# FINANCIAL STABILITY REPORT OF KAZAKHSTAN 2015-2017

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# List of Abbreviations:

| | |
|---|---|
| **BCBS** | Basel Committee on Banking Supervision |
| **CAR** | capital adequacy ratio |
| **CIS** | Commonwealth of Independent States |
| **Council** | Council for Financial Stability and the Financial Market Development of the Republic of Kazakhstan |
| **ECB** | European Central Bank |
| **EU** | European Union |
| **FSB** | Financial Stability Board (G-20) |
| **FX** | foreign currency |
| **GDP** | gross domestic product |
| **GS** | government securities |
| **HCSBK** | Housing Construction and Savings Bank |
| **HLA** | highly liquid assets |
| **ICS** | Interbank Clearing System |
| **IMF** | International Monetary Fund |
| **ISMT** | Interbank System of Money Transfers |
| **JSC** | joint-stock company |
| **KACD** | Kazakhstan Central Depository |
| **KDIF** | Kazakhstan Deposit Insurance Fund |
| **KISC** | Kazakhstan Interbank Settlement Center |
| **LLP** | loan loss provisions |
| **MF** | Ministry of Finance of the Republic of Kazakhstan |
| **MJ** | Ministry of Justice of the Republic of Kazakhstan |
| **MNE RK** | Ministry of National Economy of the Republic of Kazakhstan |
| **National Bank** | National Bank of the Republic of Kazakhstan |
| **NDF** | non-deliverable forward |
| **NF** | National Fund of the Republic of Kazakhstan |
| **NPL 90+** | non-performing loans defined as 90 days overdue on interest or principal |
| **P&A** | purchase and assumption |
| **PLF** | Problem Loans Fund |
| **ROE** | return on equity |
| **SME** | small and medium-sized enterprises |
| **SRC** | State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan |

| | |
|---|---|
| **UAPF** | Unified Accumulative Pension Fund |
| **VAT** | value-added tax |
| **bps** | basis points |
| **pp** | percentage point |
| **sq. m** | square meters |
| **thous, mn, bn, tn** | thousand, million, billion, trillion |
| **YoY** | year over year |
| **$/bbl** | USD per barrel of Brent |

## Executive summary

The risks to financial stability of Kazakhstan and the economic losses that followed were unusual in their magnitude, root causes, manifestation and timing. These events challenged the established models and views about the role of financial regulation and called for their review. As is appropriate in such case, the nature of the predominant risks also found reflection in the structure and the focus of the Report.

The Report presents the risk factors according to the type of the appropriate intervention, at the point where the risk originates. The Report covers the issues of external risks, the ability of macroeconomic policies to mitigate them, constraints imposed by the structure of the economy, issues of financial regulation, level of development of the business environment and of the financial market. This is supplemented by the traditional grouping of the risks – according to the point of their manifestation. The two heat maps in the next section represent this distinction clearly in their structure.

The most significant risks that have emerged over the past period were:

- high and persistent level of non-performing loans, which raises concerns about the quality of lending decisions in individual banks, questionable lending practices, especially related party lending and loan “evergreening”, poor quality of financial reporting, especially reliability of asset quality data and capital adequacy, generally poor standards of corporate governance, limited creditor rights;
- legal limits on the use of supervisory judgment about the adequacy of the loan loss provisions and constraints in application of the resolution regime, including the ability of of the courts to reverse the decision of the regulator to resolve an insolvent bank, limited ability to bail-in the creditors;
- fixed exchange rate regime and the attendant loss of credibility of the national currency, leading to high dollarization, high and unpredictable interest rates, loss of competitiveness for firms, inducing collectively-irrational growth in import consumption in response to the terms of trade shock, deterioration of the balance-of-payments, and other avoidable consequences.

The analysis showed that the main reasons for the systemic failures of the financial sector, in particular, at commercial banks, were the problems typically considered to be the problems of financial development, namely:

1) Limited regulatory mandate and the lack of decision-making framework to assess banks’ asset quality and to resolve the insolvent banks efficiently and without systemic disruption.

The inability of the regulator to exercise judgement in the assessment of adequacy of loan-loss provisions led to the underreporting of delinquencies, underprovisioning, overstatement of capital in financial reporting, diluted capital adequacy requirements that relied on self-reported capital and weakened the ability of the criminal law to ascertain fraud from negligence. The regulator was unable to identify undercapitalized banks and to take a timely supervisory action.

Incentives of the management and principal shareholders of the undercapitalized banks were distorted to encourage value-destructive lending. The losses on such loans would be borne by the creditors and the taxpayers. The social costs of capital and labor misallocations that stemmed from such lending may have by far exceeded the financial losses.

The ability of the regulator was further constrained by the lack of protection against civil liability for its staff and the ability of the courts to reverse its decision. This meant that

any coercive resolution aiming for legal finality would have to be court-based, protracted, potentailly spilling over to other banks and, therefore, untenable on financial stability grounds.

As a result, the supervisory and resolution framework steered the decision of the regulator towards the voluntary and more expensive restructuring that relied on open-ended liquidity and capital support from the public sector. This suppressed the recognition of the losses, but by delaying the recognition of NPL, it also amplified the losses and set the course for their eventual acknowledged socialization.

2) Growth remained severely hampered by structural constraints. They manifested themselves as high unit labor cost, persistent structural unemployment, persistently low rate of urbanization, low level of legal and financial literacy, concentration on raw materials and non-tradables, low or opaque incomes, susceptibility to terms of trade shocks.

3) Lagging institutional development, especially in the area of rule of law and property rights, including freedom of contract, their interpretation and adjudication in a way that limit creditor rights and raise credit risk to the point of disintermediation.

Reforms and policy efforts in these areas were held back or misguided by the same structural and institutional constraints that the said reforms were meant to address.

4) Macroeconomic policy issues and problems.

The most glaring problem at the beginning of the period – fixed exchange rate – has been resolved with the transition to a more flexible exchange rate arrangement and the adoption of the accompanying interest rate management and inflation targeting. Adoption of new fiscal rules to ensure gradual reduction of transfers from the National Fund and the reduction of non-oil deficit also helped to improve transparency, predictability and the stability of fiscal policy.

However, not all macroeconomic policy questions have been answered. The most pressing one is to what extent competitiveness should be taken into consideration in the design of fiscal rules. Historically, the real exchange rate, or its stabilization, were one of the policy guides for exchange rate management. It has not been incorporated into the design of fiscal policy.

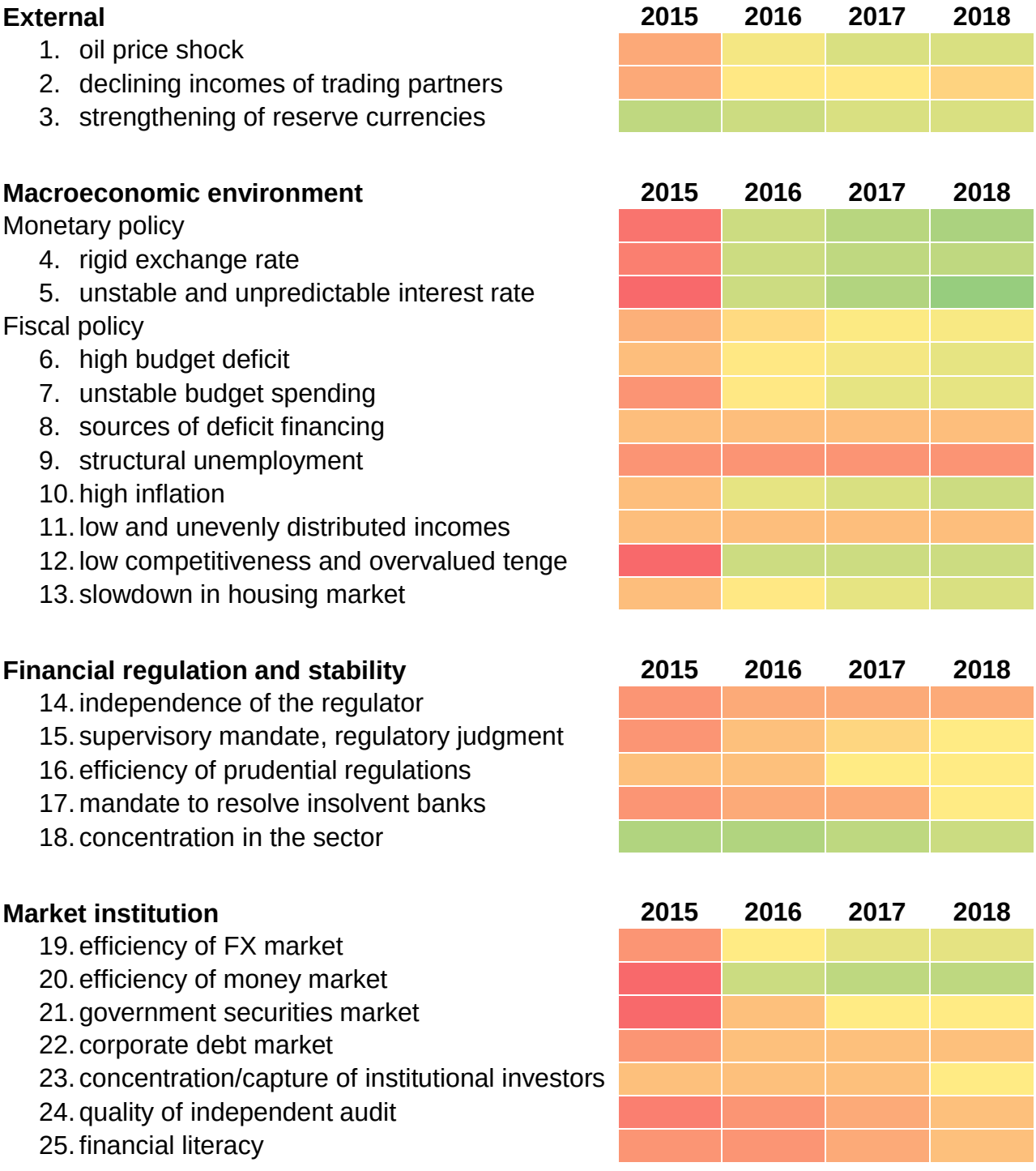
5) Level of development of financial market institutions and their regulation constrains their ability to overcome informational asymmetry and intermediate effectively. This includes low level of development and sophistication of market institutions, such as institutions responsible for financial, managerial, regulatory reporting.

## Report structure

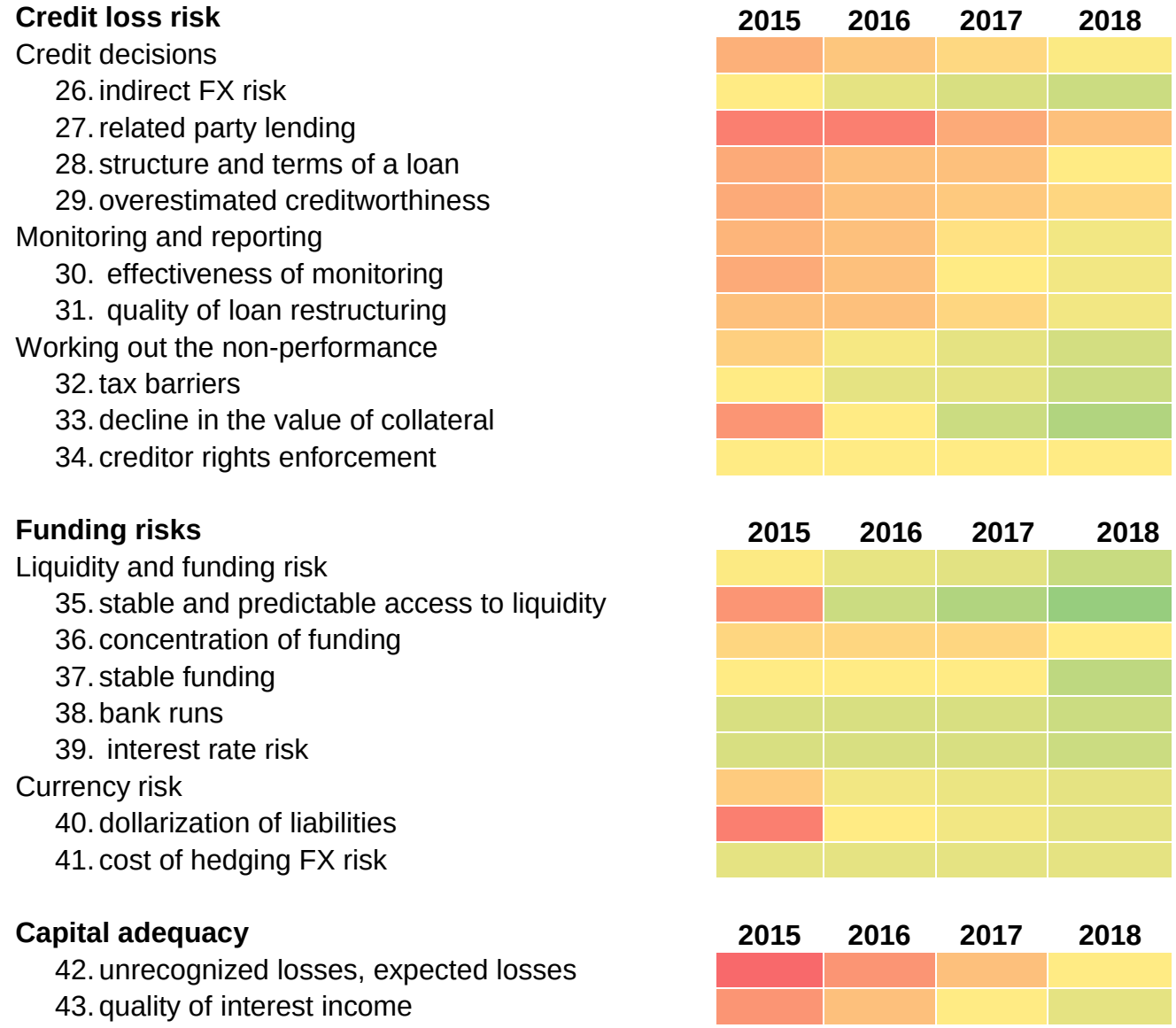
The Report follows a traditional structure, starting from external risks and domestic macroeconomic events and scenarios and then proceeds to the analysis of the relevant markets, including the money market, the foreign exchange market, public debt market and the real estate market. The core body of the Report focuses on the analysis on the balance sheet of the banking system and its ability to withstand credit, funding and market risks. The Report concludes with a discussion of how the identified problems could be best addressed. Each section begins with a chronological description of the recently transpired events, analysis of the causes and identification of the problem areas, and ends with a discussion of solutions and interventions.

# Risk map

## Institutional and macroeconomic sources of risk



## Risk manifestations at individual banks




The risk map is a graphic representation of the National Bank's opinion about the relative significance of certain risks to financial stability, their sources, causes, linkages between them, mitigation strategies and policy priorities.

Many of the risks we consider in this Report would typically be treated as the risks of an individual institution, but their scale, depth and prevalence in Kazakhstan point to the systemic nature of their causes and, accordingly, require inclusion in Report as systemic.

The table "Institutional and macroeconomic sources of risk" looks at risks as failures of institutions designed to ensure the efficiency of financial intermediation. In this table traditional classification of risks manifestation has been complemented by a classification by point of origin. This allows to identify sources of risks and channels through which they propagate and to design better mitigation strategies. The table also shows external risks, completely exogenous for Kazakhstan as a small open economy. Their inclusion is partly a

tribute to the tradition, but mainly intended to motivate policies to reduce dependence on them.

The table "Risks manifestations at individual banks" paints the risk landscape according to the traditional classification, beginning with the credit risk, capital adequacy risks, funding, including systemic ones. The selection and the emphasis reflects our opinion of the most important risks at the current stage of development of the Kazakh banking system, as well as the regulatory priorities in addressing them.

Color reflects the magnitude of the risk, from low risk green to high risk red. The magnitude is understood as the total expected social losses, that is, the probability times the impact.

For the three past years the risk is the risk that has actually materialized, affected the banking system and the economy. In some cases where the risk has not yet materialized, or materialized with the lower frequency than evaluated, this is indicated in the description.

For the year 2018, low probability risk is indicated by hedges "may", "possibly", "probably". In the absence of hedges the probability should be read at 50% and above.

## External risks

1. Kazakhstan's economy remained highly dependent on volatile and unpredictable oil prices. Reducing this dependence requires more conservative macroeconomic policies that are less dependent on oil price forecasts in the short run and flexible enough to respond optimally, quickly and predictably to the terms-of-trade and competitiveness shocks.

Fixed exchange rate did not meet these requirements. Because of it, when oil price and the ruble began to weaken in late 2014, Kazakh producers lost competitiveness, budget and current account balances worsened, confidence in tenge was lost, followed by the currency crisis, demonetization and a liquidity crunch.

2. The weakening of tenge in 2015 recovered much of the lost competitiveness and eliminated other price imbalances. To ensure resilience against future shocks, exchange rate was made more flexible. Flexible exchange rate gave monetary policy the freedom to set and stabilize interest rates and to respond flexibly to external shocks.

3. As the Fed, the ECB and BoJ keep raising the rates, capital outflows from the developing markets are becoming more likely. Under flexible exchange rate these factors are getting more prominent, although not as much as in Russia.

## Macroeconomic environment

4. Rigid exchange rate in the face of adverse external shocks could become easily overvalued, leading to the loss of competitiveness, jobs, foreign exchange reserves, prompted untimely dissaving. By masking FX risks, it caused its widespread underestimation, manifested in widespread FX lending. These costs were compounded by the loss of credibility associated with the defense of an overvalued exchange rate. It disabled the monetary policy and made interest rates highly volatile and procyclical. As a result, banks had to face a combination of FX risk, liquidity risk and FX induced credit risks.

5. Transition to free float and interest rate management put the risks of the fixed exchange rate largely in the past.

6. Large and protracted budget deficit could undermine fiscal sustainability and may indirectly affect financial stability through higher country risk, rating downgrades and higher costs of borrowing. High fiscal deficit in H1 2015 was partly due to the fixed exchange rate. In 2016-2017, with a much weaker tenge, the deficit remained countercyclically high. Fiscal

rules adopted at the end of 2016 were aimed at gradual fiscal consolidation. They specifically called for lower transfers from the National Fund and smaller non-oil deficit. If budget spending were to exclude one-off costs of bank support, the stance of fiscal policy consolidation was essentially preserved through 2017.

While sustainability is an important fiscal policy objective, it is not the only one. For example, a fiscal rule that stabilizes the budget deficit leads to real and unsustainable appreciation when oil prices are on the rise. Inclusion into fiscal policy objectives such considerations as competitiveness and the long-term effects of real appreciation could make fiscal policy more conducive to economic diversification and more conservative and countercyclical when oil prices are high.

7. Sequestrations and unplanned budget cuts make public spending less effective and undermine economy's ability to withstand adverse shocks. Sharp fiscal contractions slow down economic activity and could trigger non-payments along the supply chain of public spending. The risk of sequestration was very high under the fixed exchange rate regime and materialized in 2015. The remaining risks can be mitigated only within the domain of fiscal policy.

8. Budget deficit could be more or less procyclical depending on how it is financed: by domestic borrowing, foreign borrowing or dissaving of foreign assets. If left unmanaged, the composition of deficit financing could create unnecessary risks in capital markets, starting from the FX market, primary market for government debt. Fiscal rules need to be informed of this effect and should shape the composition of deficit financing in a credible and countercyclical manner.

9. Structural unemployment is a major constraint to growth. It is closely related to the "lack of good projects and good borrowers" which banks often cite to explain tight credit. While the lack of skilled labor impedes business development and diversification in the short run, the predominance of unskilled labor in the labor force hampers development in the long run by creating a policy bias towards redistribution and price controls and away from economic efficiency and quality of growth.

10. In Kazakhstan, where oil exports enter the economy predominantly through fiscal channel, public spending exerts more control over medium-term inflation than the interest rate policy. At the current stage of the cycle, with credit channel jammed by bad loans, the ability of the monetary policy to disinflate further is limited more than usual.

Fiscal consolidation slated for 2017-2020 established the basis for low inflation. However, further reforms are needed to make the framework more flexible, countercyclical, rule-based, inclusive of public sector accounts.

11. Incomes distribution remains uneven. Incomes remain opaque and highly dependent on oil. These factors contribute to systemic credit risk.

12. The loss of competitiveness in 2015 was mainly due a rigid exchange rate. After transition to a free float, the residual risks to competitiveness stem largely from procyclical fiscal spending and secular structural issues. Fiscal policy design that accounts for its impact on the real exchange rate could make the real economy more competitive. Over the long term, competitiveness could be improved only by policies that address structural and institutional constraints.

13. Real estate market has been gradually recovering, with the number of transactions rising steadily. Currently, we perceive the risks to house prices as roughly symmetrical.

Mortgage lending is dominated by subsidized schemes, while market lending is constrained by the difficulties which lenders face in foreclosing. Cost of funding contributes to prohibitively high lending rates.

## Financial regulation and stability

14. Operational independence of the regulator is a necessary condition for the mandate of financial and price stability. Making the regulator more independent requires, in addition to statutory acknowledgement of its operational rights, proper reflection in the organizational structures as well as the broad-based support for the policies which may seem controversial even to the beneficiaries.

15. A case in point is the mandate for motivated supervisory judgement, without which supervision is effectively blind and toothless. In 2017, the National Bank drafted the amendments to reintroduce the mandate for supervisory judgement within the framework of risk-based supervision, to be adopted and implemented in H2 2018. For these rights to be effectively applied, the regulator needs to have the capacity, including analytical talent and quality data.

16. The implementation of a number of Basel 3 recommendations, including LCR and the more stringent capital requirements, faces objective structural constraints as well as the resistance on the part of the banks unable to meet them. Constraints specific to Kazakhstan include problems in the funding market, risk management practices, quality of financial and regulatory reporting.

17. The instruments of resolving insolvent banks that are available to the regulator are difficult to apply. The legislation is poorly drafted and the mandate is effectively limited. In 2017 the National Bank drafted the amendments to the statutory laws to remedy the shortcomings of the available mechanisms. These were to be adopted in 2018.

