of all, G5 in particular, which to a greater extent depend on foreign funds and their share in the bank loan market exceeds 70%.

**Figure 1**
**Changes in Demand for Bank Loans, % of respondents (corporate sector)**

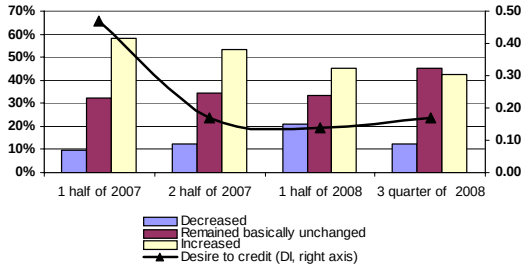
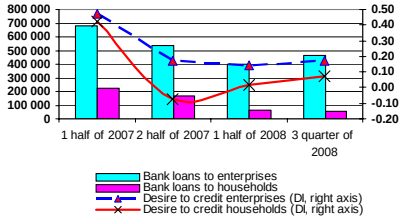


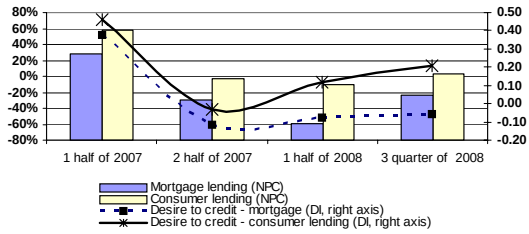

**Figure 2**
**Bank Loans**
**(monthly mean volume for a period, mln. KZT)**




***Drop in the desire to credit directly resulted in sudden decrease of bank lending to corporate and private sectors, mostly in the segment of bank loans to households*** (Figure 2). Such downswing was mainly caused by tightening of price and non-price conditions of crediting. Tightening of credit policy was also affected by the undertaken regulatory measures within prudential supervision, and re-evaluation of bank risks in real estate, building sector and mortgage lending.

As it was mentioned above, the crisis affected the lending to households. Similar negative downward trend of demand for loans from the households sector and banks' desire to credit was observed in mortgage and consumer lending during the period of July 2007 - July 2008 (Figure 3).

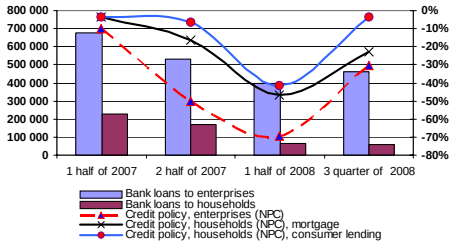
**Figure 3**
**Changes in Demand for Bank Loans (households)**




However, a restoration of *desire to credit* has been witnessed in 2008, primarily in consumer lending segment. ***The consumer lending is the most flexible and adaptable segment to significant changes in economic situation.***

During the period prior to sub-prime crisis, most banks rated the risks affecting their activity in the order of significance that is credit risk, liquidity risk, foreign currency risk, interest risk and operational risk. Remarkably, over all periods of the survey this Risk Map has not changed much. Credit risk is the most crucial for banks due to deterioration of loan portfolios.

**Figure 4**
**Influence of Changes in Credit Policy on Volume of Crediting**
**(monthly mean volume for a period, mln. KZT)**




***With increase of credit risk significance for banks, trends towards tightening of credit policy and crediting conditions directly affected the volume of lending to economy and households*** (Figure 4). However, some industries (especially trade and manufacturing industry) saw an increased demand for working capital. In the 3rd quarter of 2008 some banks

[77] The demand refers to all applications for bank loans, including refusals.

preferred to keep their credit policy unchanged, while other banks eased it slightly, as in their opinion the threshold of tightening had been achieved.

***Since August 2007 the banking system continued to operate under limited sources of funding, which affected the lending to the real economy and resulted in limited potential for refinancing the indebtedness to banks, proving the systemic nature of the crisis.***

During 9 months of 2008 there was a growth of past-due loans, particularly of legal entities, along with an increase in collection of collateral required (Figure 5). It has less affected those legal entities, where the main share of past-due loans was caused by higher risks of contractors' default, as banks were more willing to restructure their debts (Figure 6). Collection of collateral required from households was a consequence of payment scheme violation due to cutback in gross income and growth in debt burden caused by significant tightening of crediting conditions.

**Figure 5**

**Past-due Loans (mln. KZT)**

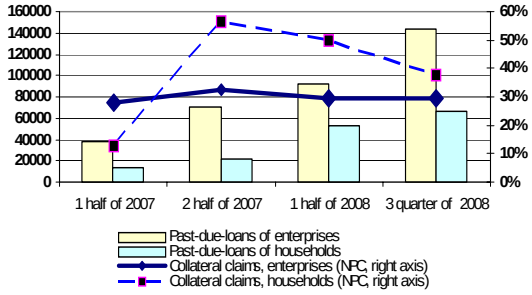
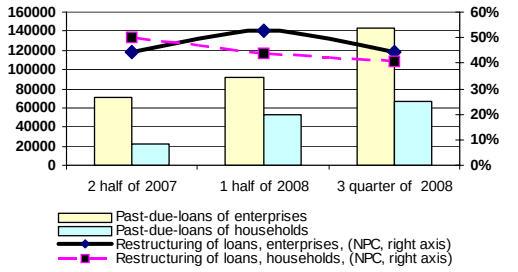