18. Degree of concentration in the banking sector has risen slightly over the last three years, but still remains on par with international averages. The narrowing of the margins due to unhealthy competition is unlikely. Competition for retail deposits has intensified in late 2016, when banks with nonperforming loan portfolios ran out of cash, began to bid up the rates and to offer other benefits.

## Market institution

19. Under the free float, the FX market became much better at price discovery, but room for improvement remains. Efficiency of the market mechanism is currently constrained by a number of factors, the most important of which are high concentration of external accounts, the accompanying informational asymmetry, prudential caps on open positions. As a result, few players are capable of forming and taking views based on the fundamentals.

20. The money market rates has normalized after the National Bank stopped intervening in the FX market and began to actively manage the supply of primary liquidity to stabilize the interest rates. The interest rate management evolved from provision of liquidity at the unannounced interest rate ceilings in early 2015 to preannounced and systematic provision and withdrawals of liquidity on the borders of the corridor beginning in 2016. Interest rate and liquidity risks have subsided substantially as liquidity became readily available at predictable and stable interest rates.

21. The government securities market, both primary and secondary, remains extremely illiquid. The notes of the National Bank is the notable exception. The notes became a major

instrument of absorbing liquidity and their primary market established the benchmark of risk-free yields for maturities up to a year. The yield curve beyond one year is based on a few small transactions with captive investors and therefore remains uninformative. Lack of liquidity in the primary market is partly due to the availability of alternative sources of deficit finance, partly due to the debt management priorities. Lack of liquidity in the secondary market stems mainly from the dearth of voluntary institutional investors.

22. Corporate debt market remains extremely illiquid. This is due to the lack of good issuers in need of debt capital as well as the lack of discriminating institutional investors.

23. Merger of pension assets and centralization of their management in 2013-2014 amounted to effective elimination of institutional investors, which led to a decline in market liquidity and undermined the institution of private pensions.

24. On-site inspections done in 2016-2017 revealed that banks understate loan losses in financial reports to meet capital requirements. A number of banks had to be liquidated or resolved otherwise. The gap between the estimates of the supervision and the auditors points at the need to increase the responsibility and accountability of auditors.

25. Low level of financial and legal awareness weaken financial stability by providing a fertile ground for risky and predatory lending, financial fraud.

## Credit risk

Quality of the loan portfolio deteriorated sharply in 2015, triggered by external shocks. However, the loans were bad and fragile to begin with, although this was evident from the financial reports where the losses were habitually and greatly understated. Poor quality of underwriting and poor quality of reporting were and remain the two major factors of credit risk. One was responsible for the bulk of the loan losses, another for covering them up.

26. FX induced credit risk on new loans has subsided, the foreign currency loans are shrinking and FX lending to individuals is restricted by regulations. However, for legacy FX denominated loans the risks remain high, especially on SME loans vintages 2011-2014.

27. Related party lending may be the single most important factor of non-performance. Its detection is hampered by weakness of formal disclosure requirements and the ease with which they can be circumvented. Since undetected related party lending acts to reduce skin in the game, capital buffer alone does not provide a strong enough disincentive. Policy should therefore focus on more vigilant supervision endowed with a mandate to use indirect diagnostics under the principle of “presumption of relatedness”.

28. Suboptimal structure of the loan increases credit risk, with long grace periods, capitalization of interest, negative amortization, no or insufficient security all acting to select bad risk, delay value preserving action or distort the incentives of the borrower. Corporate loans and large loans to individuals are more likely than other loans to have anomalous structure. In cases of related party lending, bad structure is often a feature of design and thus a red flag for self-dealing.

29. Quality of underwriting is key to loan quality, solvency of a bank, stability of the banking system and its relevance for the real economy. However, when granting related party loans, quality of underwriting would take a back seat, to be considered a barrier to lending rather than a selection criterion. For the worst offending banks, the underwriting became a mere formality and the practice spread to unrelated loans. As the presumption of related party

regulations are positioned to weed out self-dealing, regulatory efforts under risk-based supervision will also focus on monitoring and ensuring better standards of underwriting.

Loan servicing is in even deeper decline than origination. Effective monitoring, recovery and workout strategies allow banks to contain the losses and preserve the value when prospects of full repayment start to dim. Loan servicing is as integral to a commercial banking as the origination, yet many banks, especially those overloaded on bad assets, fail to do it right.

30. Early diagnostics and quality of reporting were first to suffer. Delinquencies that surfaced soon after origination in 2013-2014 were acknowledged, after much prodding by the regulator, only in 2017. Banks would focus on disguising the delinquencies rather than on taking early action. Transition to the newer accounting standards and the risk-based supervision promise a better framework for a timely recognition of impairment, but not the automatic improvements. Banks will need to put their energies into the development of internal risk management systems, replete with data collection and credit risk models, and give risk management a more prominent role. Since only well capitalized banks have the will and the means to do it right, regulatory priority is on capital adequacy under regulatory provisions.

31. Loan restructuring minimizes the losses on bad loans by reducing present value of the claims in order to make repayment more likely. Acknowledging the expected loss is a first step towards minimising it, but works only if there is capital to absorb the loss. By admitting the loss, a bank with capital on the brink of CAR would breach it, with the obvious repercussions. Instead of risking the license, undercapitalized banks would hide non-performance by value-destructive restructuring practices such as evergreening, open-ended extensions, negative amortizations and backloaded repayments. These practices would improve the appearance of loan quality in the short term and lower the chances for recovery. This suggests that banks with less regulatory capital should have less regulatory forbearance.

32. Tax treatment of transactions with bad debt and debt forgiveness were one of the barriers for effective work out of bad debt. Changes to the tax code adopted in 2018 removed some of these barriers to effective NPL work outs.

33. Overall risks due to a decline in housing prices are greatest for FX denominated loans. Historically, declines in tenge denominated housing prices were observed only in the periods of acute exchange rate misalignment.

In 2016, a law was adopted to make tenge the sole measure of value in Kazakhstan. Among other things, this meant that prices and appraisal of tangible assets had to be done in tenge only, without reference or link to foreign currencies. For FX denominated loans, this meant that the reported LTV became linked to the exchange rate and removed the illusion that FX denominated loans secured by real estate were safe.

34. The ability of a lender to exercise its rights as a creditor and a lien holder without delay is key to ensuring repayment and lowering credit risk. Constraints on these rights that favor unscrupulous borrowers tend to elevate credit risks and reduce availability of credit to all. Adjudication that hinders foreclosure and repossession by overriding contractual terms lowers recovery ex post and, more importantly, tends to raise credit risk and to reduce the availability of credit ex ante.

## Funding risks

Liquidity crunch under fixed exchange rate regime and the subsequent currency crisis created clear and present risk for the liquidity of the system and individual banks, solvent and not. With the transition to the floating exchange rate, these risks have subsided substantially, with volatility of interest rate at historical lows and unprecedented for Kazakhstan visibility and predictability of interest rate and monetary conditions.

As the most acute risks receded, to the fore came such funding risks as high dependence on the state and quasi-public sector, chunky deposits, high proportion of effectively demand deposits, and other less prominent risks.

Liquidity risks in 2016-2017 are experienced almost without exception by banks with non-generating loan portfolios. In 2017, systemic structural excess liquidity remain a risk to the conduct of monetary policy, where open market operations take a back seat to standing facilities at the boundaries of the interest rate corridor.

35. Systemic liquidity risk was reduced with the introduction of standing facilities in 2016 to provide and withdraw primary liquidity at the boundaries of the interest rate corridor. These allow to respond effectively to fluctuations in autonomous factors of liquidity supply.

36. High concentration of funding is mainly associated with the state and quasi-public sector in banking system liabilities and dependence of on large FX denominated deposits.

State funding could replace the outflows of private funds in an emergency, but in the long run does not provide stable funding. Dependence on large deposits, most of which are held by the public sector, makes banks more vulnerable to both idiosyncratic and political risks. Large deposits are also more dollarized and thus less suitable for lending.

37. Reliance on deposits that are nominally term but effectively demand accounts is a risk specific to Kazakhstan. Historically, product competition led to the emergence of term deposits that allowed early withdrawal of almost entire amount, no penalties or questions asked. Average duration of these products was about half the contractual maturity. Aside from the liquidity risks proper, the practice entails the risks associated with their mismeasurement and misassessment. To address the problem, the National Bank plans to introduce differentiation of the cap rates of Kazakhstan Deposit Insurance Fund (KDIF) depending on maturity and early withdrawal penalties.

38. Bank run is inherent to any fractional reserve system. As in other such systems, to mitigate the risks individual deposits are insured. KDIF, a paybox that collects the premium and sets the rate caps, has enough capital to cover deposits of all small banks or one largest bank.

The regulator has drafted a new “lender of last resort” mechanism based on principles of prompt lending to well capitalized banks, secured by good collateral, for a short term and at a penalty rate. This is expected to eliminate open-ended liquidity support to undercapitalized banks.

39. Interest rate risk is primarily associated with the contractual terms on fixed rate long-term deposits. The contracts give a right to deposit unlimited amount of funds at fixed rate during the life of the account, which amounts to an interest rate swaption. This embedded option emerged as a result of unregulated product competition. In the downward sloping yield curve environment, clients open such accounts strategically in order to lock in the rates. As a result, during 2016-2017, the cost of the incoming funds lagged the market rate

by about a year. Banks do not acknowledge the costs of the embedded option in financial statements and their risk management seems to be unaware of the problem. To address the issue, the regulator plans to add explicitly the cost of the option when setting interest rate caps on such deposits. This should make deposits without the option competitive and nudge the banks to manage interest rate risk better.

Currency risk associated with dollarized liabilities remains manageable, largely because dollarization has subsided. Commercial banks should in their pricing policies reflect the risks specific to each funding product, which requires that the respective roles and responsibilities of their business divisions and risk management are better allocated. However, alone, better corporate governance and better supervision cannot address the root cause of dollarization. To restore confidence in tenge, the National Bank will need to maintain commitment to free float and ensure that interest rate policy provides elastic support to the national currency, consistent with sustainably low inflation.

40. The most important risks for the funding structure are those associated with the dollarization of liabilities. Under the free float, dollarization of deposits declined from a peak of 72% in early 2016 to 48% in late 2017. This was supplemented by higher rates on tenge deposits (in 2016 caps were raised to 14%) and higher insurance coverage.

41. Currency and liquidity risks associated with the most acute stages of currency crisis in 2014-2015 were absorbed by long-term currency swaps offered by the National Bank. Most swaps issued back then have expired.

## Capital adequacy

Quality of bank capital is a key to both bank efficiency and solvency as it affects quality of its underwriting, origination and servicing. To boost absorption capacity, the National Bank in 2017 injected hybrid capital to a number of undercapitalized banks in exchange for promise of backloaded equity injection. Failure to recapitalize will result in dilution of the shareholders.

42. Delayed recognition of losses lowers bank’s capital quality, or actual quantity, and allows the bank to take on more risks than it can. In extreme cases, with no skin the game, it eliminates the disincentives against asset stripping and related party lending. Stress testing conducted by the National Bank in 2017 on the basis of the new loan level methodology showed that the actual impairment in a number of banks was substantially higher than in the books.

43. Unrecognized NPL and accrued interest on unrecognized NPL are the most common manifestations of poor quality capital that emerges as a result of a decline in lending practices.

# I. Macroeconomic and financial developments

## 1.1 External macroeconomic conditions

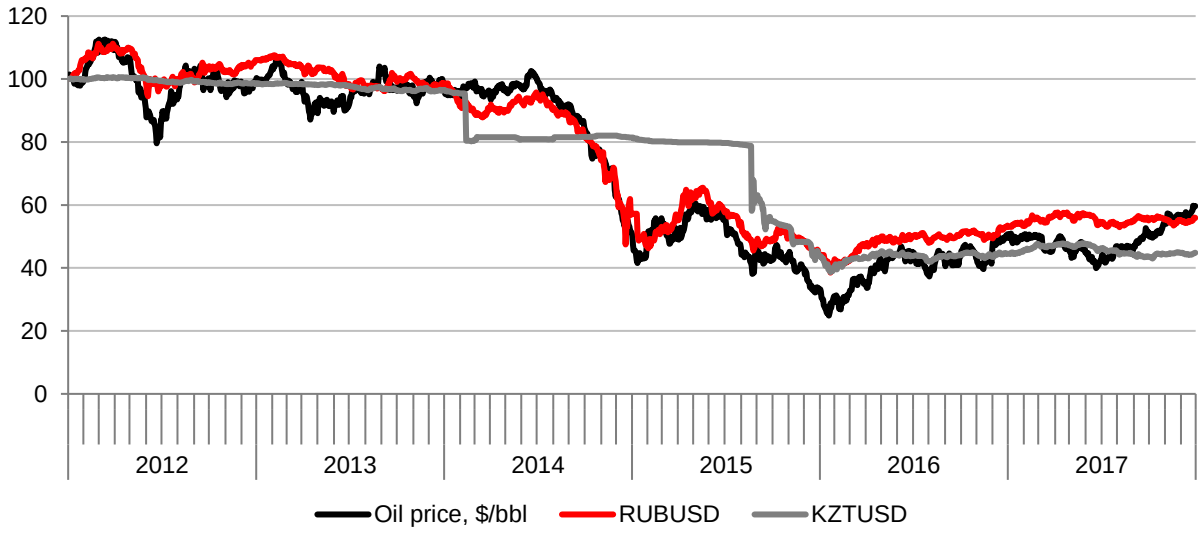
During 2015-2016 the economy and the economic policy of Kazakhstan have been adjusting to a massive deterioration in the terms of trade. As the oil prices fell in late 2014 to the new seemingly permanent lows, the exports and the budget revenues in dollar terms declined by half. In the face of similar shocks, Russian ruble weakened. Meanwhile, USDKZT remained stable, leading to a loss of competitiveness relative to Russian producers (Figure 1.1). The adjustment of the economy to these shocks was slow, delayed by the defense of the exchange rate.

Transition to a floating exchange rate in the second half of 2015 eliminated the most acute external imbalances, relieved the pressure on USDKZT, established conditions for stabilization in the money market, and, most importantly, accelerated the shift in the domestic terms of trade in favor of non-commodity tradables. The free float also made interest rates less procyclical, opened the doors for interest rate policy, eased the challenge of the countercyclical fiscal policy and established a more conducive environment for coordination between the fiscal and the monetary policy.

However, the reallocation of capital, and other resources, from non-tradable sector to tradables advanced slowly. On the supply side, it had to do with the fact that bank assets were not available for immediate reallocation, with large, and growing, portion of the loan book showing signs of non-performance. Constrained by lack of capital, banks were unwilling and unable to work out the delinquencies. On the demand side, the tradable sector had too few well-established and creditworthy borrowers.

In 2017, rising oil prices and oil output saw a partial recovery of budget and export revenues. However, the risks stemming from the terms of trade shocks remain high due to the structural dependence on commodities.

**Figure 1.1 External shocks in late 2014: unfavorable, deep and permanent**



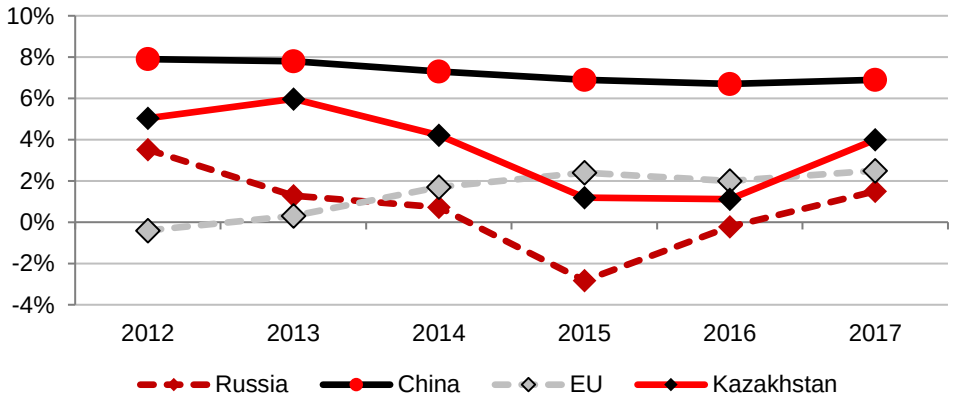

Source: KASE, Bloomberg

### External shocks of 2014

In the neighboring Russia, sanctions and a deep drop in oil prices produced a 2015 recession (Figure 1.2). As Russia's external incomes fell, USDRUB went into a free float and quickly weakened by 60%, boosting competitiveness of the labor. This contributed to a gradual recovery already in 2016-2017 on the backdrop of rapid and sustained disinflation (inflation in 2017 was 2.5%).

As expectations of rate hikes by the Fed firmed up and signs of economic recovery in the US became more robust, the US dollar began to strengthen, gaining 17.6% against the basket in 2015.

**Figure 1.2 A slowdown in Kazakhstan was almost as sharp as in Russia, but lasted longer**



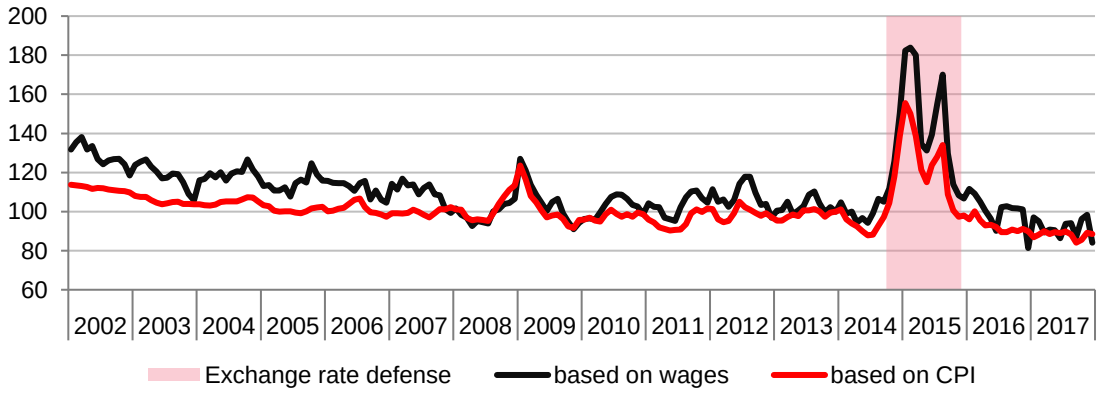

Source: IMF, Statistics Committee of Kazakhstan

The ability of the monetary policy to respond to these shocks was compromised by the commitment to defend the exchange rate. Yet, the defense was not credible. Demand for tenge weakened. The base money, especially its tenge denominated part, shrank to record lows. Money market rates became unpredictably volatile, occasionally breaking three-digit levels. The space for fiscal policy has also narrowed.

**Balance of Payments**

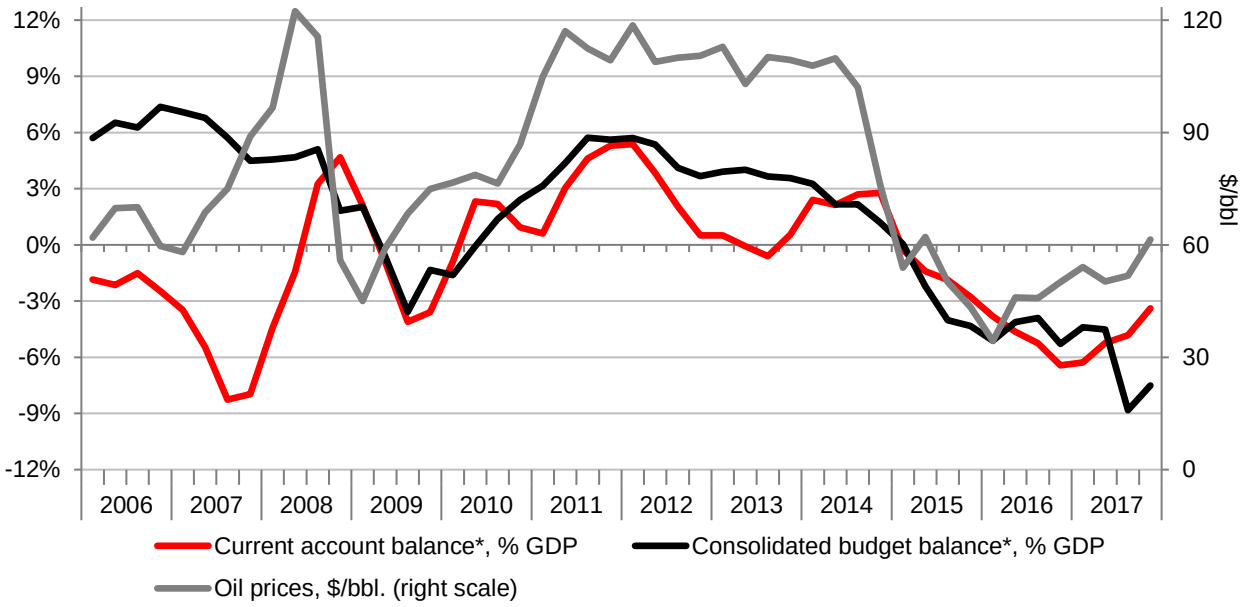
In response to the oil price shock, both, the external and the budget accounts worsened. The year 2015 bore signs of non-adjustment. Tenge appreciated against the ruble by 60% in real terms, helping to clear the inventory stocks of consumer durables in the neighboring Russian provinces. The overvaluation relative to Russia was even greater in the labor market than in the goods market. Defense of the exchange rate ruled out the external adjustment. A slower and less efficient internal adjustment was made even more so by the imperfect credibility of the defense. The policy of fixed exchange rate was costly in terms of the foreign assets used in interventions, the budget costs, lost competitiveness, especially against the weakened ruble (Figure 1.3), the improvident rise in consumption, and imports, of durables. The balance of payments slid from +2.8% GDP in 2014 to -2.8% GDP in 2015 (Figure 1.4).

**Figure 1.3 Real RUBKZT had no significant and lasting departures from long-term trend**




Source: Statistics Committee of Kazakhstan, Federal State Statistics Service of RF
Note: December 2013 = 100

**Figure 1.4 The fall in oil prices led to a deep twin deficit**



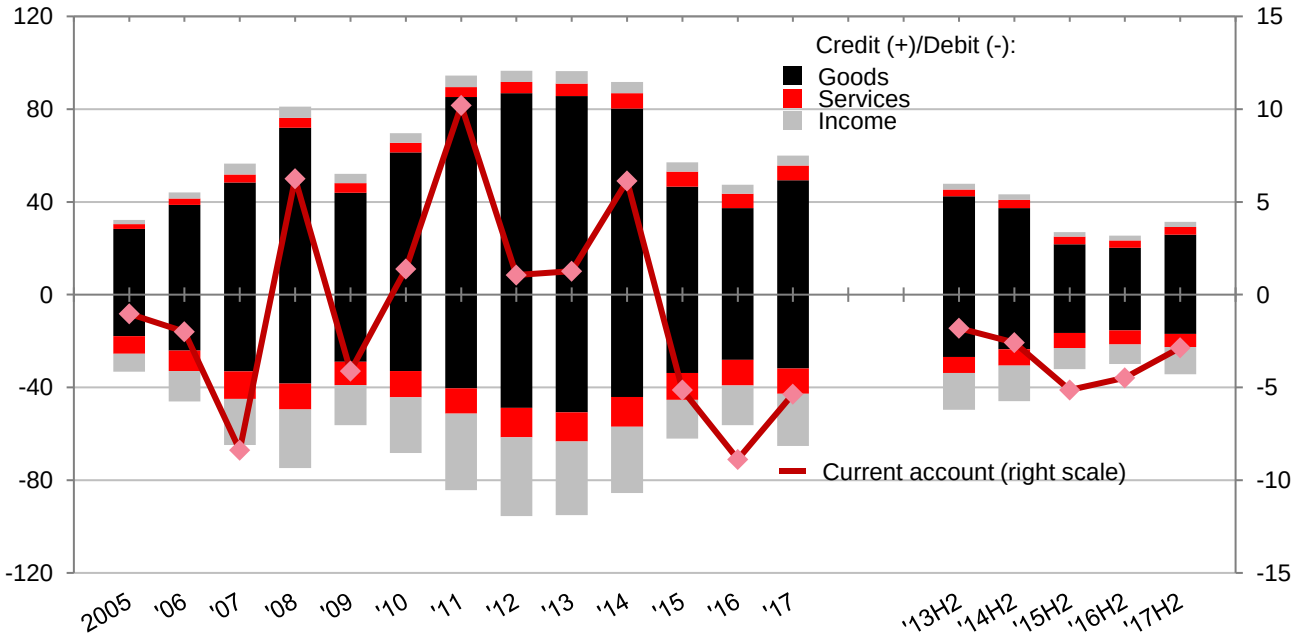

Source: Statistics Committee of Kazakhstan, Bloomberg and National Bank estimates
Note: * four consecutive quarters

After the exchange rate was allowed to weaken, adjustment accelerated, especially in the labor market. However, the imports of goods and services responded slower. For investment and intermediate goods, this was due to the decision making lags, contractual and capex commitments. For certain consumer durables preliminary evidence suggests a somewhat low income elasticity of aggregate demand. It took another year before the current account began to improve (Figure 1.5).

Exception from this tendency of lagged and slow adjustment was the primary income accounts. They responded to the oil price shocks without a lag, almost automatically.

**Figure 1.5 Exporters' and foreign investors' net income fell by half, but import of goods and services adjusted with lags and slowly**

Current account, USD bn



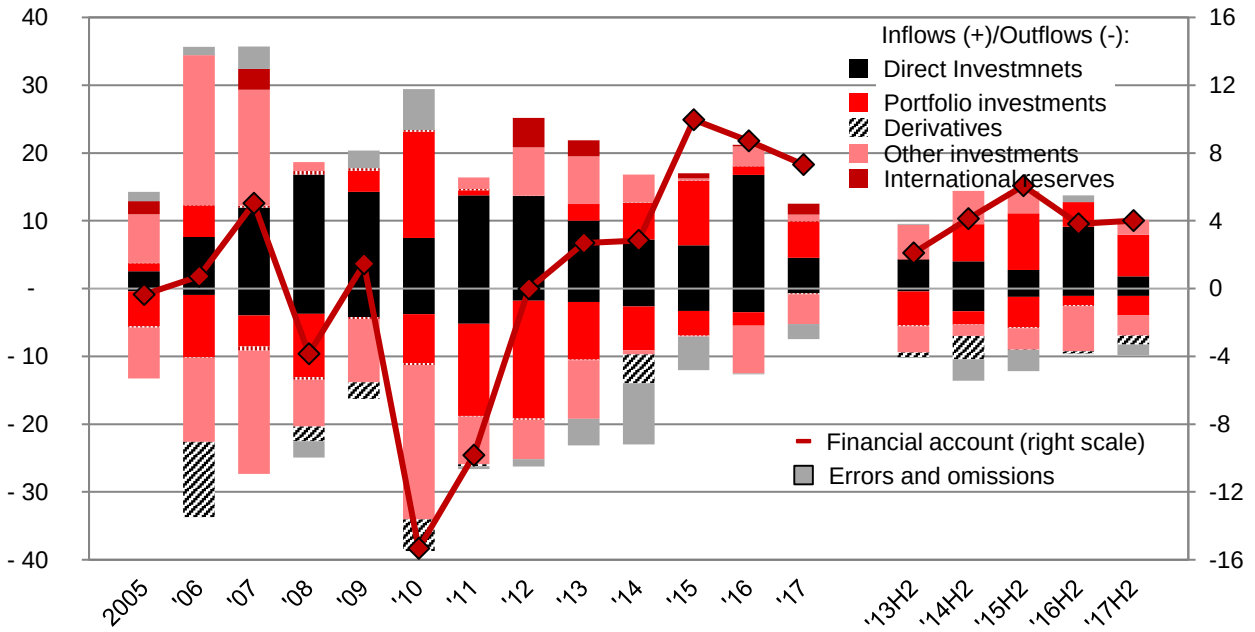

Source: National Bank

In the financial account, the inflow of direct investment declined together with the margins in oil production, the sector that has been the largest recipient of the FDIs for years. At the same time demand for external finance expanded.

The balance of payments deficit, and the budget deficit, were financed largely by government's foreign assets and sovereign Eurobonds (USD 3.4 bn, Summer 2015) (Figure 1.6).

**Figure 1.6 Balance of payments was financed by foreign assets and, marginally, foreign debt, until FDI volumes recovered**

Financial account, USD bn

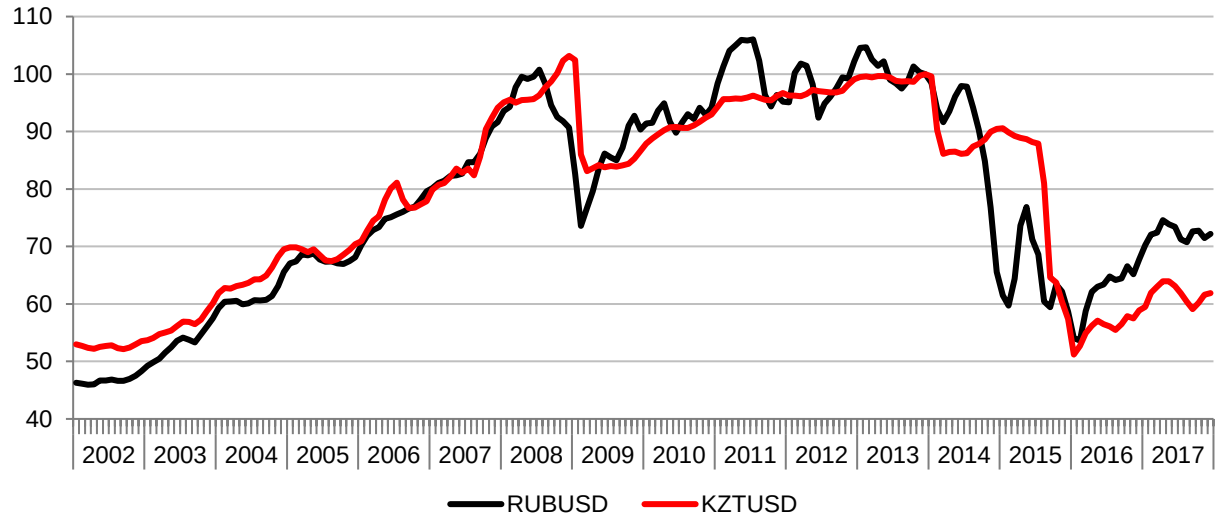



Source: National Bank
Note: Errors and omissions are not part of the financial account; and were reflected for an understanding of the scale with respect to the articles of the financial account

In August 2015, the National Bank abandoned the fixed exchange rate and announced transition to inflation targeting and a flexible exchange rate arrangement. Over the next four months, tenge lost more than half of its value against USD. However, the price discovery mechanism was still in progress and the market, without any guidance, was inefficient as evidenced by extreme volatility, deep overshooting and low trading volumes. At the end of 2015, in order to prevent the exchange rate expectations anchoring at an undervalued level, the National Bank allowed the money market rates to go up to 70%. This seemed to stabilize the expectations and allowed the National Bank to cut rates weekly, bringing them down to 25% by the end of January.

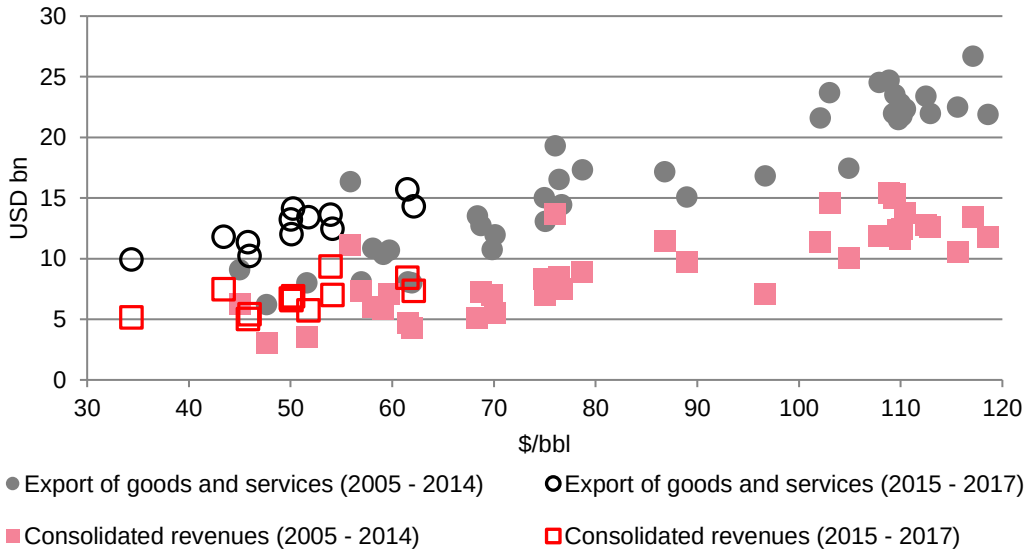
In 2016 the economy began to recover as the exchange rate flexibility improved competitiveness, especially relative to Russia (Figure 1.3), and especially for the tradable sector. It also created room for fiscal stimulus. The use of foreign assets and foreign debt to finance the twin deficits has declined. Foreign direct investments have recovered.

**Figure 1.7 Real USDKZT depends on oil prices and is likewise non-stationary**




Source: National Bank, Central Bank of Russian Federation
Note: December 2013 = 100

**Figure 1.8 Exports and tax revenues are highly dependent on oil prices**




Source: MF RK, National Bank estimates

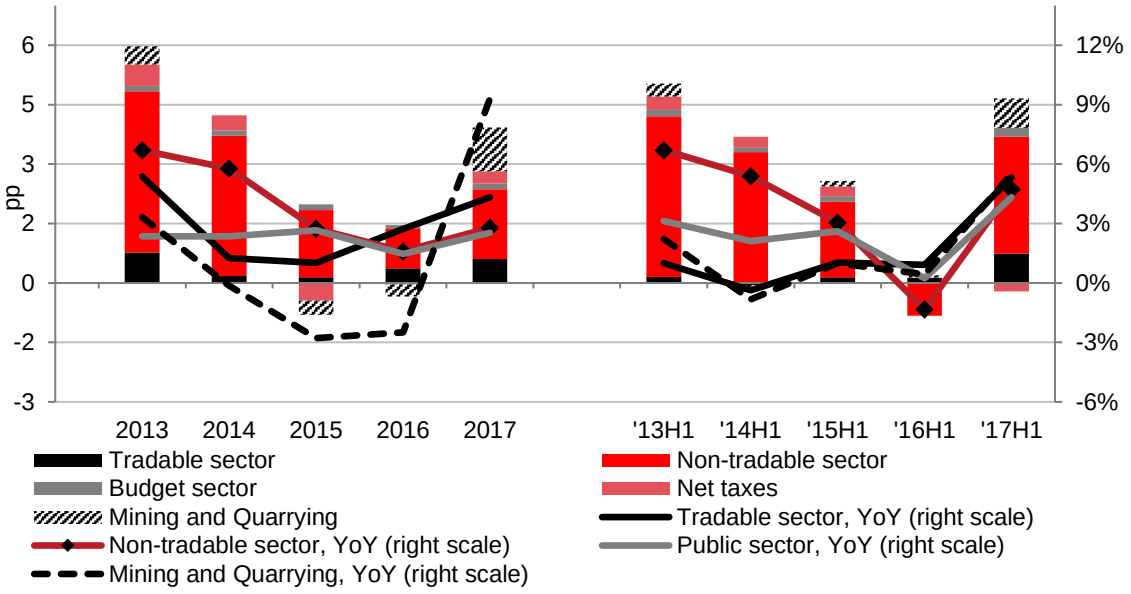
## 1.2 Domestic macroeconomic conditions

### Economic growth

Although the free float made the policy response more rational and the economy more resilient, Kazakhstan remains highly dependent on commodity exports and vulnerable in the face of commodity price shocks.

Economic growth slowed in 2015-2016, mainly due to a fall in mining output where operational margins dropped (Figure 1.9). The first half of 2015 was particularly difficult for industrial production, where price plunges were accompanied by rising labor costs relative to Russian competition. In Q1 2015 industrial production declined by 38.7% in value terms and the indebtedness of the sector rose markedly.

**Figure 1.9 Terms of trade improved for tradables in 2016, spurred growth in 2017**

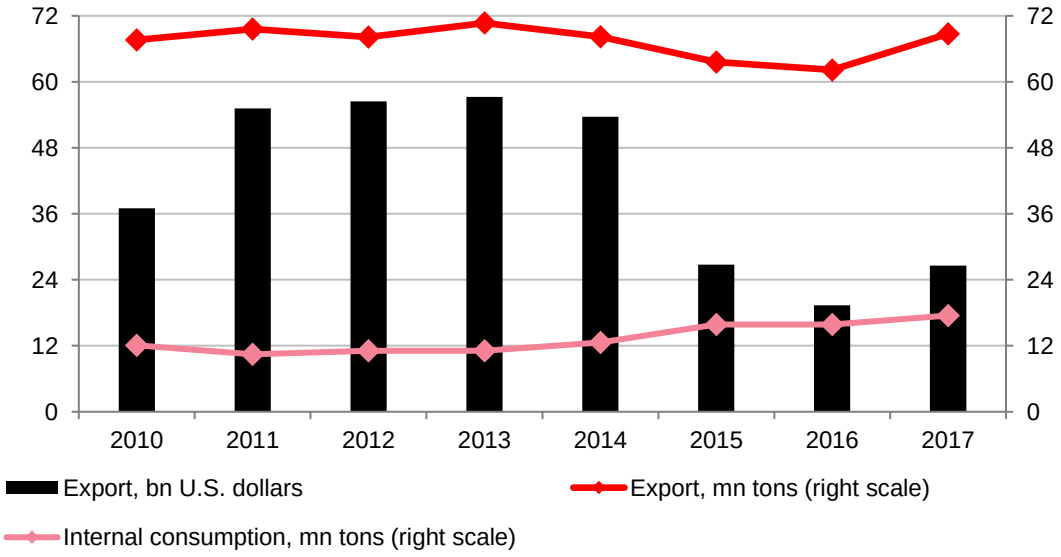



Source: Statistics Committee of Kazakhstan
Note: LHS contribution to growth, pp; RHS Ratio of price to wages, % change YoY
The tradable sector includes agriculture and manufacturing; the public sector includes education, public administration and defense; compulsory social security and healthcare, as well as social services; the non-tradable sector includes all other branches not included in the tradable and budget sectors

There were early signs of recovery already in 2016. The tradable sector has grown. Exports of agricultural products and metals have risen. The manufacturing output expanded by 1.5% after 0.1% decline in 2015.

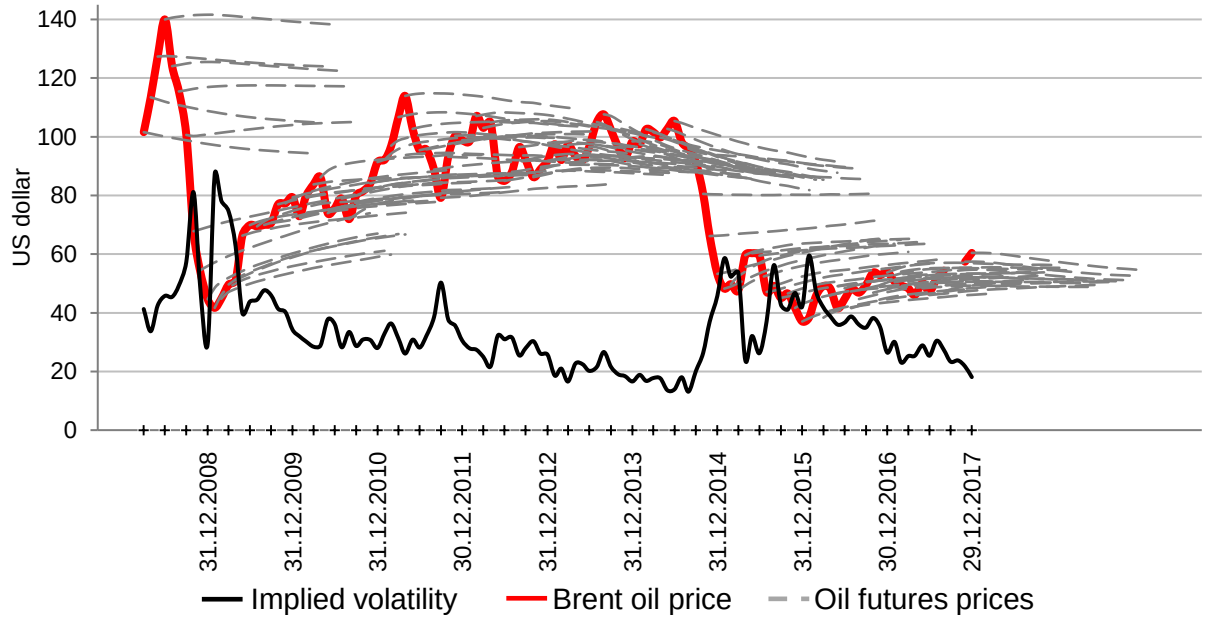
In 2017 GDP grew by 4%, again, mainly on the back of greater mining output and the recovery in the non-tradable sector. Oil and gas production rose by 10.5% (Figure 1.10). Firmer commodity prices and more competitive wages have also contributed to industrial growth.

**Figure 1.10 Oil production and exports remain stable and predictable. Main risks are to oil prices**



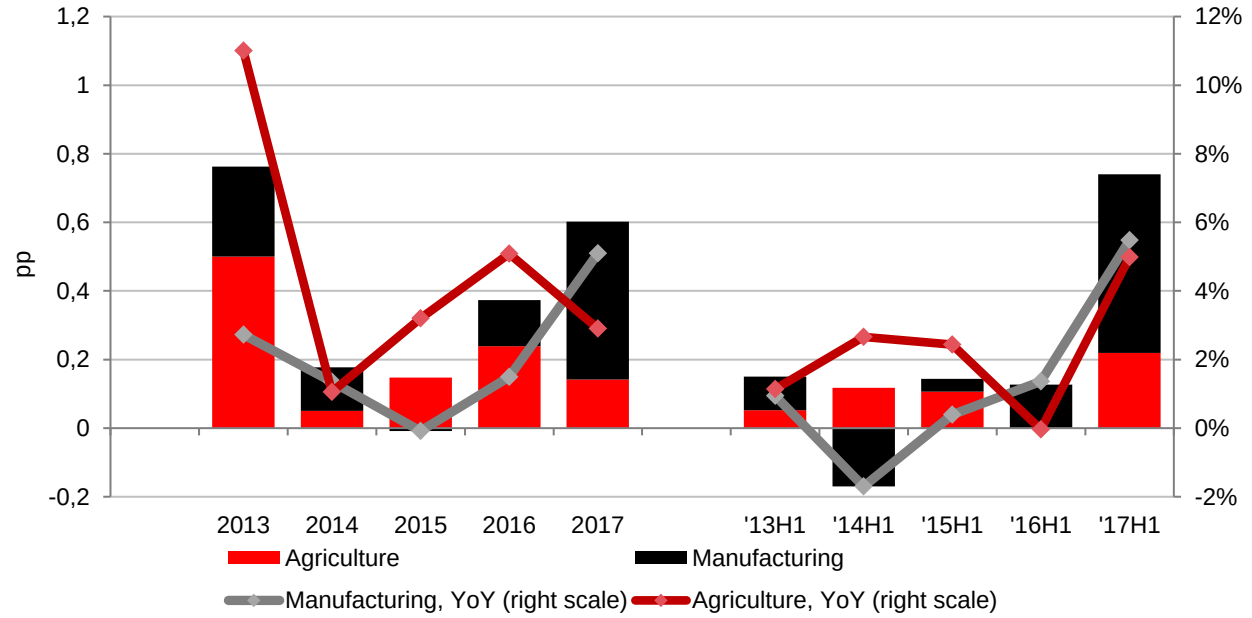

Source: Statistics Committee of Kazakhstan, National Bank estimates

**Figure 1.11 Oil prices remain volatile and largely unpredictable, despite some mean reversion in expectations**




Source: Bloomberg

**Figure 1.12 Tradable sector began to grow, although from a low base**



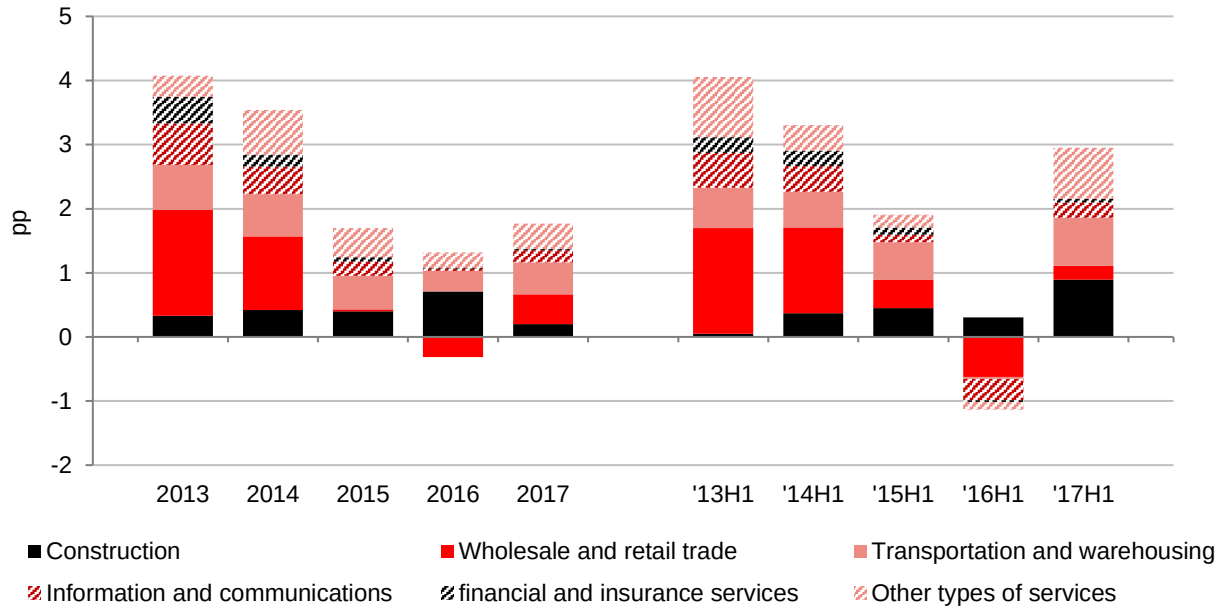

Source: Statistics Committee of Kazakhstan

After depreciation of 2015 consumer demand contracted and caused a slowdown in non-tradables in 2016 (Figure 1.13). The wholesale and the retail trade contracted from +0.2% in 2015 to negative 2.1% in 2016, transport and warehousing slowed down from 5.4% to 3.2%, financial and insurance activities – from 1.7% to 0.4% (Figure 1.14).