**Figure 6**

**Restructuring of Past-due Loans (mln. KZT)**

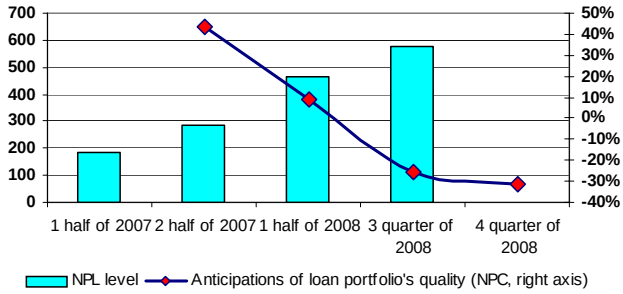



As a result of tightening of credit policy (considerable tightening is attributed to bank loan collateral requirements and profit margins on riskier loans) growth in debt burden and bank loan costs has negative effect on the quality of banks' loan portfolio, including the level of NPL[78] (Figure 7). Yet, ***operations on restructuring indebtedness assist in leveling out the negative effect of tightening of crediting conditions.***

In the background of growth of risks in the real economy, within the system of monitoring loan debtors banks try to apply financial coefficients, i.e. of liquidity, efficiency, profitability, implement tighter systems of rating, branch limits, work thoroughly with the debtors having past-due loans. Additionally to stimulating and enlarging work of internal problem credit departments, banks develop relations with collector agencies, study proposals of foreign banks on purchase of problem assets, and use of securitization mechanisms. Besides, state measures to support the banking sector are greeted by most banks. Particularly in respect of creating a special organization to clear bank balances off problem assets and increasing the amount of guaranteed deposits of the private sector.

**Figure 7**

**NPL Level (bln. KZT, beginning of the period)**




***As a result, in 3rd quarter of 2008 wholesale and retail sectors of crediting faced the situation when the credit market was characterized by lack of new «good» debtors that could meet all the current requirements of the banks, and imbalance between tightening of bank credit policy and high demand in financial loans.*** Consequently, the main share of bank transactions in corporate sector was in financing of current clients having urgent demand in working capital. The retail sector faced further drop in demand for mortgage lending and limited demand for consumer loans, which was the result of continuous uncertainty at the capital facilities market and rise in debt burden, against the background of sliding income in the private sector.

[78] NPL (non-performing loans) include loans of 5th category, loss loans and provisions on homogeneous loans.

## 3. Peculiarities of Bank Reactions at Financial Market Turmoil

To understand the level of demand and degree of change in bank credit policy, it is important to define the influence factors which also help to measure the scope of credit market at a particular period. For example, a list of influence factors are singled out, among which are those that affect both the demand and the credit policy, those that are assessed by banks with the scale. The most significant factors influencing demand and credit policy are presented in tables 1-6.

**Table 1**

**Factors Influencing Demand (corporate sector)**

| Factors influencing demand | July 2007 | January 2008 | July 2008 | October 2008 |
|---|---|---|---|---|
| | *Mean values*[79] | | | |
| Financing of working capital | 3.81 | 3.81 | 3.50 | 3.64 |
| Fixed investments | 3.84 | 3.28 | 3.05 | 2.94 |
| Restructuring of current liabilities | 3.58 | 3.44 | 3.30 | 3.73 |
| Internal financing | 2.84 | 3.00 | 2.90 | 3.00 |
| Loans from other banks | 2.47 | 3.06 | 2.95 | 3.13 |
| Changes in terms of crediting | 3.55 | 3.00 | 2.70 | 2.73 |
| Changes in interest rates | 3.81 | 2.91 | 2.85 | 2.82 |
| Changes of other crediting conditions | - | - | 2.70 | 2.66 |

**Table 2**

**Factors Influencing Demand (mortgage lending)**

| Factors influencing demand | July 2007 | January 2008 | July 2008 | October 2008 |
|---|---|---|---|---|
| | *Mean values* | | | |
| Real estate market outlook | 3.75 | 2.58 | 1.48 | 2.17 |
| Consumer confidence | 3.71 | 2.77 | 1.82 | 2.24 |
| Non-housing related consumer expenditure | 3.11 | 2.55 | 2.00 | 2.38 |
| Household savings | 3.18 | 2.87 | 2.42 | 2.86 |
| Loans from other banks | 3.36 | 2.90 | 2.33 | 2.79 |
| Changes in terms of crediting | 4.00 | 2.87 | 2.24 | 2.76 |
| Changes in interest rates | 3.85 | 2.39 | 1.73 | 2.62 |
| Changes of other conditions of crediting | - | - | 2.00 | 2.69 |

**Table 3**

**Factors Influencing Demand (consumer lending)**

| Factors influencing demand | July 2007 | January 2008 | July 2008 | October 2008 |
|---|---|---|---|---|
| | *Mean values* | | | |
| Consumer confidence | 4.00 | 2.97 | 2.03 | 2.43 |
| Spending on durable consumer goods | 4.21 | 3.30 | 2.30 | 2.73 |
| Household savings | 2.86 | 2.80 | 2.41 | 2.70 |
| Loans from other banks | 3.32 | 2.87 | 2.31 | 2.70 |
| Changes in terms of crediting | 3.96 | 2.90 | 2.31 | 2.83 |
| Changes in interest rates | 3.59 | 2.43 | 2.13 | 2.70 |
| Changes of other conditions of crediting | - | - | 2.25 | 2.80 |