Construction continued to grow. Its contribution to GDP growth rose from 0.4 pp to 0.7 pp. The sector benefitted from government investment in housing and other fiscal stimulus programs and as such was the exception to the tradable-nontradable divide.

**Figure 1.13 Construction as the instrument of fiscal stimulus grew faster than other non-tradables**

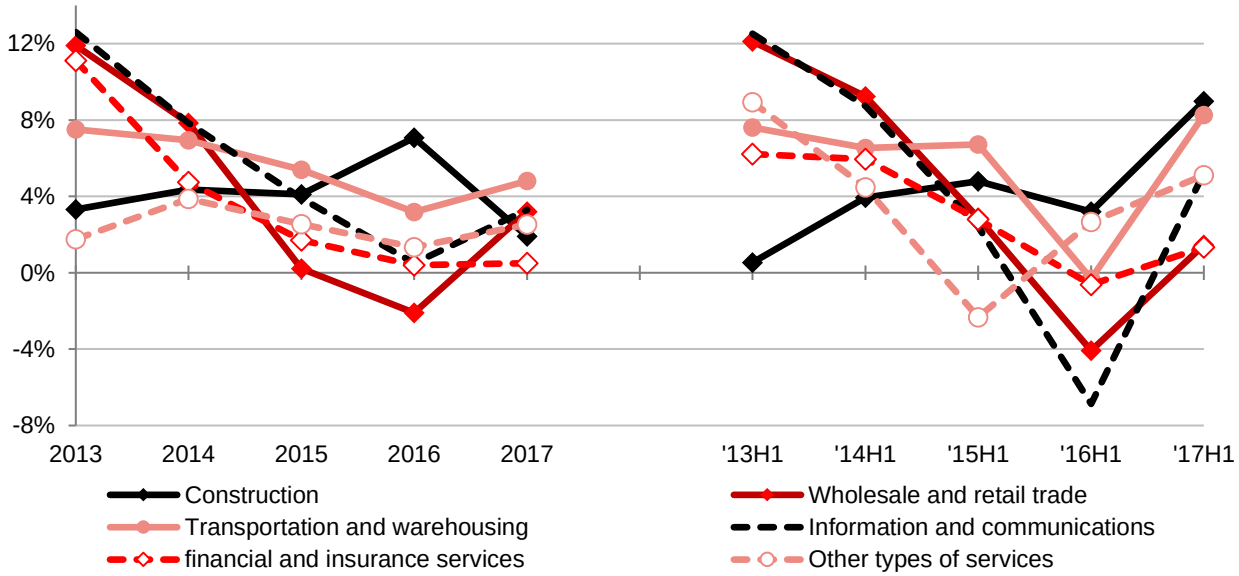
Contribution to GDP growth




Source: Statistics Committee of Kazakhstan

Wholesale and retail trade grew by 3.2% in 2017, which was partly due to the increase in retail turnover as a result of the moderate recovery in demand.

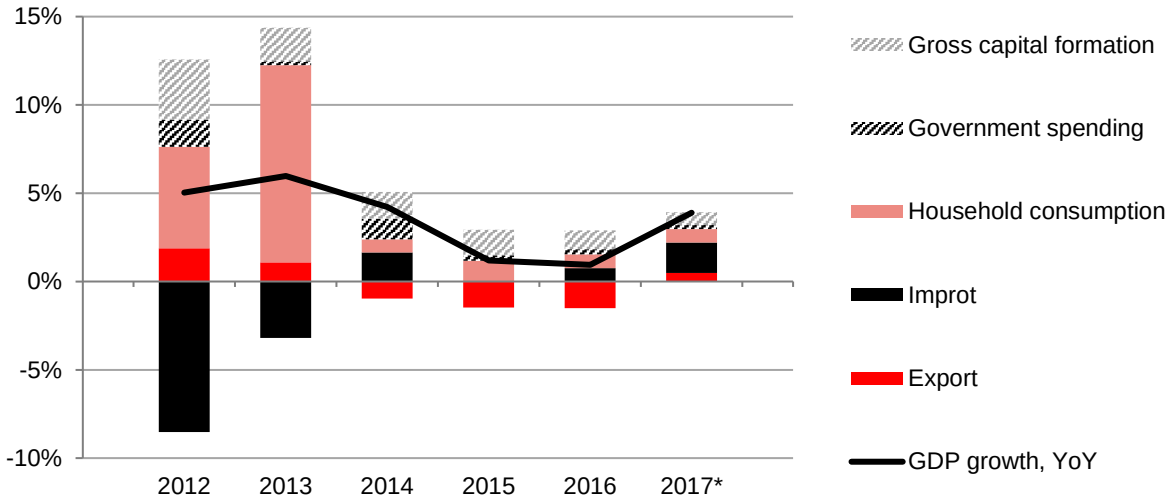
**Figure 1.14 Growth in non-tradable sectors, YoY**




Source: Statistics Committee of Kazakhstan

Net exports continued to make a negative contribution to GDP growth in 2016. Household consumption slowed, responding declining wages in private and public sectors (Figure 1.15).

**Figure 1.15 Contribution of aggregate demand components to GDP growth, YoY**

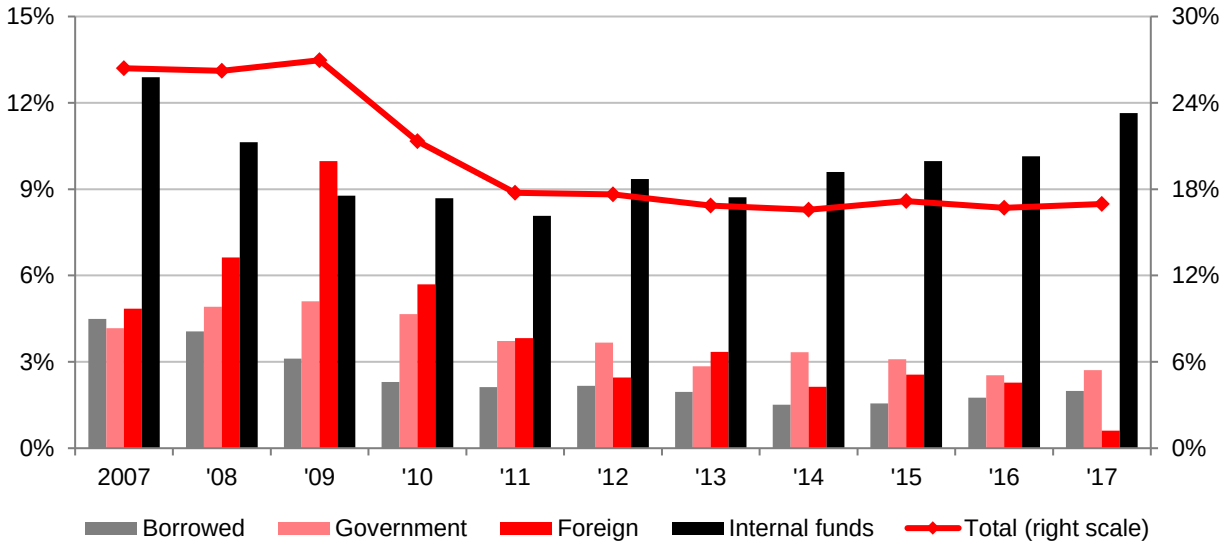



Source: Statistics Committee of Kazakhstan, * - National Bank estimates

The 2016 budget deficit narrowed significantly, mainly due to the weaker tenge. This allowed for a more countercyclical fiscal policy with smoothing of the government spending.

**Figure 1.16 Sources of funding and capital structure of fixed investment became more stable and market-oriented, but ...**

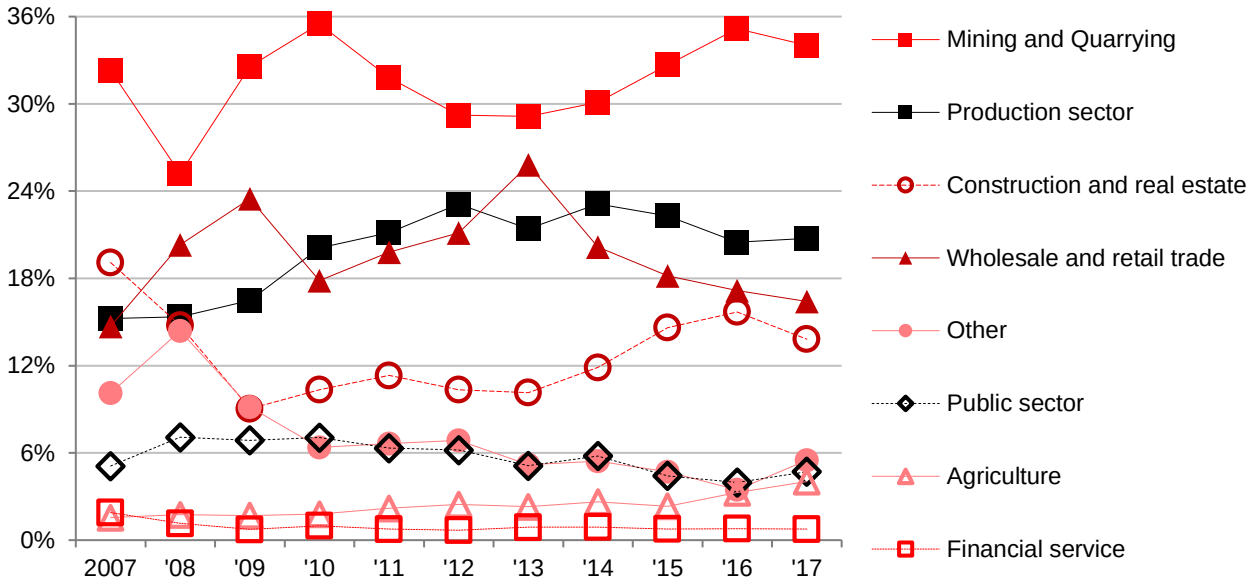
Investments in fixed assets, % of GDP




Source: Statistics Committee of Kazakhstan

In 2015-2016 there was a fall in investments from the state budget, which was offset by the increase in financing from own funds. In recent years growth in investments, in nominal terms, has been comparable with the GDP growth, in nominal terms. Investments remained at 17% GDP (Figure 1.16). Foreign investments in value terms declined in 2015 due not only to the terms of trade shock, but also due to the completion of major FDI-funded projects. Own capital remained the main source of financing in 2017. The total investment remained unchanged in 2017 despite the foreign investments in fixed assets declined to 0.6% of GDP.

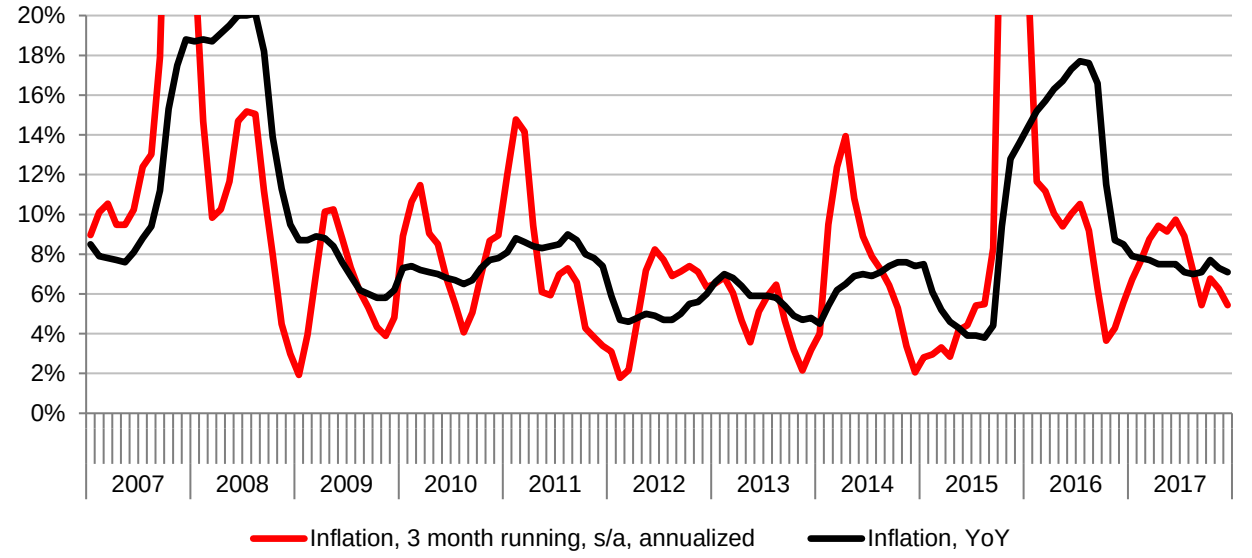
**Figure 1.17 ... capital allocations remained commodity focused**




Source: Statistics Committee of Kazakhstan

Despite the stability of aggregate investments, the composition of the recipients responded to the shocks and the policy. Historically a leader, capital-intensive mining retained by far the largest beneficiary. Investments in merchandise and transportation, a proxy of business activity, declined along with a slowdown in the economy and moderation of growth expectations. The share of construction and real estate in investments declined in 2017, while the share of agricultural investments rose somewhat.

**Figure 1.18 After the initial pass-through of the exchange rate in late 2015, inflation was held back by weak demand**




Source: Statistics Committee of Kazakhstan, National Bank estimates

## Fiscal indicators

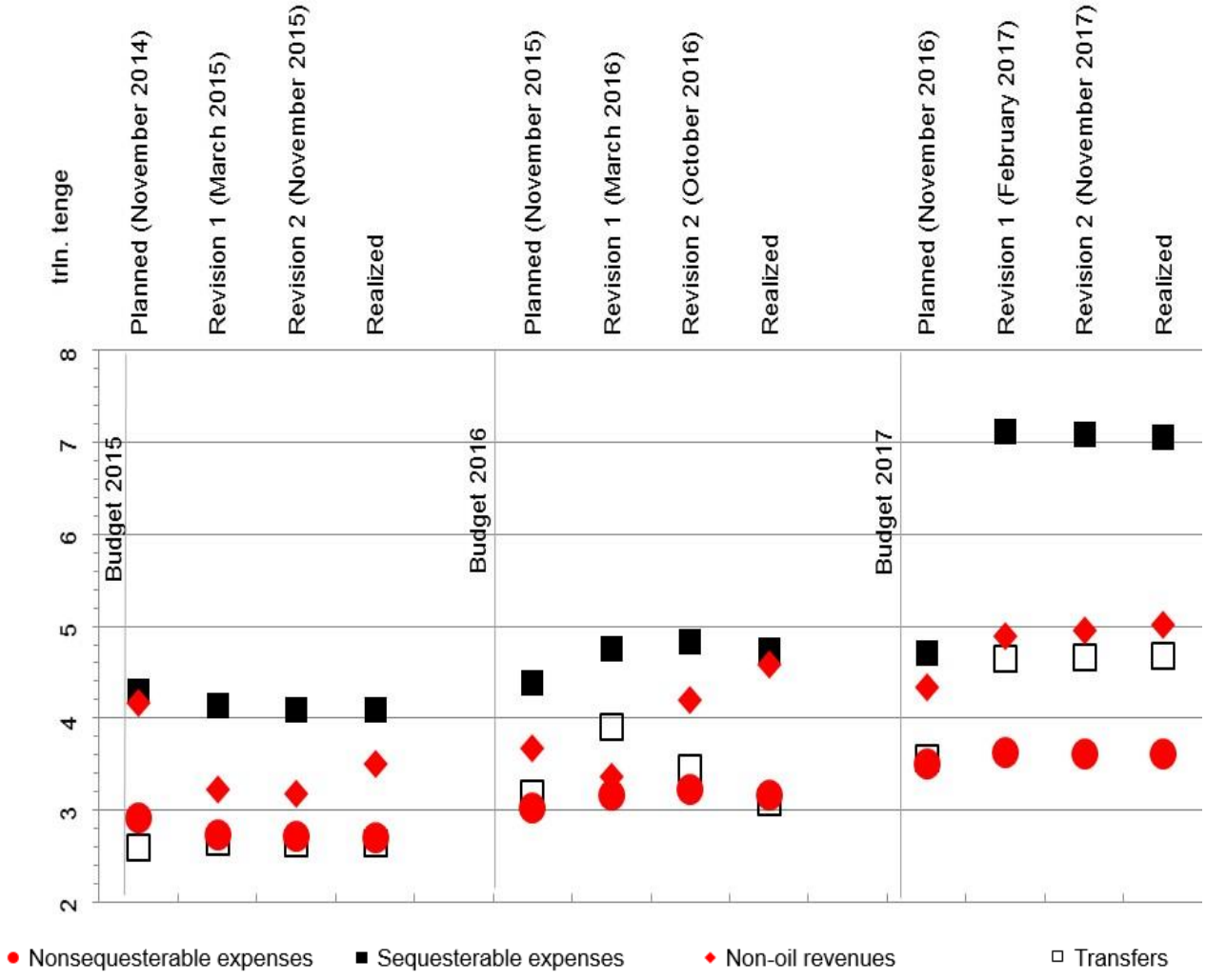
In 2015 revenue projections declined sharply in USD terms. As the exchange rate adjustment was not available, deficit widened dramatically and spending had to be cut substantially. The deficit was financed by transfer from the National Fund. In fact, transfers accounted for almost a half of the budget. Debt played a minor role, acquired mainly by foreign creditors and the Pension Fund.

The Pension Fund's holding of government securities issued by MF rose from KZT 1.9 tn at end-2014 to 2.3 tn in 2015 and 2.7 tn at end-2016.

The original budget for 2015 projected revenues to increase 14% YoY, but in the event projections were reduced, in two stages. Second revision saw revenue projections decline by 13.9% relative to the original budget (Figure 1.19).

**Figure 1.19 The first revision of the 2015 budget was made during fixed exchange rate, but the reductions persisted after weakening of USDKZT**

Republican budget revisions and execution




Source: MF RK

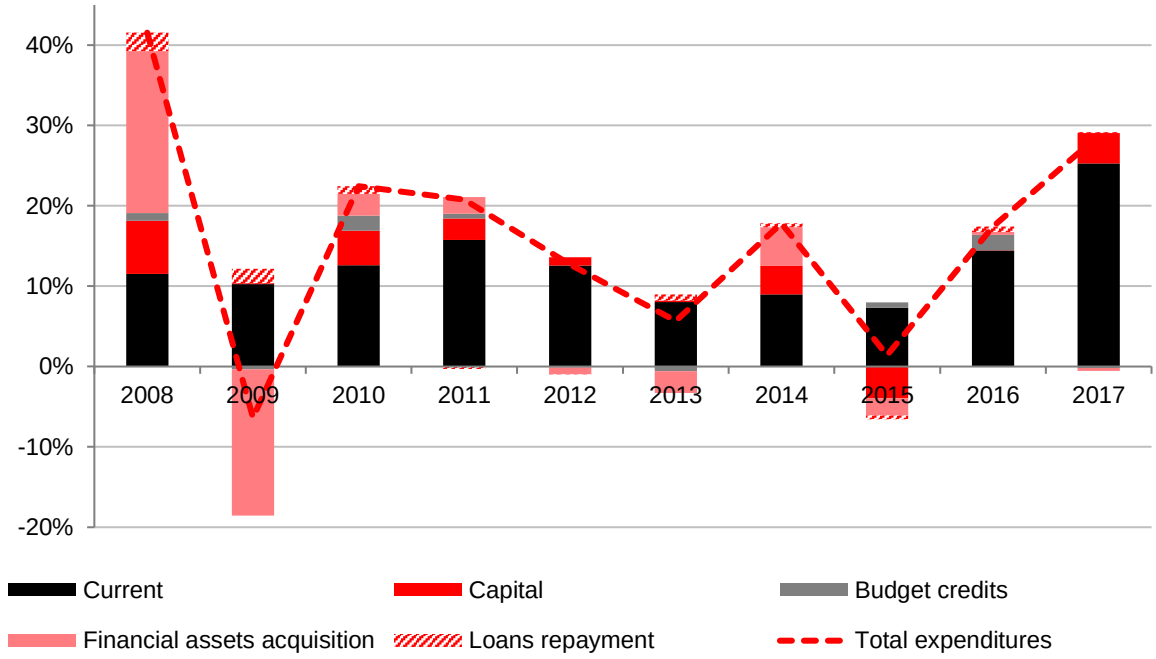
Lower revenues were partly offset by a 25% increase in the size of the transfer from the National Fund. During revisions the transfer was increased by 1.8%, or by KZT 47 bn.