**Table 4**

**Factors Influencing Credit Policy (corporate sector)**

| Factors influencing credit policy | July 2007 | January 2008 | July 2008 | October 2008 |
|---|---|---|---|---|
| | *Mean values*[80] | | | |
| Costs related to bank's capital position | 2.68 | 2.44 | 2.52 | 2.70 |
| Bank's liquidity position | 2.55 | 2.19 | 2.30 | 2.64 |
| Expectations regarding general economic activity | 3.10 | 2.09 | 2.06 | 2.15 |

[79] Mean measures are calculated in accordance with the scale: 1 – significant effect on drop in demand, 2 – little effect on drop in demand, 3 – no effect on demand, 4 – little effect on rise in demand, 5 – significant effect on rise in demand.

[80] Mean measures are calculated in accordance with the scale: 1 – significant effect on tightening the credit policy, 2 – little effect on tightening the credit policy, 3 – no effect on the credit policy, 4 – little effect on alleviating the credit policy, 5 – significant effect on alleviating the credit policy.

| | | | | |
|---|---|---|---|---|
| Economy industries risk profile | 2.74 | 1.94 | 2.00 | 2.18 |
| Risk on the collateral demanded | 2.65 | 1.84 | 1.82 | 2.03 |
| Changes in share of high-risk loans in loan portfolio | - | 2.16 | 2.09 | 2.34 |
| Changes in financial status of large debtors | - | 2.35 | 2.44 | 2.50 |

**Table 5**

**Factors Influencing Credit Policy (mortgage lending)**

| Factors influencing credit policy | July 2007 | January 2008 | July 2008 | October 2008 |
|---|---|---|---|---|
| | *Mean values* | | | |
| Cost of funds and balance sheet constraints | 2.96 | 2.23 | 2.33 | 2.90 |
| Competition from other banks | 3.54 | 2.84 | 2.67 | 3.13 |
| General economic activity outlook | 3.25 | 2.35 | 1.97 | 2.52 |
| Real estate market outlook | 3.07 | 2.19 | 1.73 | 2.45 |
| Level of debtors' creditworthiness | 3.21 | 2.58 | 2.03 | 2.61 |
| Risk on the collateral demanded | 2.68 | 2.06 | 1.64 | 2.45 |

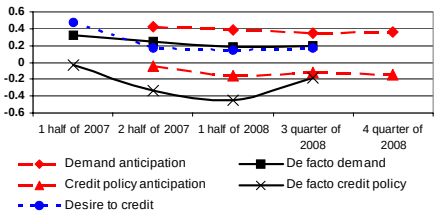
**Table 6**

**Factors Influencing Credit Policy (consumer lending)**

| Factors influencing credit policy | July 2007 | January 2008 | July 2008 | October 2008 |
|---|---|---|---|---|
| | *Mean values* | | | |
| Cost of funds and balance sheet constraints | 3.00 | 2.17 | 2.41 | 2.87 |
| Competition from other banks | 3.57 | 2.77 | 2.66 | 3.07 |
| General economic activity outlook | 3.21 | 2.27 | 1.91 | 2.47 |
| Level of debtors' creditworthiness | 3.00 | 2.33 | 1.88 | 2.43 |
| Risk on the collateral demanded | 2.63 | 2.07 | 1.75 | 2.57 |

**Figure 8**

**Demand and Credit Policy Anticipations (corporate sector)**




Throughout the forecast survey it has been noticed that the diffusion index revealed inconstant coincidence of bank forecasts for the next period both of demand and credit policy with the real assessment. For example, in corporate sector the gap between the forecasts and factual demand and credit policy assessment is much deeper (Figure 8). Demand forecasting, factual demand and readiness to credit correlated positively over the last 9 months. What affected the gap in credit policy of banks most is an abrupt slowdown in the activity of businesses and unfavourable situation at the financial markets. Restraint in growth of credit risks forced banks to undertake tight countermeasures, which eventually resulted in gap between forecasts and factual assessment of changes in the credit policy.

The situation with mortgage lending turned out to be more predictable (Figure 9). During drop in prices of real estate and a consequent reevaluation of collateral, the banks aimed to restrain the increase in the mortgage share of their loan portfolios by tightening the credit policy and reviewing requirements to debtors. As a result the forecasts and the factual assessment of the credit policy positively coincide to a greater extent. If the demand is analyzed, its assessment depends on the situation at the real estate market and overall economic forecasting. At the same time, the banks realize that the threshold of tightening the credit policy is achieved, and assume that it will either stay at the same level, or will be slightly softened as of beginning of 2009.

**Figure 9**

**Demand and Credit Policy Anticipations (mortgage lending)**

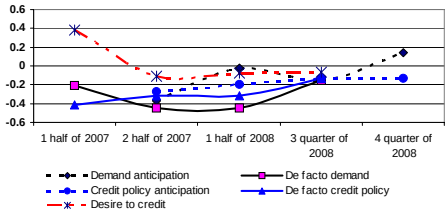
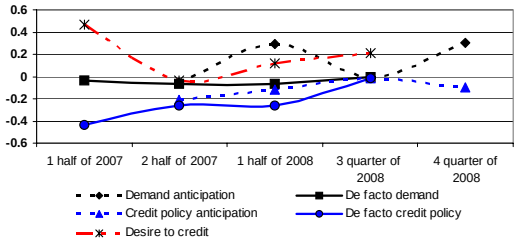


**Figure 10**

**Demand and Credit Policy Anticipations (consumer lending)**




Over the last 15 months demand for consumer lending stayed at the same level at the whole of credit market (Figure 10). Cyclic jumps in forecasts on demand can be explained by expectations of increase in consumer expenditures on durable goods. However, tight credit policy stayed at the level of the beginning of 2008, and no abrupt fluctuations are forecasted in the near future. This can be explained by banks restructuring their credit products, measures to restrain increase in the number of bad debtors, as lowering the current level of credit risk and improving the quality of loan portfolio is the immediate task of banks.

## Conclusion

On the whole, when the banks found themselves in dire straights and were affected by the situation on the foreign markets, were forced to do their best to keep the liquidity and alleviate the burden on capital and protect its adequacy in the situation of deteriorating loan portfolio, it is most sensible to carry out quality survey. The results of this survey can be summarized in the following:

1. the survey allowed obtaining useful information on main parameters of the credit market;
2. the obtained information facilitated correct understanding and interpreting of quantitative data;
3. the results of research are an additional source of information both for the banks and for other concerned parties who can refer to them in their analytical surveys;
4. the current policy of surveys enhances creation of a full-scale database;
5. improvement of the general research policy and a wider use of new approaches in analysis of data provided by banks will promote its efficiency; and
6. surveying of the second tier banks contributes to carrying out similar surveys in other segments of the financial market.

# 11. Financial Stability in Kazakhstan: Towards the Regulatory Impact Assessment

*By Max Watson, Director of Research at John Howell and Company Limited, a former Deputy Director of the IMF*

## Introduction

This paper conducts a preliminary review of the financial stability policies advocated and pursued by the National Bank of Kazakhstan (NBK). By extending regulatory impact assessment (RIA) to the field of financial stability, the paper seeks to break new ground. In recent years, RIA has become established as a standard technique to improve the effectiveness and efficiency of regulatory policies, including notably in the financial sector. But it has not yet been applied to issues of policy design and execution involved in financial stability work.

The policy and market developments of recent months suggest that the application of RIA in this field is now a priority. Demands for accountability are mounting with the growing calls on the public purse in the present market stress – demands which are unlikely to be limited to those countries which have already been seriously affected.

As a case study, in this context, Kazakhstan offers features that are relevant and instructive. Kazakhstan explicitly adopted policies to promote financial stability in the run-up to the present market turbulence, conscious of potentially unsustainable capital market trends. The economy experienced complex and strong pressures during the boom period of the mid-2000s; became an early casualty of the current turbulence; but has been successful to the present time in preventing any huge loss of output or employment as the boom has unwound. This reflected the fact that the authorities moved swiftly to put in place a comprehensive package of measures to contain spillover effects when the present market tensions and turbulence emerged.

## Assessing financial stability frameworks

How is RIA to be extended to the field of financial stability? This is a policy function that embraces aspects of monetary, fiscal and supervisory policy, and it might at first sight appear too diffuse to merit consideration in its own right. Yet the greatest costs for the public purse arise precisely in those cases where there is a systemic failure of some kind, and the history of financial crises demonstrates how different strands of policy can contribute both in the phase of "prevention" and of "resolution."

The answer cannot be to aggregate the findings of micro impact assessments in each area of policy. The distinctive feature of financial stability is that it is an emergent feature of the economic and financial system, not of its constituent parts. And it results in important ways from the manner in which policies interact – for example, in the macro policy mix. Moreover, it can well be the secondary aspects of policy (e.g. risk management dimensions) that matter for financial stability, and these secondary characteristics may well be relegated in a standard RIA to a quite subordinate role.

To break the ice in this field, this paper does make one simplifying restriction. It focuses principally on the role of the central bank in pursuing the financial stability mandate. This seems reasonable. Financial stability is, explicitly or implicitly, a core function of the central bank. Indeed in Europe, where only half of the central banks exercise an autonomous monetary policy, it is the main common aspect of their analytical focus and operational priorities. Never has this focus of their work been more relevant or crucial than in the period since the spring of 2007.

## The risk environment in Kazakhstan

From 2000 to 2007 the Kazakhstan economy was on a path of very strong economic growth, averaging over 10 percent per annum. This reflected not just the impact of higher energy prices, but also the favourable effect of transition reforms in the macroeconomic and structural areas. Among the structural measures implemented, Kazakhstan was particularly advanced in the financial sector reform, especially regarding banking reform and interest rate liberalisation. Indeed, in the banking area, Kazakhstan was acknowledged to be more comparable with the highly modernised financial systems in Eastern European members of the European Union than with CIS economies other than Russia (Table 1).