The projected revenues were revised downward by 6%. Expenditures were cut by KZT 404 bn, or 5.6%, with main cuts in education, housing and utility services, social spending. Capital expenditures were cut by 20%, and current expenses were increased by 10.6%.

The 2017 budget was based on projections of cautious growth of 3%, but was revised upward by 20% for revenues and by 36% for outlays. Support to the banking sector contributed to the revision in spending.

**Figure 1.20 Spending cuts in H1 2015 set a low base for 2016**

Contribution to growth in public expenditures

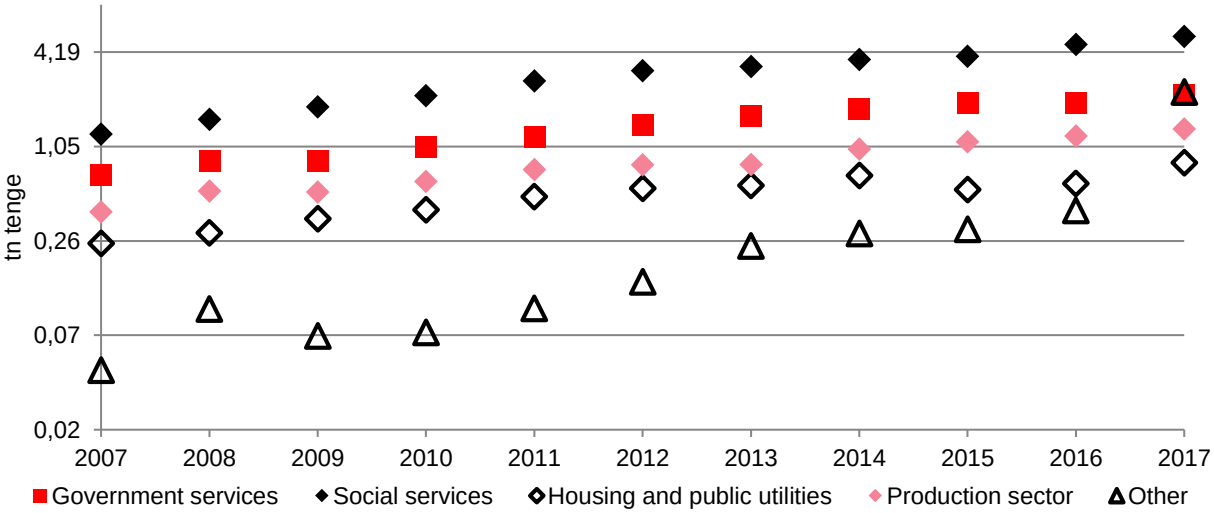



Source: MF RK

In 2016, budget expenditures were set to grow, based on cautious estimates of GDP and revenue growth (Figure 1.20). In the event, the budget was revised upward during the year. Public sector wage bill and transfers to individuals were responsible for 36% of the total increase in current expenditures. Capital expenditures were flat.

In 2017 public spending sharply increased again (Figure 1.21), this time due 'other current expenses' disclosed as the spending on bank support.

**Figure 1.21 Government budget expenditures**




Source: MF RK
Note: This graph uses a logarithmic scale (base 2)

## The labor market

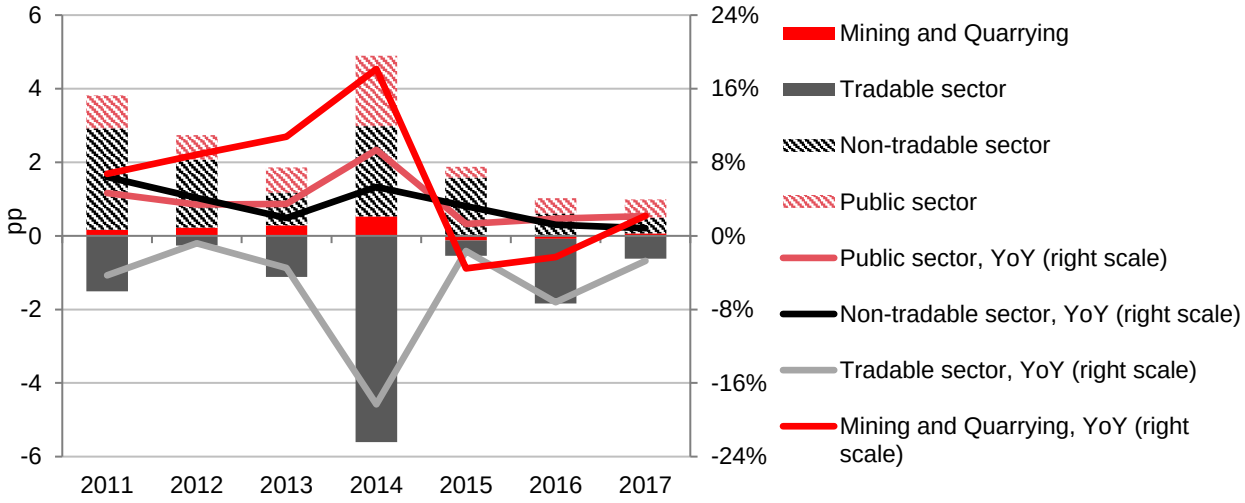
Changes in the labor market reflected the aggregate influence of external and internal conditions (Figure 1.22). The workforce in mining sharply declined in 2015, a

consequence of unfavorable terms of trade shock. The non-tradable sector, which previously led the growth in the workforce, in 2015 contributed somewhat less than before. The tradable sector continued to shed jobs in and after 2015 just as it did before, but the decline was mainly due to secular exodus from agricultural employment (Figure 1.23). In 2016 agricultural employment fell by 10.8%.

This was reversed partly in 2017. In 2017, employment grew across the board, with the noted exception of agriculture. In mining, employment grew for the first time since 2014.

**Figure 1.22 The outflow of labor from tradable sectors continues**

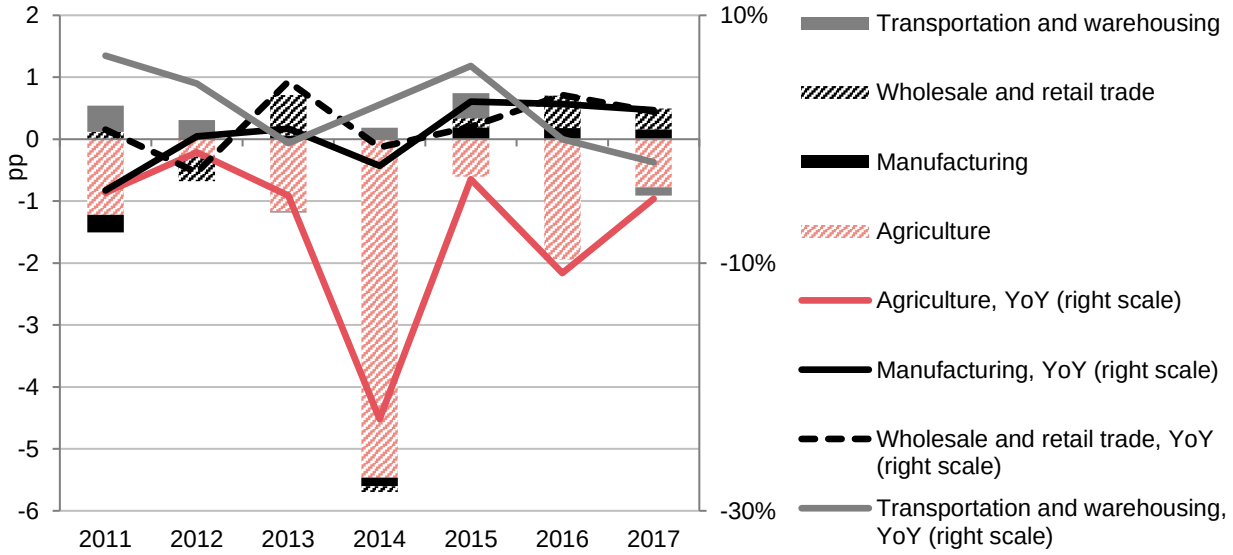
Contribution of the sectors (bars) and growth of economic population




Source: Statistics Committee of Kazakhstan

**Figure 1.23 Employment growth and contribution to growth for select industries**

Contribution of the sectors (bars) and growth of economic population




Source: Statistics Committee of Kazakhstan

By 2016, uncertainty about macroeconomic environment remained high, mainly due to the structural fragility of the underlying economy and low development of policy making institutions. Transition to the free float allowed the economy to align domestic and external prices via exchange rate adjustment. Employment in almost all sectors showed improvement in 2016. The non-tradable sector continued to lose labor. Adjustments in the

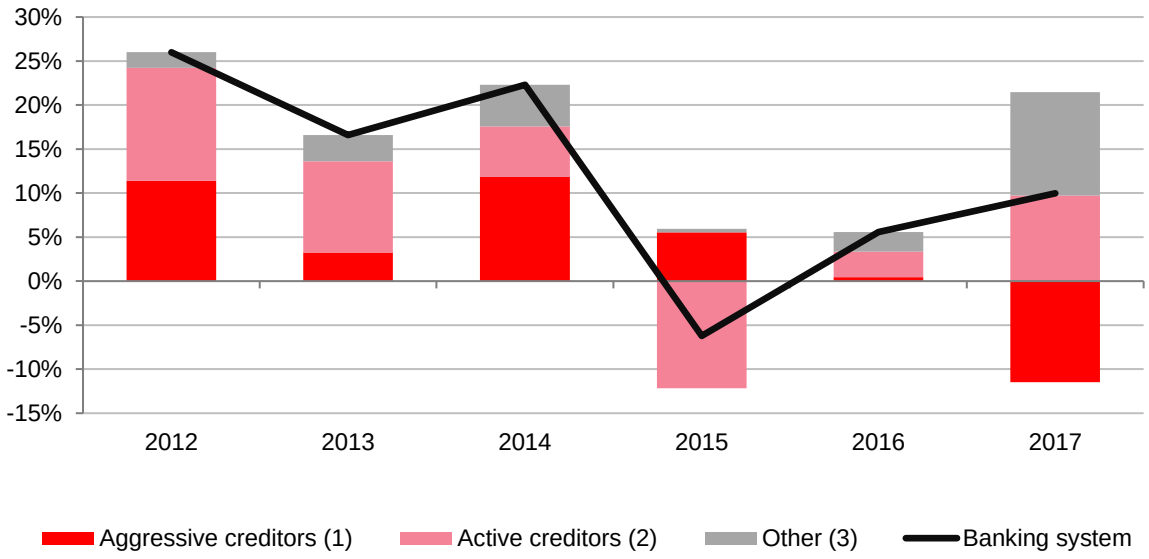
non-tradable sector may take time. In the tradable sector growth has not yet materialized as the institutional and organizational capacity to generate employment from a very low base remained weak.

**Bank lending**

**The shocks to the economic producers found reflection in bank lending. On the credit supply side, credit losses reduced bank capital and banks' ability to assume new credit risk. On the demand side, credit rationing was justified by the lack of creditworthy borrowers. In fact, credit tightening after 2015 was overdetermined as either of these two reasons sufficed. While only a few banks faced capital adequacy constraint, the lack of low risk borrowers was a constraint common to all lenders. Under the circumstances, credit tightening and credit rationing was a necessary and optimal response.**

After lending actively in 2012-2014, banks pressed on the breaks hard in 2015. Lending declined. Banks, which had been growing aggressively, could no longer maintain previous growth rates. Banks which grew rapidly in 2012-2014 were among those that experienced the largest credit losses in 2015-2016 and subsequently were subjected to supervisory action.

**Figure 1.24 Aggressive lending before 2015 and tight lending after 2015**




Source: Reporting of banks
Note: The contribution of a bank groups to the loans volume annual growth rate. Excluding BTA Bank JSC. (1) Aggressive creditors - the volume of loans in 2012-2014 exceeded the loan portfolio by more than in 10 times, 8 banks; (2) Active creditors - the volume of loans in 2012-2014 exceeded the loan portfolio by more than 5 times, 15 banks; (3) Other banks, 12 banks; (4) Data for 2014 is adjusted for the large issuance of a subsidiary stressed assets management company

Banks which grew rapidly in 2012-2014, slowed sharply in 2015-2016. The economy was undergoing structural transformation in response to external and policy shocks. Banks and their borrowers began to adjust to the new conditions. Business activity contracted and so did the borrowing as incomes of the borrowers declined and credit risks surfaced.

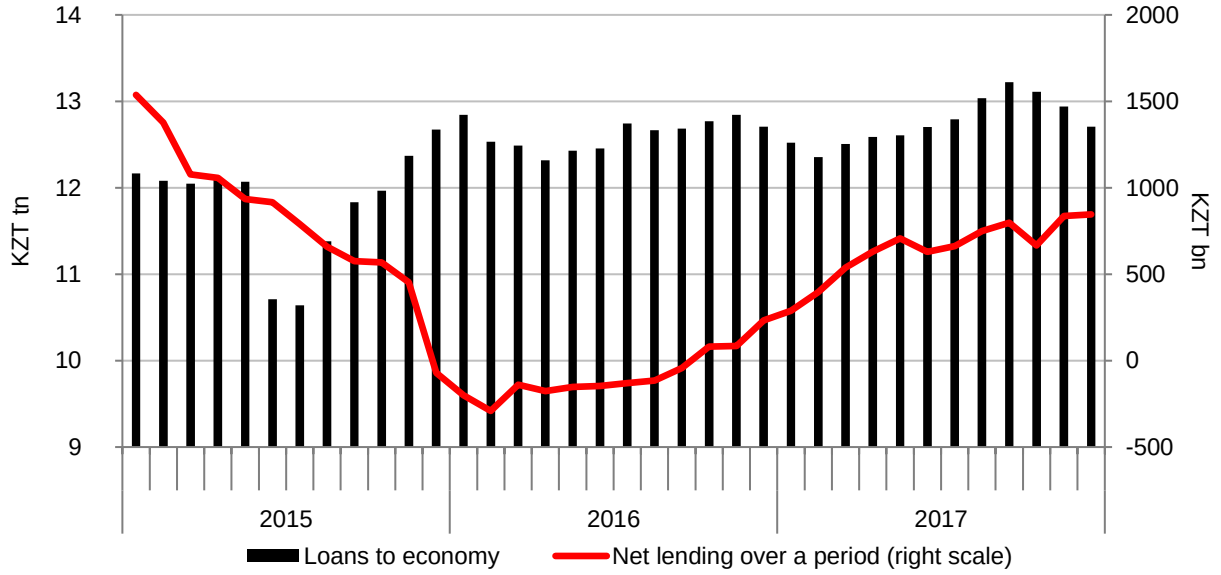
Borrowers in the traditional for banks non-tradable sectors became less profitable, riskier. Few good borrowers remained and even fewer in the sector of tradable goods, where terms of trade have been unfavorable for years and where equity and credit history were in the short supply. Potential borrowers in tradable sector was poorly represented and was dominated by businesses in the early stage, where equity is the preferred source of

capital and credit risks are detrimental and unacceptable to both, the banks and the fledging entrepreneur.

Lending activity in 2015-2016 was largely a result of government programs of concessional finance aimed at favored activities. Credit allocation under subsidized programs could be less efficient and the development of the business so funded could be less sustainable than growth achieved without government assistance. It could lead to counterproductive results for the economy, banks and other stakeholders in the longer run, potentially manifesting itself in nonperformance and related losses for banks and the public sector. Quality borrowers and stable banks with effective lending policies and strong corporate governance remain the necessary prerequisite for responsible and value creative lending.

In 2017, voluntary lending began to show signs of recovery. Both, new credit allocations and the stock of loans grew (Figure 1.25). This trend was somewhat masked by poor reporting practices where banks actively manage the stock of reported NPL to meet prudential requirements. These included various forms of refinancing and extensions to avoid recognition of the losses. Non-disclosure and underprovision of such loans could result in an overestimation of lending at the time of lending, but delayed disclosure results in understatement of growth when banks finally acknowledge the losses.

**Figure 1.25 Growth in lending and loan portfolio**




Source: Reporting of banks
Note: Net lending data is a rolling series over 12 months

As a result, credit to economy which stood at the end of 2017 at KZT 12.7 tn, declined by 1.2% comparing to 2016. Scheduled repayment constituted a relatively small part of portfolio reduction. The main contribution came from write-offs and transfer of claims to entities outside of the banking system for effectively non-performing loans, mostly within the program of the government support to the banking sector.

The issue of data quality and in particular, the quality of risk and loss accounting came to the fore of policy discussion back already 2016 as a factor of uncertainty about the extent of credit losses. It also affected the statistics of aggregate credit when previously unrecognized NPLs were reported by a number of banks in mid-2017. Reduction in the number of banks also affected the credit statistics.

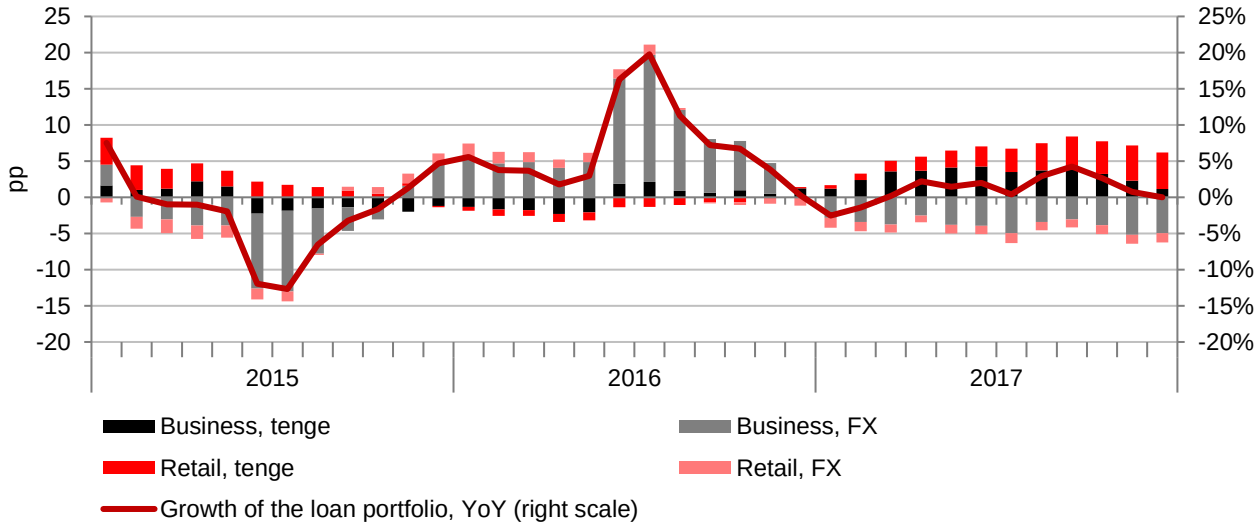
The dynamics of aggregate loan portfolio during 2015-2017 was mostly driven by the restructuring of Kazkommertsbank and its largest borrower BTA Bank (see Section 9.1 for

details). With the exclusion of these two entities, growth rates of the loan portfolio appear to have remained positive. Lending during 2015-2017 was mainly to SMEs and consumer finance (Figure 1.26).

FX-loans continued to decline, both due to write-offs and scheduled repayments and due to banks' unwillingness to lend in foreign currency.

**Figure 1.26 Growth of the loan portfolio was provided by tenge loans**

Contribution to the growth of the loan portfolio




Source: Reporting of banks

## II. Monetary policy and the money market

**The monetary policy underwent fundamental change: the National Bank abandoned the peg, adopted a free float and began to target inflation. The developments in the money and FX markets were closely linked with the evolution of the monetary and exchange rate policies. Flexible exchange rate restored confidence in tenge by making exchange rate risks two-sided. Freedom from exchange rate management opened the way for interest rates management. Money market conditions improved and interest rates became more stable and more predictable, with the visibility horizon expanding from less than a week to beyond a year. Managing liquidity at credit institutions became easier. Liquidity risks for the system declined.**

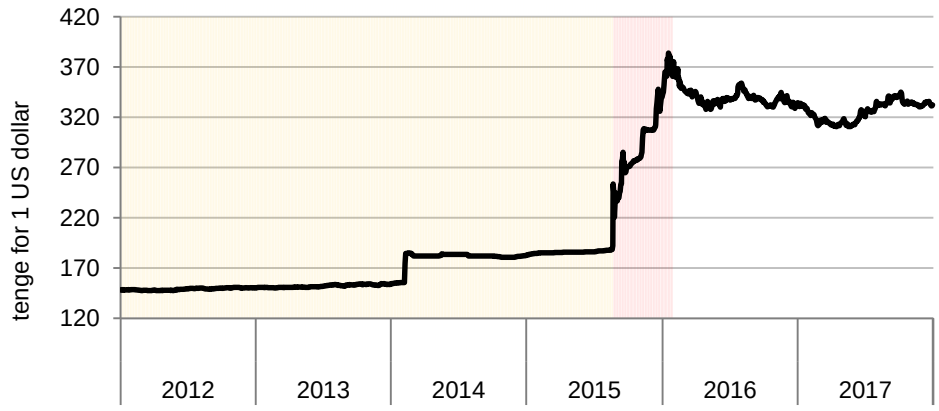
**Maintaining credible commitment to flexible exchange rate in the face of possible external shocks and high costs of withdrawing liquidity to defend the lower bound of the interest rate corridor remains a challenge for the monetary policy. To ensure further development of the money market, government debt markets needs to be more liquid and predictable; non-repo money markets need to become more efficient; banks should be given access to longer term collateralizable assets; prudential regulations aimed at supporting exchange rate management will need to be rationalized.**

During the three-year period monetary policy and the money market went through three distinctive regimes: defense of the fixed exchange rate, volatile transition and eventual stabilization under flexible exchange rate.