**Table 1**

**EBRD Reform Indicators**

(4+ = level of market economy)

| | Banking reform & interest rate liberalisation | Securities & non- bank financial institutions | Governance & enterprise restructuring | Competition reform |
|---|---|---|---|---|
| Kazakhstan | 3 | 3- | 2 | 2 |
| Russia | 3- | 3 | 2+ | 2+ |
| Czech Rep. | 4 | 4- | 3+ | 3 |
| Hungary | 4 | 4 | 4- | 3+ |
| Poland | 4- | 4- | 4- | 3+ |
| Slovakia | 4- | 3 | 4- | 3+ |

With financial liberalisation, Kazakhstan – like other advanced transition cases – began to integrate rapidly with global financial markets. The main engine of integration lay in domestic banks, which were predominantly owned by domestic interests. At the same time, progress was relatively less advanced in the diversification of the financial system and in developing a business environment in which resources would be competitively allocated across the non-energy sectors of the economy. In other words, banking system development and integration moved on apace while some other aspects of reform advanced more slowly.

During these boom years, the banking system was highly profitable. However, financial risks were building up, and some sources of later stress were becoming ingrained. The potential sources of financial instability risk lay partly on the asset side, in the scale and speed of the rise in bank lending and asset prices. But they lay also on the liability side, in the growth of banks' external borrowing. Kazakhstan was not running a current account deficit, because the oil surplus counterbalanced the deficit in the non-oil sectors of the economy. But gross external liabilities grew rapidly, as financial integration facilitated credit expansion by the domestic banking sector.

An analytical challenge facing the authorities was that it is inherently hard to disentangle the symptoms of a warranted boom, following productivity or financial liberalisation shocks, from the symptoms of a bubble that can end in serious damage to the real sector. This challenge is all the greater in a catching-up economy, where reform shocks should trigger sizable equilibrium increases in asset prices and appreciation of the real exchange rate. Energy exporting economies, moreover, can expect to experience a trend appreciation of the real exchange rate as a result of growing natural resource revenues, and this too must be viewed (at least over the medium- and long-term) as an equilibrium phenomenon.

In the mid-years of the decade, banks and the wider business community viewed financial trends in Kazakhstan as strongly positive, reflecting favourable shocks to the economy, although there were concerns about the emergence of "Dutch Disease" during this period. The Government of the Republic of Kazakhstan was satisfied with the rapid expansion, which doubled GDP in less than a decade, but it also took action to moderate the boom by continuing fiscal transfers to the National Fund, cognisant of the risk that the natural resource boom could place excessive pressures on the economy.

The assessment of outside commentators varied in the degree of concern or questioning they expressed about trends in the financial sector. A study of bank systemic risk by FitchRatings in

2005 classified Kazakhstan quite high risk (as D on a scale of A-E) for the strength of the national banking system, but as low risk (1 on a scale of 1-3) in terms of the systemic risks posed by trends in bank lending, asset prices, and the real exchange rate.

The multilateral institutions in their assessments called for a prudent monitoring of trends in the financial sector, but did not give sharp warnings that serious stress might be only two years away. External assessments typically did not trace the macrofinancial linkages through which shocks to the economic system could cause a build-up of endogenous financial risk; through which a downward spiral in credit, asset prices and the exchange rate could emerge; or through which fiscal performance could play a role.

An exception, to some degree, was the December 2005 Oxford/FIRS study of the economy, which highlighted financial stability, rather than Dutch Disease, as a key policy concern. The grounds were that the confluence of positive shocks on the financial sector was very likely to trigger overshooting in financial markets, with macrofinancial linkages (such as unhedged exposures in the nonfinancial sector) that could result in serious damage to growth in the downswing of a boom-bust cycle.

From 2005 onwards, the management of the NBK became concerned about the progressive build-up of risks in the financial system, and the possibility of future threats to financial stability, and emphasized these issues in its interactions with other domestic agencies.

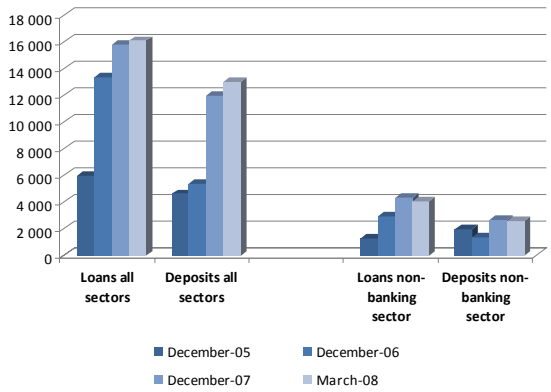
A key concern was the possibility that external borrowings by the banks could prove a trigger point for financial stress, which might then propagate through the macrofinancial linkages and feedback processes described above.

The course of events in Kazakhstan from mid-2007 onward validated this risk analysis. When risk premia in global markets began to rise as the sub-prime crisis broke, domestic banks proved vulnerable to external shocks. From mid-2007, their access to the international capital markets was sharply curtailed. Credit default swaps rose and debt ratings by international agencies were reduced. These external shocks translated into slower domestic bank lending, stalling asset prices, reduced growth, and some downward pressure on the nominal exchange rate.

Kazakhstan was more seriously affected by this initial phase of market turbulence than other former transition economies. One factor that may help explain this is that the compound positive shocks to the financial system and real economy had resulted in credit growth that was significantly more rapid than in other emerging market countries in a similar stage of financial deepening, and that this was accompanied by a very rapid growth in cross-border bank liabilities (Figure 1).

A further factor explaining the relatively early onset of liquidity stresses is that emerging market economies in Eastern Europe had wide foreign bank ownership. In the early stages of the sub-prime crisis, this moderated the impact of liquidity shocks in global markets. That partly reflected portfolio dynamics in specific banks, which happened not to be exposed to the sub-prime crisis. Indeed, recent credit flows to and within the Baltic region illustrate that a foreign banking presence did not assure invulnerability.