The pressure on the fixed exchange rate rose sharply in late 2014 when oil prices dropped and ruble depreciated. During the first half of 2015 the National Bank defended fixed exchange rate (Figure 2.1). Volatility of the interest rates remained high even as the National Bank attempted to manage the interest rates by providing liquidity at an implicit ceiling (Figure 2.2). However, there were no attempts to set the floor, which did not bode well for the credibility of the exchange rate defense.

In the second half of 2015, the National Bank abandoned the defense and began to develop institutions and instruments for managing liquidity and the interest rates. In 2016, the National Bank finally committed to the policy of interest rate management and free float (Figure 2.3).

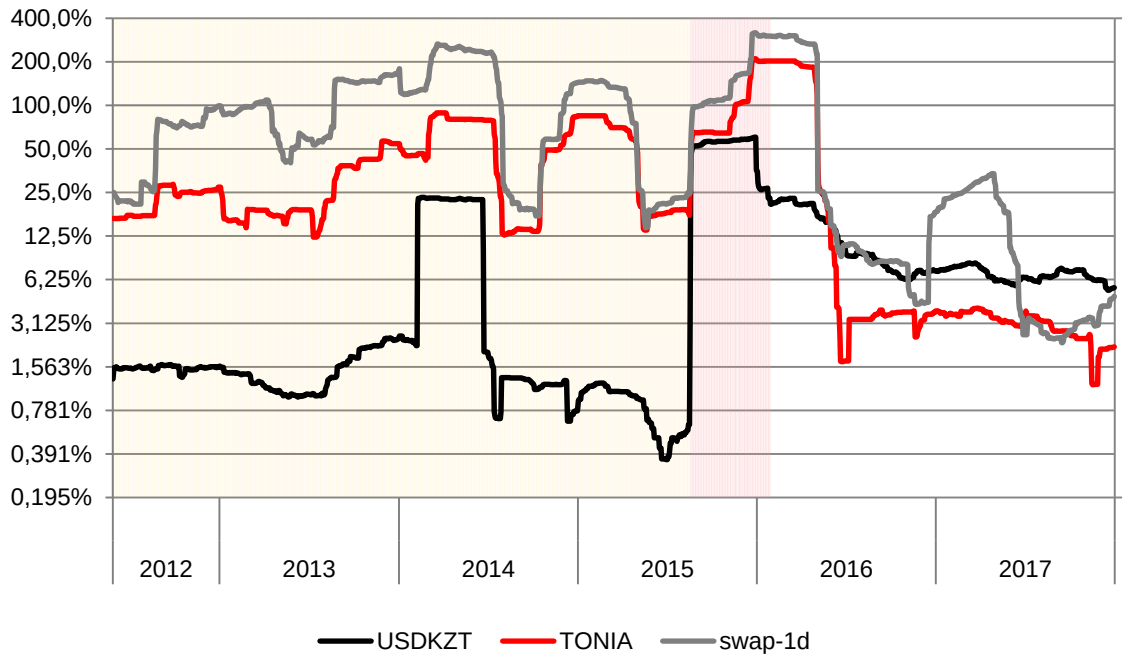
**Figure 2.1 USDKZT exchange rate**




Source: KASE
Note: The weighted average of USDKZT_TOD

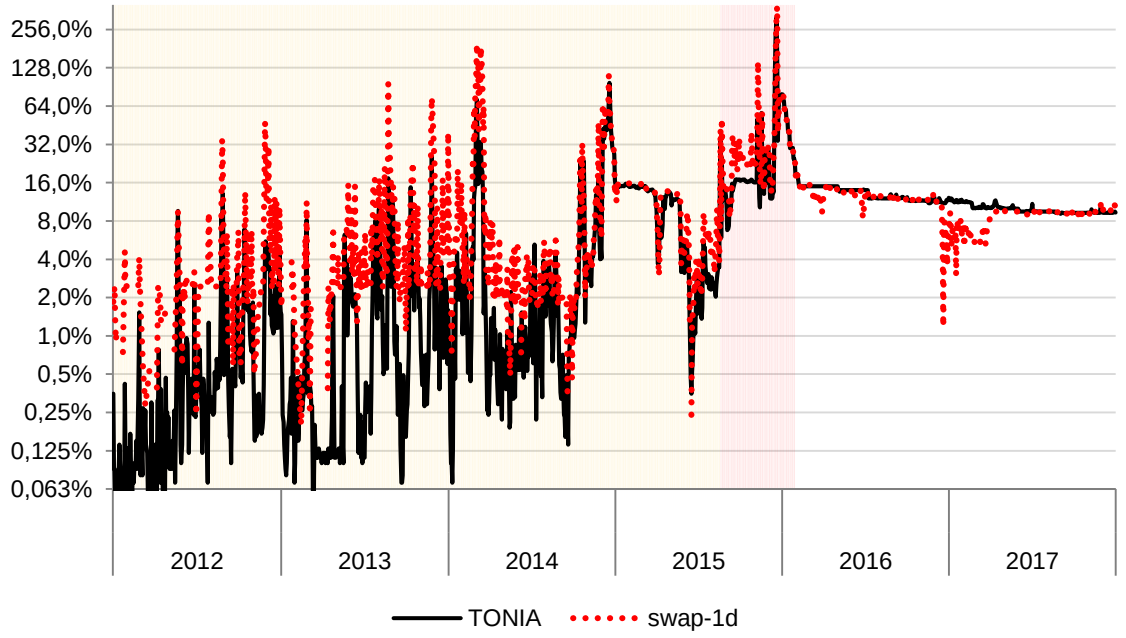
**Figure 2.2 Stability of the fixed exchange rate was illusory, but the volatility of the interest rates was real**

Volatility, % per annum




Source: KASE, National Bank estimates
Note: 1) This figure uses a logarithmic scale (base 2); 2) values of a 90-day moving average are used; 3) presented data series start from June 2012; 4) Swap-1d indicator was introduced by KASE on June 9, 2014. Values for prior dates are estimates

**Figure 2.3 The money market stabilized only after the transition to free float**




Source: KASE
Note: 1) This figure uses a logarithmic scale (base 2); 2) Swap-1d indicator was introduced by KASE on June 9, 2014. Values for prior dates are estimates

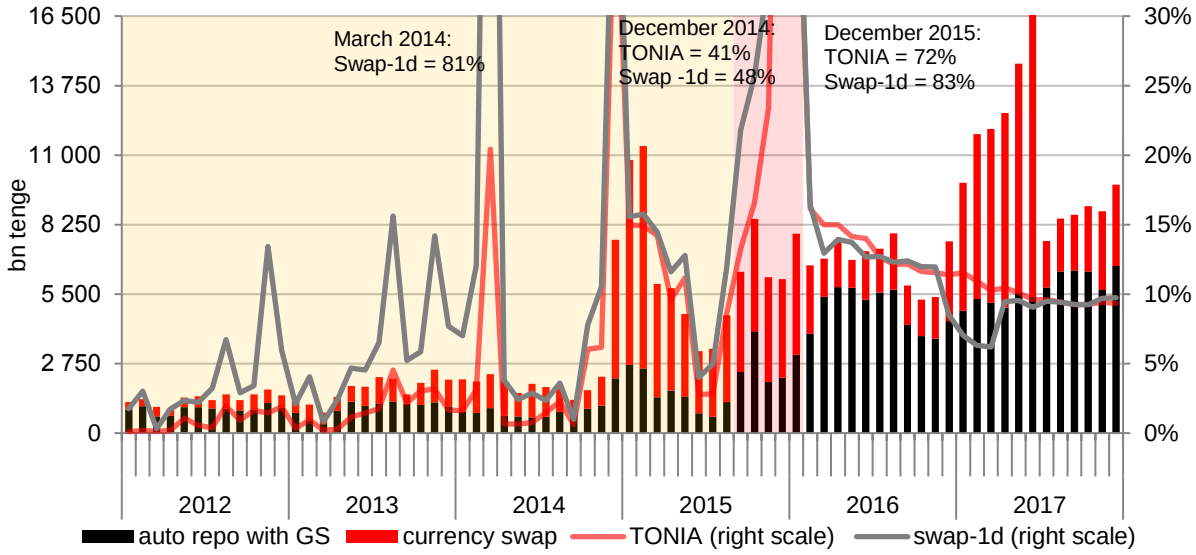
## 2.1 Defense of the exchange rate

Terms of trade shock and the real appreciation against the weakened ruble in 2014 shrank exports and tax revenues in dollar terms almost by half, deepening the twin deficits, and led to the loss of competitiveness. The resultant mispricing and resource mislocations called for an immediate adjustment in the exchange rate and, more generally, for the replacement of exchange rate management by a framework that was more credible in the face of frequent and deep terms of trade shocks.

In November 2014, Russia made a transition to the floating exchange rate regime and before year ended ruble lost 18% in dollar terms. The increasingly rigid tenge appreciated in real terms to exceed historical averages by 37%.

With tenge deeply overvalued, confidence in it was lost, leading to demonetization, dollarization, deterioration of credit conditions, and the threat of capital and prudential controls.

**Figure 2.4 Money market turnover and the interest rates**




Source: KASE
Note: Swap-1d indicator was introduced by KASE on June 9, 2014. Values for prior dates are estimates

During this period, foreign assets were being spent at a rapid pace, helping finance budget and the current account deficits.

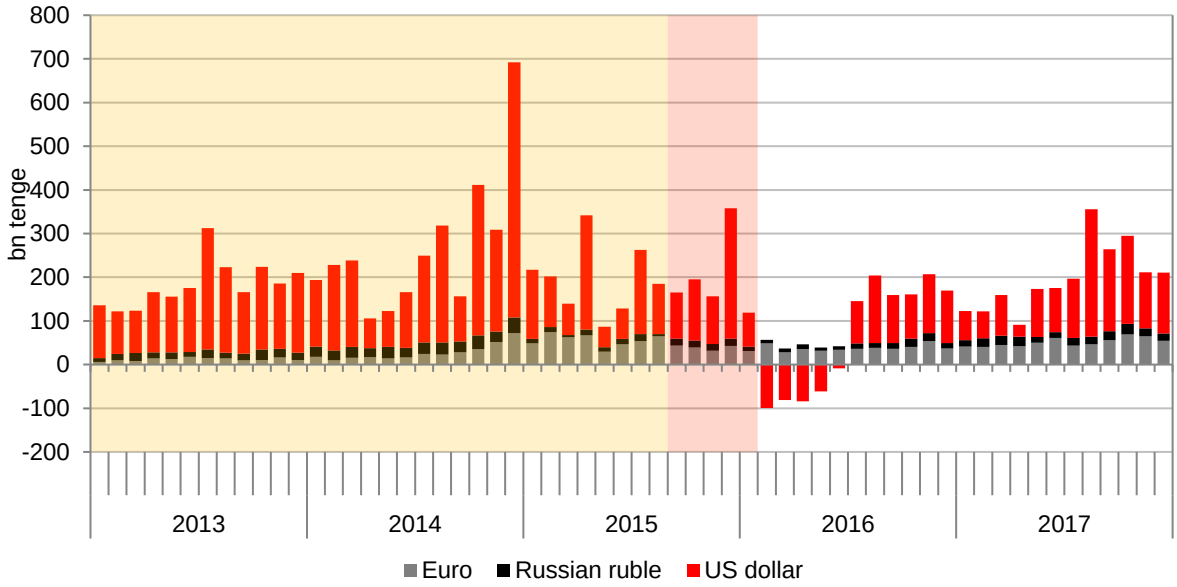
Initially, the firmness of the defense acted to reaffirm commitment and helped to stabilize the expectations. However, as the costs for the economy continued to mount, in terms of lost competitiveness, decline in output and employment, fiscal costs and the costs to financial stability, credibility crumbled. Injection of liquidity into some banks has also weakened the defense as the money market rates hit the floor.

Imbalances continued to build up, expectations of devaluation were getting firmer and liquidity risks remained unabated. As demand for balance sheet tenge denominated assets shrank further, demand for FX rose. Households began to hoard FX banknotes (Figure 2.5).

The market and the regulator began to actively discuss policy options. In May 2015, the National Bank issued a document with conceptual approaches and principles for further development of the monetary policy that described the transition to inflation targeting and flexible exchange rate as a way to address the contradictions of the fixed exchange rate regime. According to the document, a target level of inflation would be set by the Board of the National Bank. The horizon for the target would be medium-term, rather than the customary end-of-year targeting. Market offered alternative visions for the monetary policy.

However, despite the difference, opinions converged that tenge was overvalued and had to weaken.

**Figure 2.5 Net purchase of FX banknotes by population**

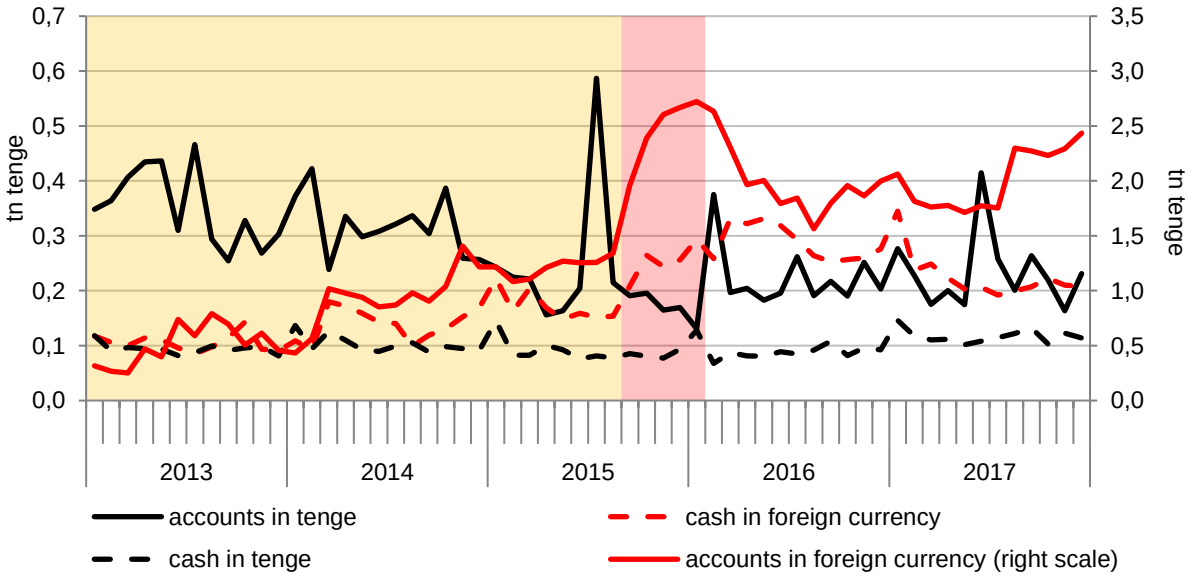



Source: Reporting of exchange offices
Note: The tenge equivalent of the foreign currency was obtained through calculations

Dollarization of deposits, already high in 2014, continued to rise through 2015 (see details in Box 3, Section 6.1). Dollarization of bank liabilities reached the levels where liquidity balances were so low that banks faced difficulties in effecting payments.

A regulatory requirement to keep assets in a domestic custody (coefficient of domestic assets) and low or zero interbank limits resulted in an increase of FX-denominated correspondent accounts with the National Bank. Banks' claims against the National Bank became further dollarized (Figure 2.6).

**Figure 2.6 Tenge demonetization deepened during the defense of the exchange rate**




Source: Reporting of banks
Note: 'Accounts' represent correspondent accounts of the banks in the National Bank

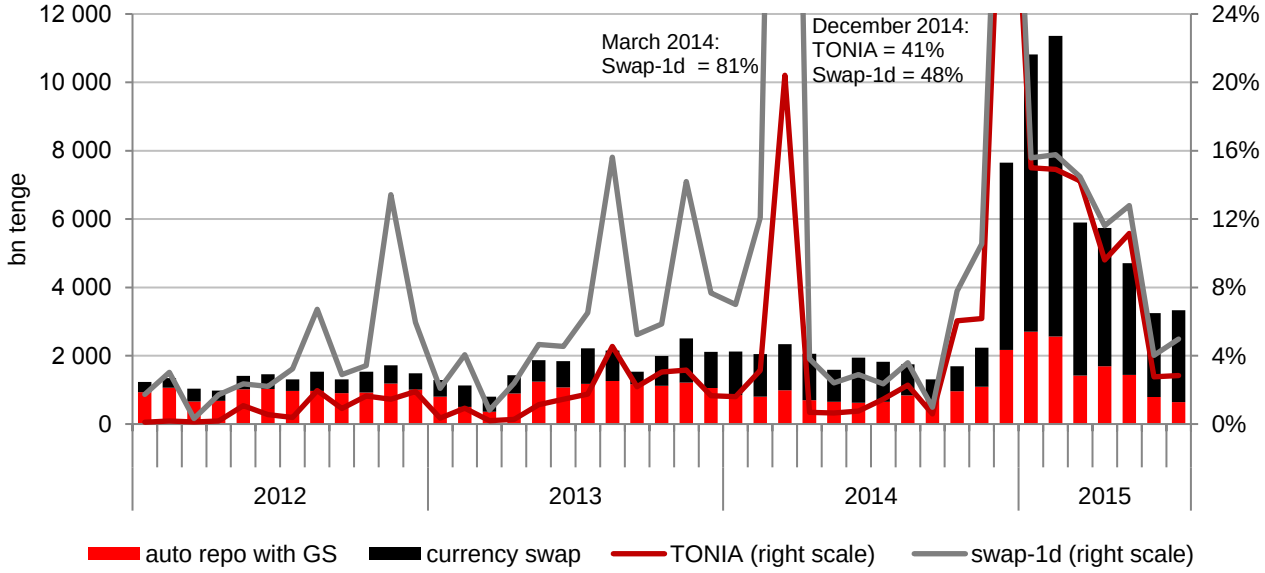
Liquidity crunches became persistent, making banks increasingly susceptible to systemic risks. It was in these conditions that the regulator moved to accelerate transition to a flexible exchange rate. However, preparations took time.

**Developments in the money market and the FX market**

Volatility and the average level of interest rates rose sharply, mainly due to a contraction of liquid tenge on banks' balances and the elevated reliance on liquidity borrowed in the money market. Unequal access to primary liquidity and the absence of a policy mandate to stabilize the interest rates contributed to the volatility.

Demand for longer term tenge denominated assets dropped as well. As a result, banks would borrow tenge by putting FX as a collateral rather than government bonds, that is, in the overnight FX swaps market rather than in autorepo market. The volume of overnight markets increased several times since ruble weakened in November 2014 (Figure 2.7) and remained elevated well after tenge weakened in August 2015.

**Figure 2.7 As demand for tenge liquidity on the balance sheet declined, tenge money market interest rates and transaction volumes rose dramatically**

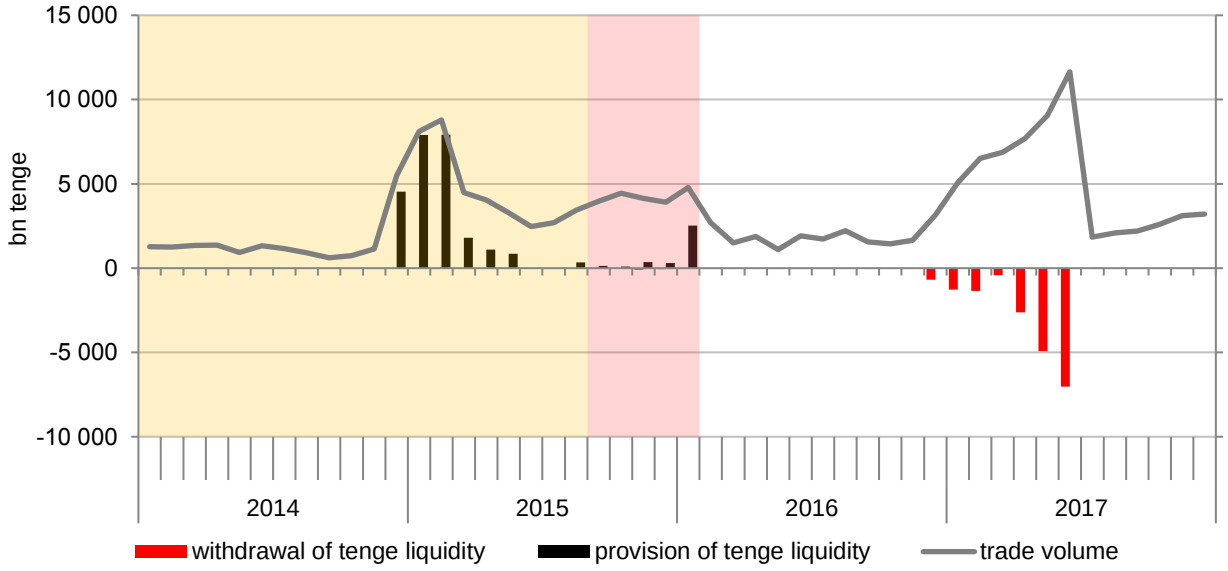



Source: KASE
Note: 1) The figure shows monthly average interest rates; 2) Swap-1d indicator was introduced by KASE on June 9, 2014. Values for prior dates are estimates

In these markets the National Bank would become the main lender of tenge (Figures 2.8 and 2.9).

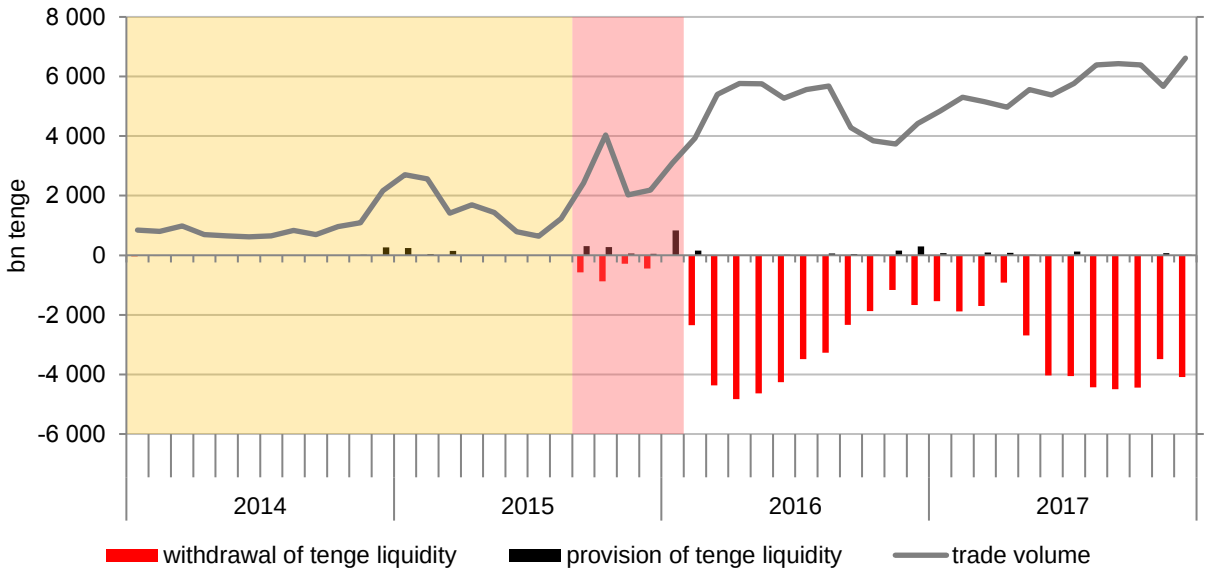
As control over the exchange rate tightened, its volatility fell to abnormal lows (January-July 2015 USDKZT volatility was 1.5%, Figure 2.2) even as volatility of the interest rates rose to historic heights.

**Figure 2.8 Dollarization of the money market: overnight FX swap became the main instrument to borrow tenge liquidity**




Source: KASE
Note: 1) USDKZT_0_001, USDKZT_0_002; 2) the tenge equivalent of foreign currency was obtained by calculation

**Figure 2.9 Uncertainty of the exchange rate reflected on the money market with tenge denominated collateral**




Source: KASE
Note: Includes all maturities of the automatic repo with government securities on KASE

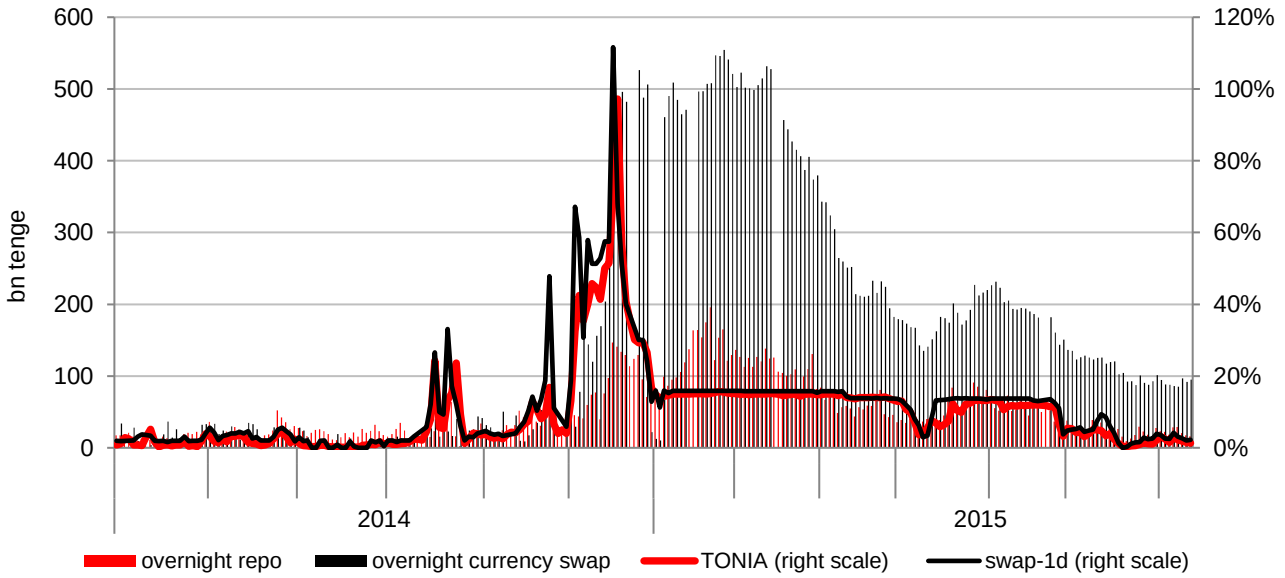
Despite high interest rates, monetary policy could not be characterized as the interest rate defense, because of the high volatility of the interest rates. High rates were an unintentional consequence of the exchange rate policy, but not an extension of it, at least initially.

In 2015 the National Bank began to provide liquidity at more or less predictable interest rates, effectively establishing the unannounced ceiling. However, no floor could be identified. The interest rates in 2015 fell and did not help defend the exchange rate (Figure 2.10). There were no withdrawals of primary liquidity in any systematic way, even at the very low levels. Occasional injections of liquidity into the banking system, carried out outside

of the scope of the monetary policy, would suppress the interest rates and chip away at the exchange rate credibility. In April 2015, repo rates fell to 3-4%. In June and July, after a more massive and concentrated injection of liquidity, interest rates in the repo market again declined to 3-4%, occasionally falling to 0.4-0.5% while the swap rates were observed to fall below zero on some days. By then the National Bank had almost completely stopped providing liquidity in the money markets, but was withdrawing it through foreign exchange market.

**Figure 2.10 Implicit ceiling and no floor: first attempts at interest rate and liquidity management during fixed exchange rate regime**

Turnover and interest rates in the money market




Source: KASE
Note: Swap-1d indicator was introduced by the KASE on June 9, 2014. Values for prior dates are NBK estimates

In addition to liquidity provided to the market at an unstated ceiling, the National Bank provided liquidity to select banks outside of monetary policy framework – as part of the programs to improve asset quality (2015) and to help manage liquidity under severe dollarization (long term FX swaps in 2014-2015).

As part of the program to refinance FX denominated mortgages KZT 130 bn were provided, although only KZT 33.7 bn were absorbed in 2015.

Another injection came in June 2015, when Kazkommertsbank received KZT 250 bn from the Problem Loans Fund in long-term funding to be used only for NPL restructuring.

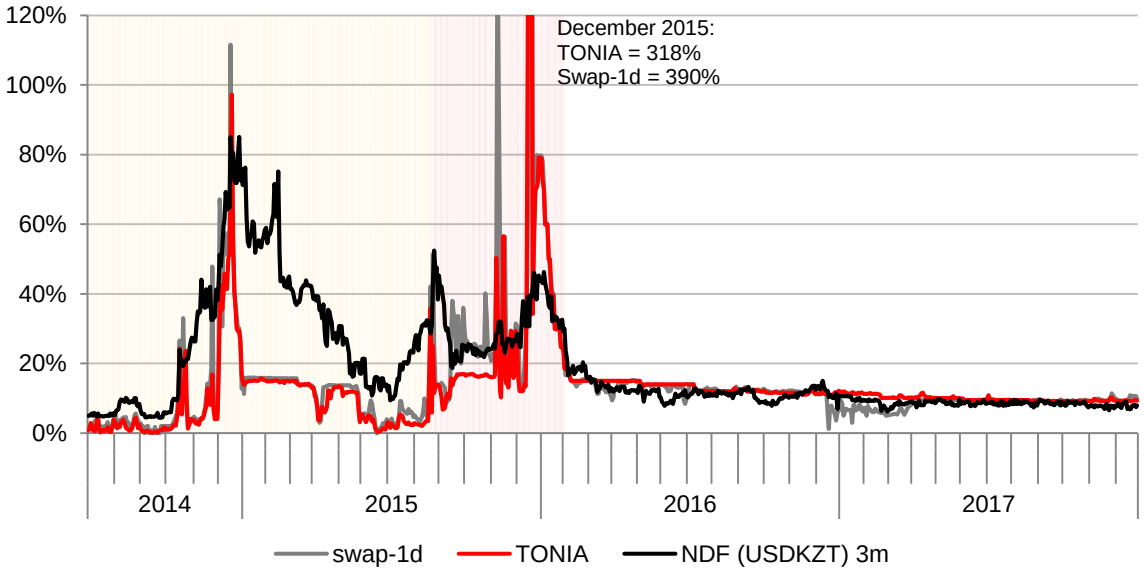
Meanwhile, the opportunity cost of holding tenge remained high. The spread between the short-term USDKZT (non-deliverable) forward rates (NDF) and the overnight repo was wide, indicating elevated expectations of imminent devaluation. However, spread arbitrage was constrained by prudential requirements on FX and liquidity positions and by uneven access to subsidized liquidity.

The short-term NDF rates rose in late 2014 but then declined before February 2015 in the face of a fierce defense (Figure 2.11). During the period, the NDF rates tended to correlate with the pace of depreciation in the weeks past.

Preference for USD was observed in deposits (Box 3, Section 6.1). As the real sector, consisting of both creditors and borrowers, went long USD, banks were unable to maintain a neutral FX position and sufficient liquidity in KZT to meet prudential requirements and operational needs. The National Bank addressed this predicament by providing the

banks with a long-term FX swaps at 3% per year on KZT side. This allowed the banks, despite severe dollarization of liabilities, to remain FX neutral while maintaining a sufficient stock of tenge liquidity. On the flip side, the swap rates were substantially below the NDF rates and thus failed to transmit to banks and their clients the true cost of tenge liquidity, pecking at the credibility of the exchange rate defense.

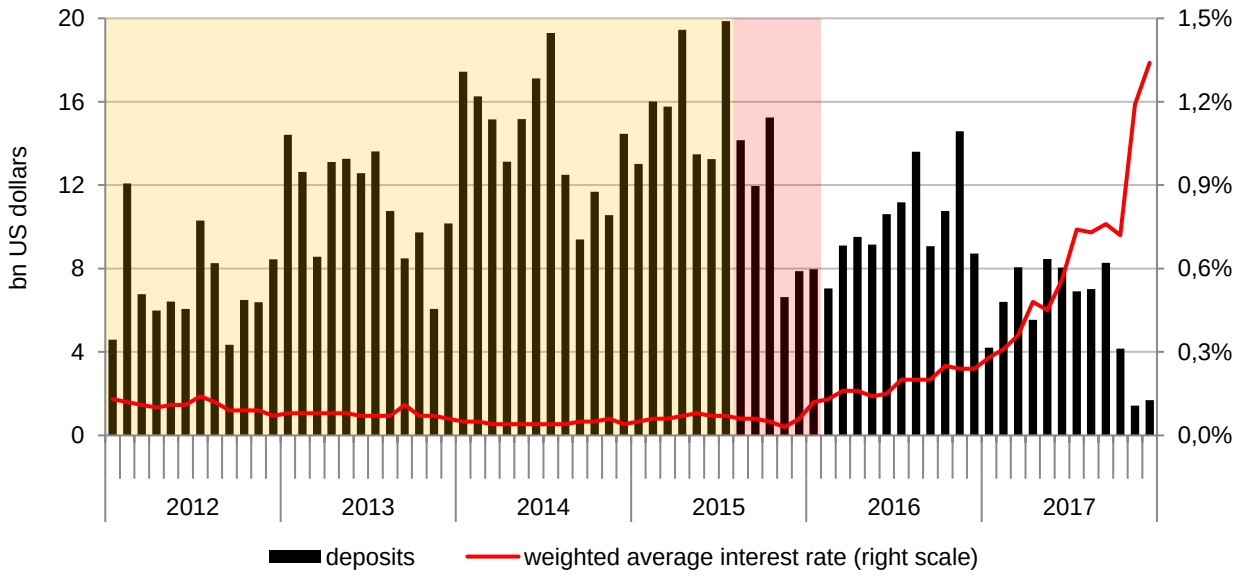
**Figure 2.11 Effect of the exchange rate expectations on the money market interest rates**




Source: KASE, Bloomberg
Note: Swap-1d indicator was introduced by KASE on June 9, 2014. Values for prior dates are estimates

**Figure 2.12 Dollarization of liquid assets**

Short-term USD deposits held by banks in non-resident banks




Source: Reporting of banks

As clients converted their account into dollars, banks deposited the funds with foreign banks (Figure 2.12).

However, the banks had to comply with the 'coefficient of domestic assets' that required a certain portion of assets to be held domestically. Effectively, the banking system

could increase its liquid assets at home, including FX assets, only by depositing them with the National Bank (Figure 6.3, Section 6.1). On the level of individual banks, holding assets with another second-tier bank would go towards meeting the requirement just as well, but the stock of interbank accounts was negligible, largely because the banks cut, or closed, their counterparty limits back in 2007, resulting in the disappearance of unsecured interbank market.

In February 2015[1] the National Bank and the Government of the Republic of Kazakhstan drafted a plan to reduce dollarization. It raised the coverage of guaranteed individuals' tenge-denominated deposits from KZT 5 mn to 10 mn, lowered the interest rates caps for USD-denominated deposits from 4% to 3% (which were eventually lowered to 1%), introduced a proposal to restrict FX borrowing for state-owned companies, and others.

Liquidity crunches accompanied by interest rate spikes were more frequent ahead of the tax dates. Exporters would convert FX accounts into tenge and transfer the amounts due to the tax authority, reducing the supply of primary liquidity and resulting in interest rate spikes, since withdrawals by fiscal authority were not offset by injections by monetary authority. Liquidity tightenings around the tax date were common and their effect could be observed well into 2015. Liquidity management was not effective at maintaining the supply of liquidity at just right level. This was most evident during currency crises, such as in late 2014, when in expectation of devaluation demand for primary liquidity shrank.

In early 2015, the National Bank began to provide liquidity at an unstated ceiling, a first step in liquidity management.

## 2.2 Transition to free float

**During the five months of transition the monetary policy oscillated between episodes of predominantly managed and stable exchange rate, with high and volatile interest rates, and episodes of exchange rate adjustments and relatively stable interest rates.**

On August 20, 2015 the National Bank stopped defending the exchange rate and announced transition to free float and inflation targeting. In the next two days, tenge lost 25% in USD terms, then strengthened ahead of the tax date, with low trade volumes. Subsequent adjustments were stop and go. By the end of the year tenge lost 42% against USD.

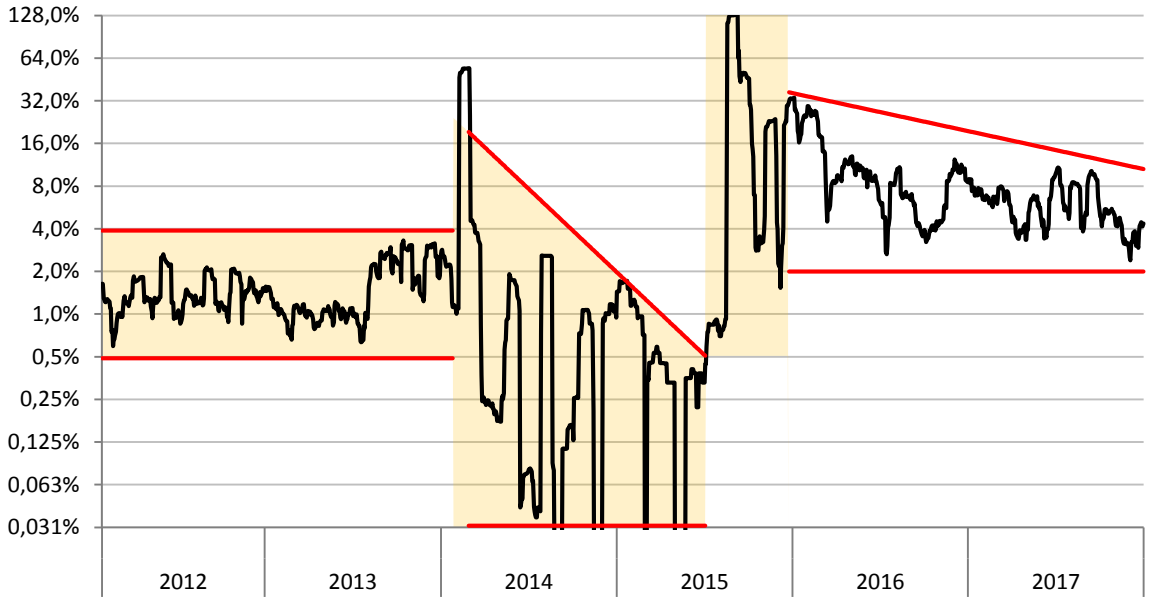
In September, the National Bank announced overnight repo rate as the targeted rate and a band around the policy rate – the so-called base rate – at 12% ± 5 percentage points, published a list of policy instruments for managing primary liquidity. In November 2015, the National Bank expanded the list of collateral for its standing facilities.

However, commitment to stable interest rates was limited with occasional relapses towards exchange rate stabilization. Two such episodes could be identified, when exchange rate volatility fell to the levels characteristic of the managed exchange rate (Figure 2.13).

[1] The Plan aimed at reduction of the dollarization level of the economy of Kazakhstan for 2015 - 2016 (approved at the meeting of the Government of the Republic of Kazakhstan (protocol No. 9 as of February 17, 2015)). Later this Plan ceased to be in force in accordance with the protocol of the meeting of the Government of the Republic of Kazakhstan No. 51 as of December 8, 2015

**Figure 2.13 Volatility as an indicator of the exchange rate regime**

Volatility, 15-day moving average, % annualized




Source: KASE, National Bank estimates

In Q4 2015, tenge was no longer overvalued, but the perceived risk of further weakening rose significantly compared to the period of defense. Short-term interest rates would occasionally reach record levels and persist for a record time. Liquidity crunches ahead of the tax date, in August and in November 2015, reemerged. At the end of the year, several long-term FX swaps reached maturity and were closed, resulting in a contraction of primary liquidity.

High interest rates in November and December of 2015 reflected banks' willingness to minimize liquidity balances in the anticipation of further depreciation. Periodic peaks in interest rates reflected the challenges of aggregate liquidity management in the face of strong autonomous shocks and evolving forecasting methods.

Residual pressure on the exchange rate three-four months after the announced transition was also manifest in the spread between the overnight FX swaps (repo secured by FX) and overnight repo (secured by KZT-denominated government bonds). The spread was especially noticeable during the episodes of stable interest rates in the repo market which the National Bank used to provide liquidity. Although the spread was wide, most banks did not have government debt on the balance sheet to take advantage of what seemed like arbitrage opportunity.

Transition period ended in January 2016.

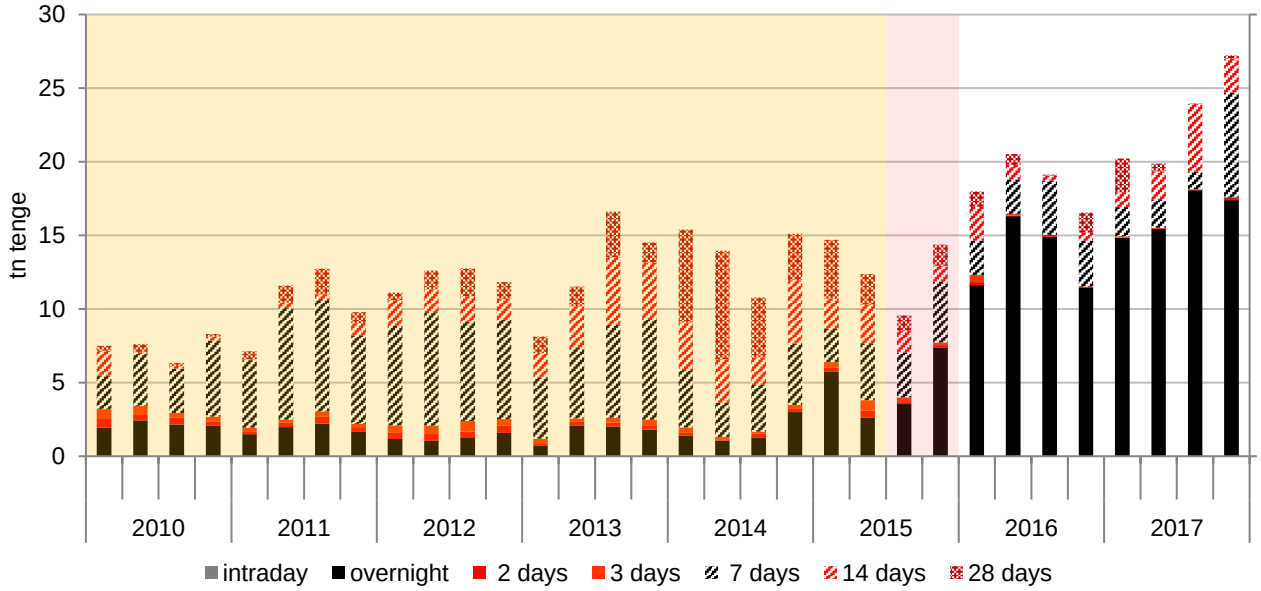
In December, USDKZT peaked, and began to recover in January, eventually settling at around 360, half of its value before the transition. A number of indicators suggested that tenge was undervalued. Exchange rate risks became more symmetric. Expectations of weakening were replaced by uncertainty. Trade volumes remained low. Demand for tenge assets began to recover. Banks continued to rely on borrowed tenge, mainly because of the easy access. Trade volumes on the repo market grew dramatically, but unevenly; the bulk of operations happened in the overnight repo, where the National Bank began to intervene, and the longer-term repo markets virtually disappearing (Figure 2.14).

Despite interest rate volatility during the transition, the policy of interest rate stabilization continued to evolve and liquidity management became more disciplined. During this period the National Bank attempted, with variable success, to defend both sides of the

interest rate corridor. Excess liquidity was promptly mopped up. And at no time during the transition would the interest rate fall to the lows observed before the period.