**Figure 1.**
**Cross-border loans and deposits to and from Kazakhstan by BIS countries (US$ billions)**




*Source: Bank of International Settlements (July 2008)*

It can be argued that Kazakhstan would have escaped such a severe initial liquidity shock in 2007 if there had been a larger presence of foreign banks acting as external financing conduits. This is probably correct, assuming that such banks were not also among the early victims of the sub-prime crisis. However, there is a broader and more durably relevant conclusion here: that financial sector diversification in

general can contribute to moderating the risks of stress by multiplying the channels through which credit can flow to the real economy.

## The Policy Responses of the NBK

Official policies outside the domain of the central bank were already set on a course by the mid-years of this decade that promised to mitigate boom-bust risks in the national economy. Importantly, the government had moved to set up the National Fund in order to smooth the impact of fluctuations in natural resource revenues – thus moderating their impact on demand and deferring some receipts to benefit future generations. Moreover, financial regulation had been built up while this was a responsibility of the NBK, and it continued to be strengthened after the FSA became independent in January 2004.

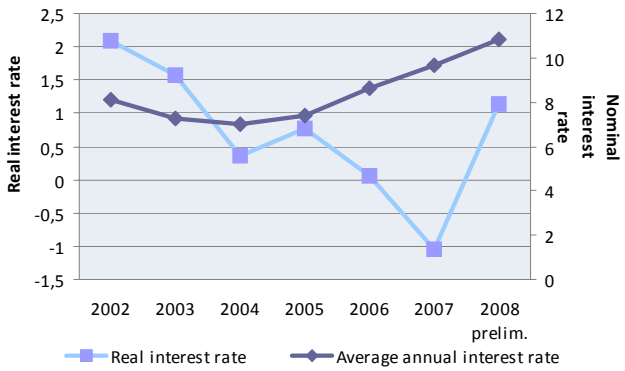
As the NBK became more concerned about financial stability risks, it adopted a two-pronged strategy. The first was to tighten monetary policy progressively, and in this connection to gain political acceptance of the need to allow a steady strengthening in the nominal exchange rate. The second was to press for a broader policy response to the ongoing boom, conscious that its twin goals of monetary and financial stability both depended on strong flanking measures in the domains of fiscal policy and financial regulation.

In terms of instrument assignments, the NBK knew monetary policy had a significant role to play in mitigating stability risks. It raised interest rates, tightened liquidity requirements, and allowed sizable variability in the exchange rate – which is recognised to discourage unhedged borrowing in foreign currency by firms and households (Figures 2 and 3). Few other emerging market central banks moved on all three fronts during this period.

However, given the strength of the financial boom, the NBK judged that macroeconomic policy could not be effective through monetary policy alone. It called for a tight fiscal policy to dampen pressures on consumer prices, asset prices and the real exchange rate. In 2006, it encouraged the tax-based measures adopted to slow the pace of direct external borrowing by firms.

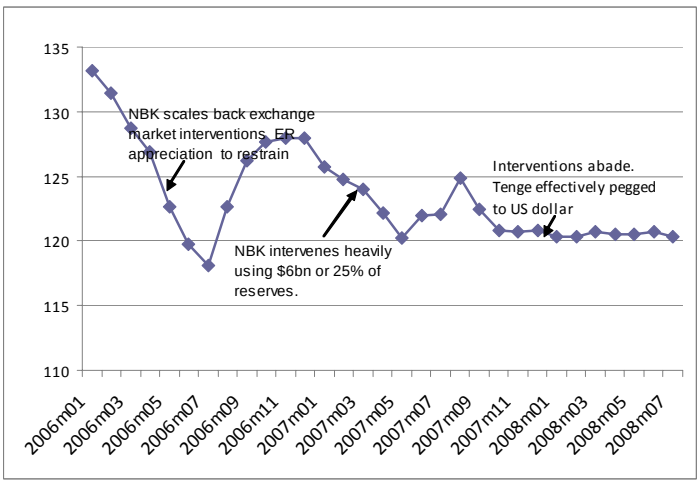
The NBK also alerted the Financial Supervisory Authority (FSA) to the strong macroprudential case for vigilance over lending and external borrowing. In Kazakhstan, unlike many other advanced and emerging market economies, this macroprudential message was both launched effectively by the central bank and acted upon by the FSA. A wave of additional regulatory measures was taken by the FSA in 2005-7.

**Figure 2**
**Evolution of nominal and real interest rates, 2002-2008**




*Source: IMF Article IV Consultation – Staff Report, August 20*

**Figure 3.**
**Exchange Rate, Tenge per US$. Monthly averages, 01/2006 – 07/2008**



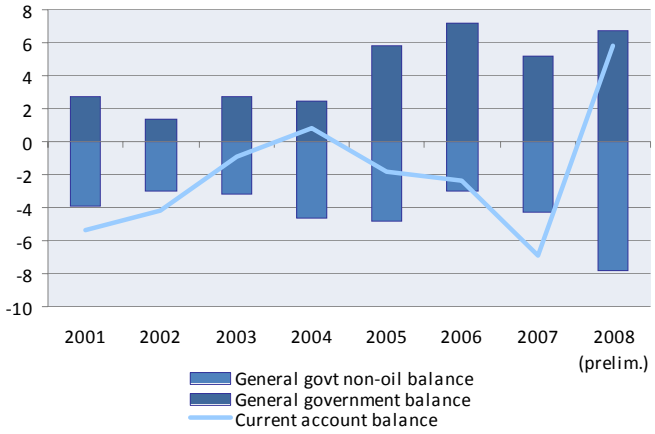

*Source: IMF International Financial Statistics, October 2008*

The prudent fiscal policy pursued during these years of strong revenue boom is illustrated in Figure 4 below.

The policy mix that the NBK advocated in the closing months of 2007 (and which was largely adopted by the Government of Kazakhstan and its agencies) comprised three main elements. First, it injected liquidity generously and provided blanket support for bank deposits, since moral hazard concerns were outweighed by risks of a bank run (Figure 5). To counter moral hazard, it also sought to "bail-in" bank shareholders by seeking capital injections. Second, it kept a firm monetary stance in terms of policy rates to avoid a loss of domestic confidence and the crystallization of balance sheet risks among firms and households; indeed, nominal interest rates were raised by two percentage points during the period of stress. Third, it advised that fiscal policy should "take the strain" through a significant temporary widening of the non-oil deficit, and through specific measures to support the private sector (Figure 6).

**Figure 4.**

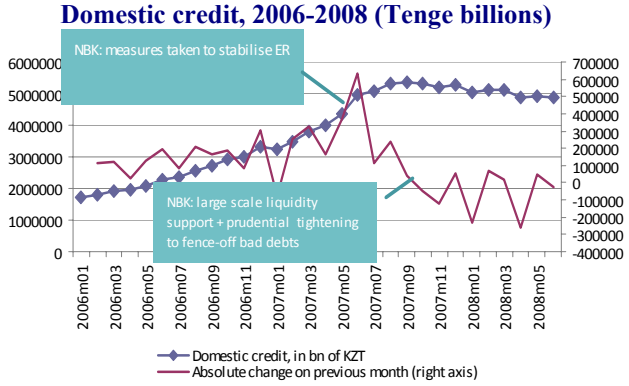
**General government and current account balances, % of GDP (2001-2008)**




*Source: IMF Article IV Consultation*

**Figure 5.**

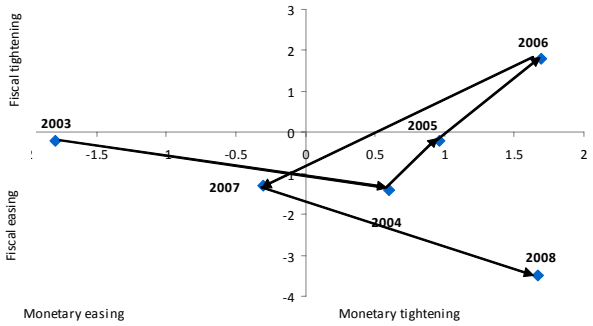
**Domestic credit, 2006-2008 (Tenge billions)**




*Source: IMF International Financial Statistics, October 2008.*

**Figure 6.**

**Policy mix, 2003-2008**




*Source: NBRK, IMF, Authors' calculations. Note: Monetary policy in this chart is measured by a combined index: a sum of % change of average annual real interest rates, applied by NBRK in the respective year, (weighed at 2/3), and of % change in the average annual real effective exchange rate (weighed at 1/3). Fiscal policy is measured by % changes in the general government non-oil budget balance.*

## *Alternative options and policy trade-offs*

In implementing the RIA approach, it is important to look beyond the findings of a direct cost-benefit analysis of actually measures taken. Even where there is evidence of sizable net benefits on this basis, it is valuable to ask several additional questions:

Could stronger preventative and/or remedial action have more effectively mitigated the financial stresses in the recent episode?

Alternatively, was it indeed necessary to have recourse to official regulatory action, with its associated costs; or would moral suasion/self-regulation have sufficed?

Was a suitable mix of policy measures adopted, or would the cost have been lower, and/or the effectiveness of official action higher, if the mix had been different?

Are there hidden costs in terms of a legacy for the future – e.g., risks that stress might worsen again, or that moral hazard could distort future resource allocation?

**First, could Kazakhstan have avoided severe financial stress by stronger preventative or remedial action?** The analysis that underlay the actions of the NBK does not suggest that it would have been possible to resist to a high degree the tide of inward capital flows and of upward pressure on credit, asset prices and the real exchange rate. These were driven by "tectonic" shifts in the economy: the triple shock of transition reforms, of growing natural resource revenues, and of financial integration. Nor would it have been desirable to stifle the private sector by blanket controls.

At the margin, more might have been done in terms of an even stronger fiscal, monetary and prudential stance. Fiscal policy could have withdrawn stimulus sizably in 2006-7, and nominal interest rates might have been raised more aggressively. But against this it should be noted that some more advanced economies have entered the sub-prime crisis with less well-thought-through preparations than Kazakhstan, and in some cases with a seriously damaging policy mix. Moreover, the recent stress was a possibility, not a certainty; and the triggering events from the US economy were far more savage than any observers in international policy and market circles had anticipated. Ex post, the trade-offs inevitably emerge more starkly than ex ante.

**Second, would an approach based on moral suasion or self-regulation have sufficed? Could non-regulatory approaches to prevention have worked as – or more – effectively at a lower financial and administrative cost for the NBK or the banks?** There are indeed examples of the authorities using exhortation and having recourse to self-regulatory approaches, where this was judged a useful route. For example, the management of the FSA held regular meetings with second-tier banks, and sent recommendations to them about liquidity management and the need for pursuing conservative pricing policies on loans and deposits - which they consider stimulated these banks to be more pro-active in their internal analyses and decision-making.

However, contemporaneous discussions by the author of this paper with domestic and foreign banks suggest strongly, that suasion alone was not a feasible route during the upswing. Bankers essentially rejected the stability analysis of the NBK – or viewed it as much too risk averse. They believed, in essence, that their own low risk assessments were right. Regulatory action was indispensable.

There were also, however, some criticisms that measures should have been preceded by greater consultation, an important element of ex ante RIA. This issue deserves careful review for the future, though there are complications in discussing some measures as this may result in pre-emptive actions by banks.

**Third, was the policy mix optimal in terms of effectiveness and of imposing costs on the economy?** On balance, this study finds that the policy mix advocated by the NBK, and broadly adopted, was well-judged. Indeed, in late 2006 on the eve of the liquidity shock, positions advocated by the NBK compare well in some respects with some IFI advice, notably on the need for a restrictive fiscal policy. One clear question, however, which did not depend on the NBK, is whether the FSA would not have benefited from a larger injection of resources.

**Fourth, are there hidden legacy costs?** As with all actions by central banks and governments during the current turbulence, a key question is how to address the risks of moral hazard created by these public interventions. One traditional answer is to strengthen supervision, which exists in major part to counter risks of moral hazard in the financial system. This clearly is relevant in Kazakhstan. But it will be crucial to pay close attention to the broader incentives created by official policy intervention as the present stresses are resolved – including in the ways in which

emergency budget funding is channelled to the real economy; the ways in which beneficial owners of banks are "bailed in" (and/or diluted) as action is taken to strengthen bank balance sheets; and the forcefulness of official actions to pursue the consolidation of the banking system and the clean-up of balance sheets. Over the long run, this will be very important in determining the costs of recent official policy actions, since errors in this area could result in widespread misallocation of resources in the future.

Meanwhile, the present cycle in international financial markets, commodity prices and the real economy is far from over, so any reckoning on the impact of financial stability policies in Kazakhstan can only be provisional. The current liquidity stresses in global markets, and recessionary influences in many advanced economies, will continue to pose challenges that require prudent management of policies in Kazakhstan to avoid negative spill-over effects on the domestic economy.

In the period ahead, notably, easing oil prices will tend to widen the external current account deficit, while tensions in international markets may imply a continuing sizable net repayment of external bank borrowings. In this setting, there will be a delicate balance to strike in determining the right stance for monetary and fiscal policy. This will need to support demand yet avoid triggering an undesirable degree of exchange rate depreciation that could prove problematic for containing inflation and rebuilding confidence.

This means that the NBK may need to avoid a very rapid monetary easing in the period ahead, even in the face of an extended slowdown in domestic growth. As a corollary, fiscal policy should continue to give support to the economy in the period ahead. However, the thrust of fiscal policy could become more selective at the microeconomic level. It would be most effective if it combined an expansion of growth-oriented expenditure – such as infrastructure and education – with a cutback in distortive programmes such as subsidies or other support for private sector projects that are no longer viable.

These latent or contingent costs will be important to internalise in setting policies for the period ahead. Any definitive evaluation of financial stability policies will need to take into account the way the full aftermath of the recent stresses is finally handled. This said, the foregoing assessment offers a very clear picture of the "story so far." The financial stability policy strategy in Kazakhstan has been essentially right, deploying the right mix of measures, adopted for the right reasons.

## Implications for Policy Design

For the future, nonetheless, there are lessons – and in many ways these are lessons of success. At the macro level, a key lesson is the wisdom of maintaining a prudent medium-term fiscal stance, avoiding stimulus in a boom and ensuring that support for the economy in times of stress is truly growth-supportive (avoiding distortive interventions). A further aspect of the public finances is the importance of keeping the National Fund invested – in normal times - in external assets that have an appropriate degree of liquidity: in this form it serves as a store of wealth, a dampener of demand pressures, and a source of collateral for the economy in times of stress.

Second, the supervisory challenge is far from over – including because action to avoid a crisis of confidence will have tended to foster moral hazard. More specifically, supervisors will need to pay continuing attention to concentrations in the external lending and funding exposure of domestic banks. There is also, over the medium term, a need to diversify the financial sector further, making it less dependent on a few major domestic banks. And it will be important, too, to engage in crisis readiness exercises that involve the relevant national agencies and also, over time, overseas supervisors.

Third, the NBK will need to offer continuing advice on the appropriate policy mix from a financial stability perspective – in a setting where attention to the role of the exchange rate may be fundamental, and where monetary policy will have to strike a delicate balance. In this connection, it will also be crucial to monitor carefully the aggregate liquidity profile for the banking system in the

period ahead. Moreover, in assessing financial stability policies, the NBK may be able to make continuing use of RIA techniques. These can be relevant as a tool for filtering the impact of ongoing NBK policy actions, as well as the contributions of other actors to preserving a setting of growth and stability in the Kazakhstan economy. To be effective, this process would need also to devote sufficient resources to monitoring and enforcement priorities.