**Figure 2.14 Overnight repo emerged as the predominant segment of the money market, used by the emergent interest rate policy for intervention and as an indicator**

Quarterly trade volume in autorepo market, term weighted




Source: KASE, National Bank estimates
Note: Term-weighted volume is the volume of repo operations opened during the period times days to maturity

## 2.3 Stabilization period

**During this period, the National Bank finally completed transition to interest rate management and by and large abandoned the fixed exchange rate. The period is characterized by a recovery in demand for tenge assets, a gradual decline in the level and volatility of interest rates, the phasing out of devaluation expectations, and a stabilization of the exchange rate volatility at levels compatible with the free float. Excess supply of primary liquidity emerged as the main challenge for the interest rate policy.**

Tenge began to appreciate in 2016. The trend continued for several months. By May, USDKZT appreciated from 360 to 340 and settled there until the end of the year. In 2017 it strengthened to 320.

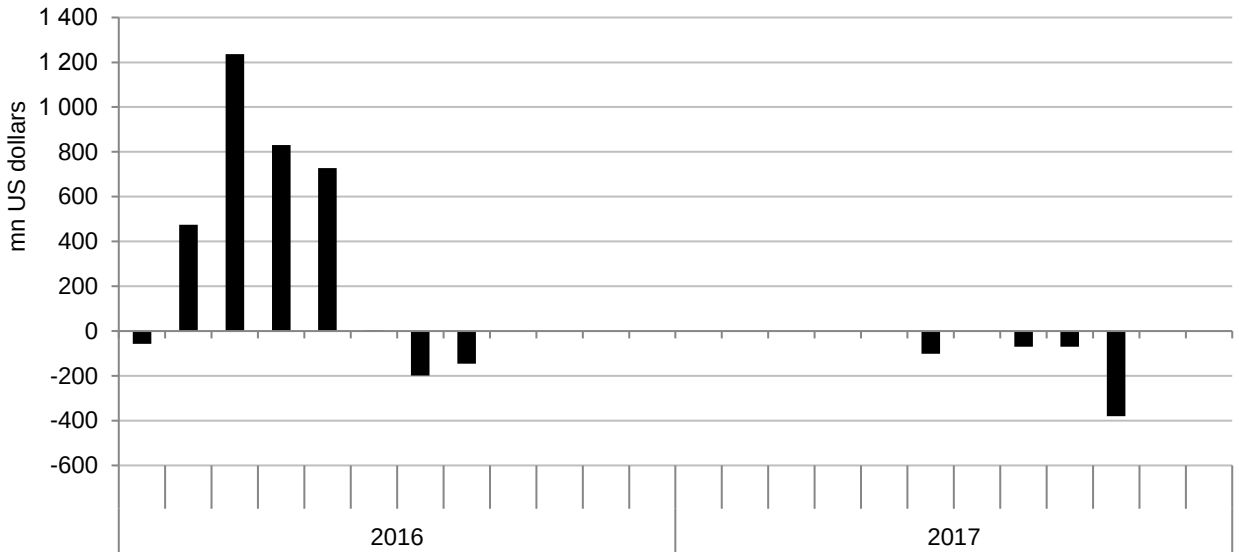
Volatility of exchange rate too was consistent with the free float. The overshooting that the appreciation of 2016-2017 implied also served as evidence of the exchange rate being flexible. This helped to establish the credibility of the free float, eased pressure on the exchange rate and made interest rate cuts possible sooner.

With exchange rate management out of the picture all essential conditions were in place for the stabilization of the money market interest rates. In early 2016, the National Bank returned to the money market and gained control over the interest rates. In early January, the unstated ceiling was established at 70%. It was lowered by 10 percentage point increments and by the end of January the interest rates were at 25% with little volatility.

As the money and FX markets stabilized, the National Bank gradually reduced its presence in the FX market, reserving the right to intervene to smooth ‘sharp changes in the exchange rate not caused by the fundamentals’ (Figure 2.15).

**Figure 2.15 National Bank significantly reduced presence in the FX market**

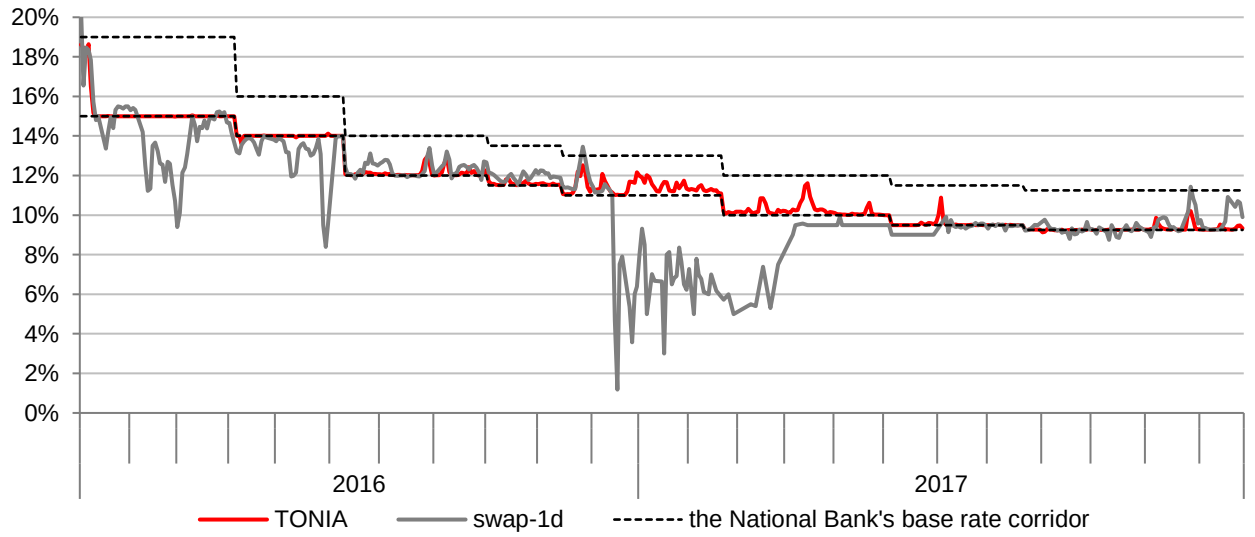
Net purchase of foreign currency by the National Bank




Source: National Bank

In February 2016, after a three-month pause, the National Bank set the base rate at the level of 17%, with a corridor of ± 2% for the target TONIA rate. Over the next two years, the National Bank has gradually cut the base rate, narrowed the interest rate band and managed to keep TONIA within it (Figure 2.16).

**Figure 2.16 Strengthening control over the lower bound of the interest rate band in overnight repos beginning 2016 and in the overnight FX swaps in 2017**




Source: National Bank, KASE

During this period excess liquidity emerged as the new challenge for liquidity management. The National Bank had to withdraw it in order to defend the lower bound of the interest rate band. The excess liquidity originated in autonomous factors, outside of direct monetary policy control. One source was budget deficit that was financed by foreign assets rather than domestic debt. In 2016 the National Fund converted foreign assets and transferred KZT 2.9 tn to the budget, and 4.4 tn in 2017. Issuance of domestic debt was almost non-existent, while redemptions continued.

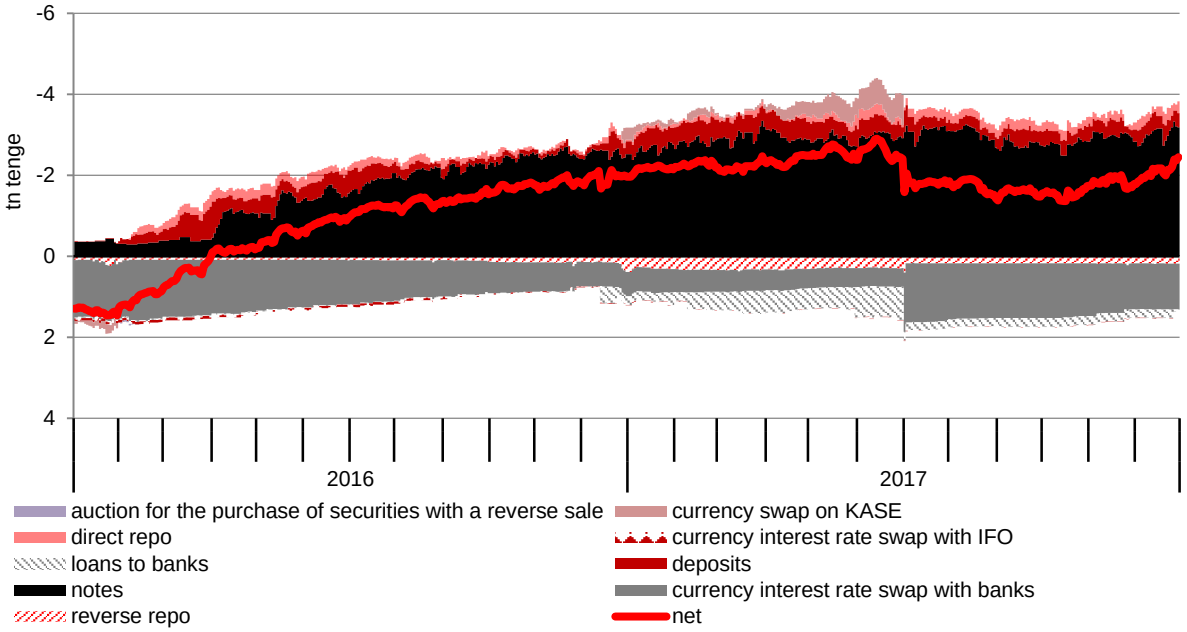
Another factor was the dedollarization of bank deposits, particularly rapid in H12016, when tenge appreciated against USD. Tenge-denominated deposits increased by KZT 3.2 tn during 2016 and by another 0.8 tn during 2017.

These were partly offset by the closures of the long term FX swaps initiated in 2014-2015.

As a result, the National Bank had to absorb the excess of about KZT 3.2 tn as of end 2016 which rose to 3.8 tn as of end 2017 (Figure 2.17).

**Figure 2.17 In 2016 the National Bank began to withdraw excess liquidity at the interest rate floor**

Open position of the National Bank operations

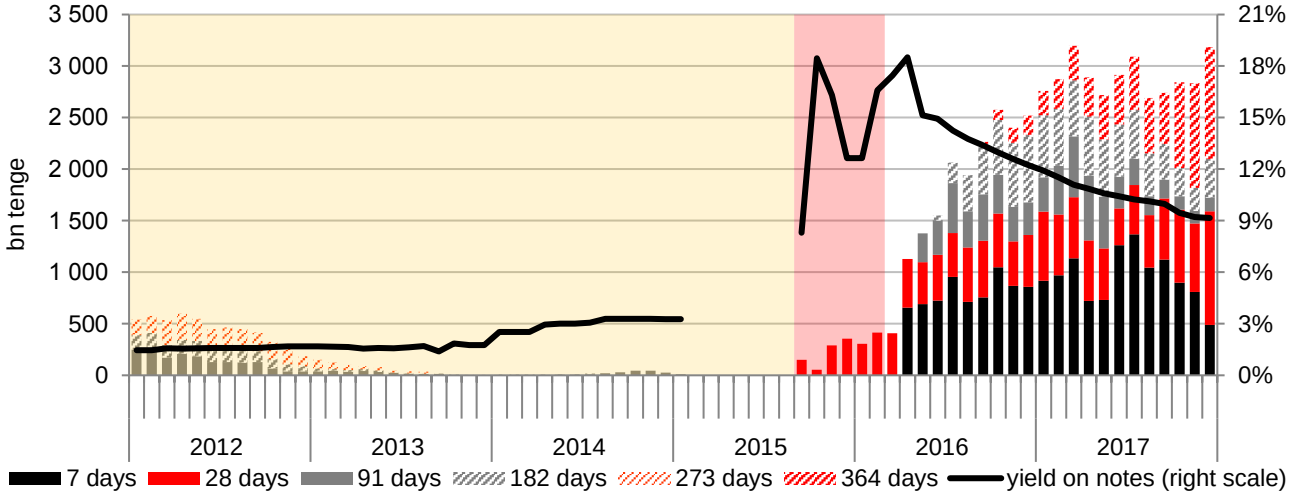



Source: National Bank

To withdraw the liquidity, the National Bank issued short-term notes and used other instruments (Figure 2.18), including short-term overnight deposits (Figure 2.20).

**Figure 2.18 Notes of the National Bank became the main instrument of liquidity withdrawal**

Stock in circulation




Source: National Bank
Note: No notes circulated from February to August 2015

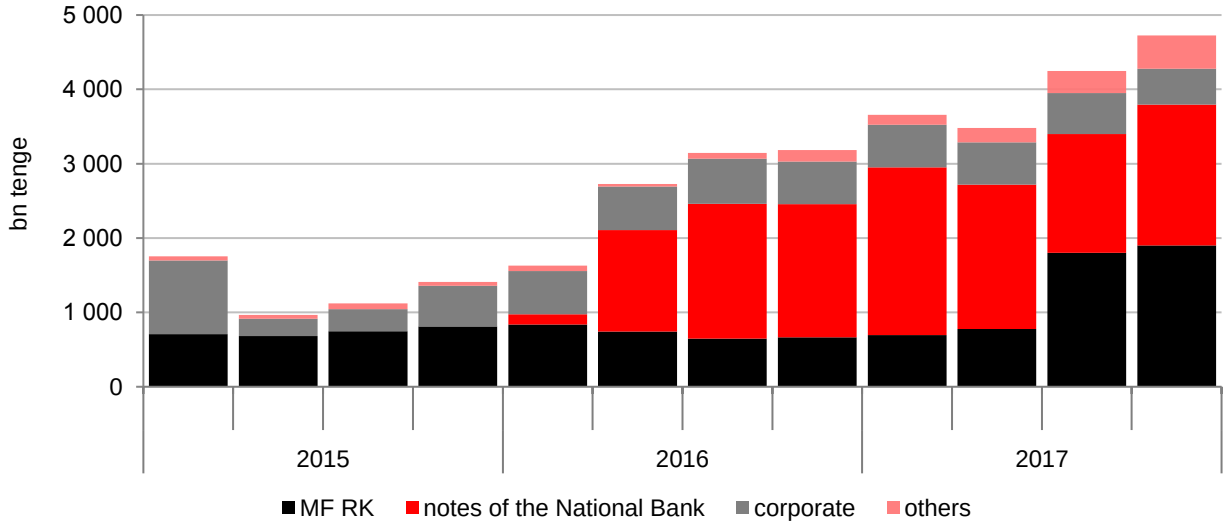
Liquidity management became essential for enforcing the interest rate policy. For the first time in the monetary history of Kazakhstan, the National Bank was withdrawing liquidity to defend the lower bound of the interest rate corridor. Decisive and consistent in implementation, interest rate policy gained credibility and was soon accepted as a given. Regular communication of the rationale for interest rate decisions helped reduce uncertainty about future interest rates. In the absence of debt emission by the fiscal authority, the National Bank was compelled to issue notes with progressively longer maturity and in September 2016 placed first one-year issue. This established the market for risk free tenge debt already in 2016 and helped to crystallize interest rate expectations up to this maturity. However, the bulk of the notes had the maturity of one week and the yield curve was most liquid and representative only at very short maturity.

In 2014 the yields on National Bank notes in the primary market were around 3%, while the refinancing rate – the policy rate at the time – was dormant at 5.5%. At that time, the National Bank did not attempt to manage liquidity in any systematic way. Back then, excess liquidity, of autonomous or monetary nature, translated into low interest rates. In 2016, notes offset the autonomous factors and raised the interest rates to the target level (Figure 2.18).

As a result, banks accumulated significant amounts of National Bank notes (Figure 2.19), which offered risk-free return and made ‘domestic assets’ prudential requirement easier to comply with.

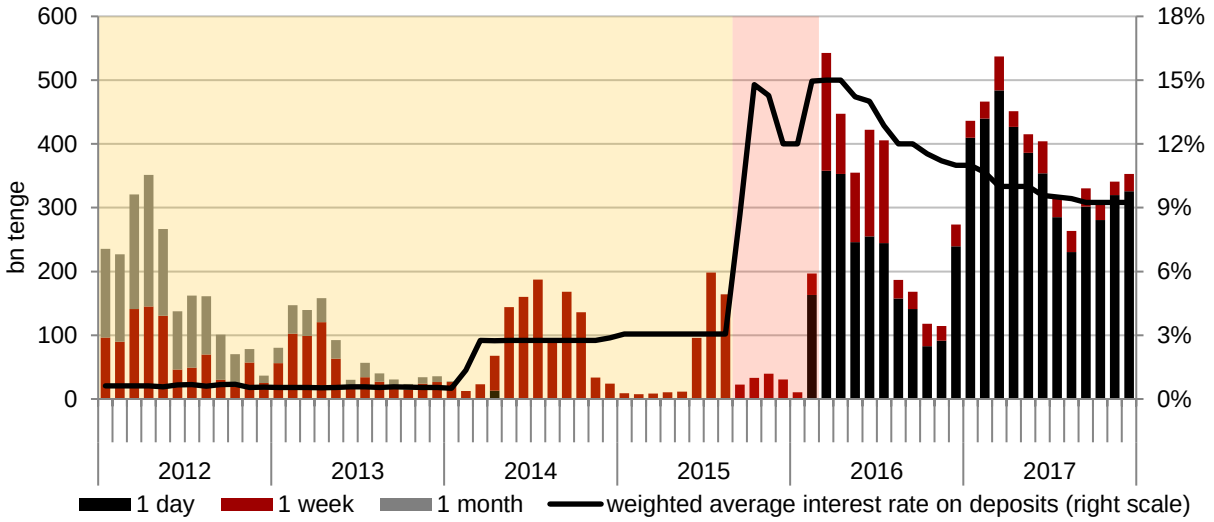
**Figure 2.19 Notes of the National Bank came to dominate securities portfolios of commercial banks**

Structure of the commercial banks’ security portfolios, end of period




Source: Reporting of banks
Note: Stock at book value without accrued interest

**Figure 2.20 Daily average balance of deposits with the National Bank**




Source: National Bank
Note: Estimated as the sum of the product of deposits opened and their maturities in days divided into 30 days.

## 2.4 Risks in the money market and the FX market

**Since 2016 the risks to financial stability coming from the money and foreign exchange markets subsided markedly. Free float eliminated the most obvious and systemic component of exchange rate mispricing and allowed monetary policy to pursue interest rate management, with all attendant benefits. However, short term exchange rate uncertainty remained high and price discovery mechanism continues to be hindered by structural and institutional gaps. Residual policy risks are related to the credibility of commitment to the free float, short maturity of instruments used by the National Bank to manage the supply of the primary liquidity. Long-term uncertainty about the money market mechanisms and future interest rates remained relatively low, in part reflecting the uncertainty in fiscal policy responses.**

### Inefficient price discovery in the FX market

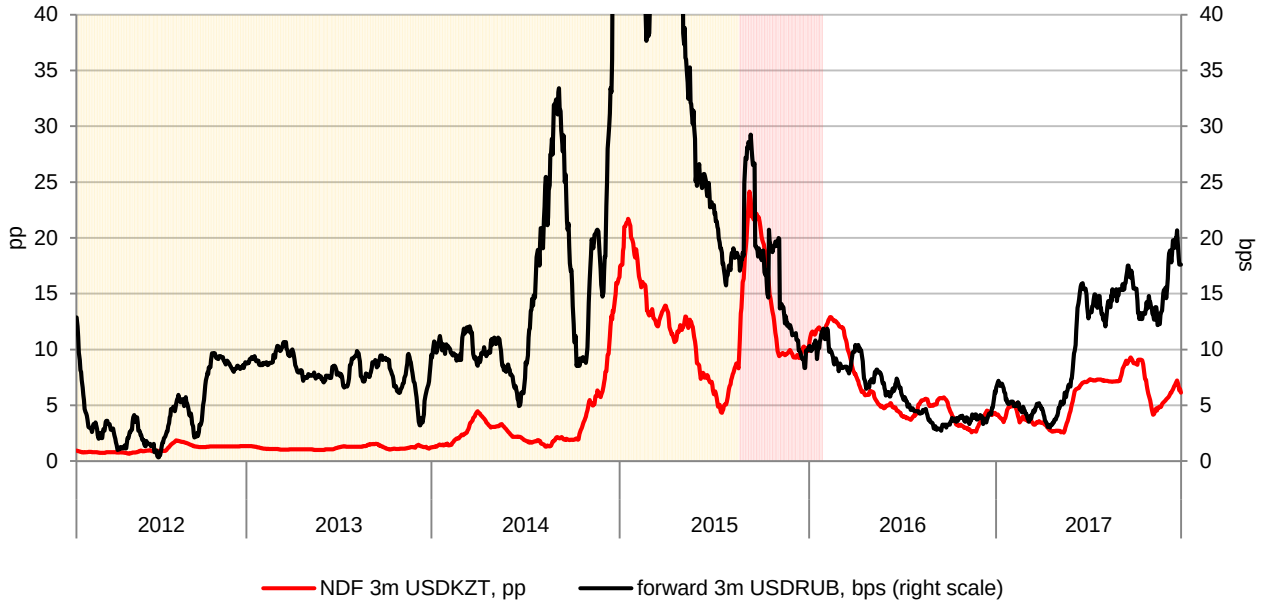
Transition to a flexible exchange rate regime illustrated potential for efficiency in detecting an equilibrium price, with risk of overshooting and the related risk of exchange rate expectations becoming entrenched at undervalued or overvalued levels.

However, price discovery mechanism remained inefficient. Its inefficiency was evident in wide bid-ask spreads and lack of liquidity in the FX forward market, low liquidity and bouts of low volatility in the spot market, low elasticity of the exchange rate with respect to oil price and USDRUB.

For example, bid-ask spreads in USDKZT forward market were two orders of magnitude wider than for USDRUB forward (Figure 2.21). This suggests very high and unmitigated uncertainty in USDKZT market.

**Figure 2.21 Bid-ask spread on USDKZT forward was 25-200x wider than for USDRUB**

15-day moving average




Source: Bloomberg

The inefficiency and the uncertainty had a number of reasons, structural, legacy and institutional.

Structural factors included high concentration of flows and the attendant asymmetry of information. For example, export flows were highly concentrated, tended to accumulate in the accounts outside of Kazakhstan and to remain there for arbitrary long time without being acknowledged in the financial account. The resultant lags and the uncertainty about the timing of the flows in the FX market compounded the task of interpreting and forecasting them. High concentration was also a feature of the portfolio flows. The market is dominated by a few large participants, often with trading pattern that is orthogonal to the rest of the market.

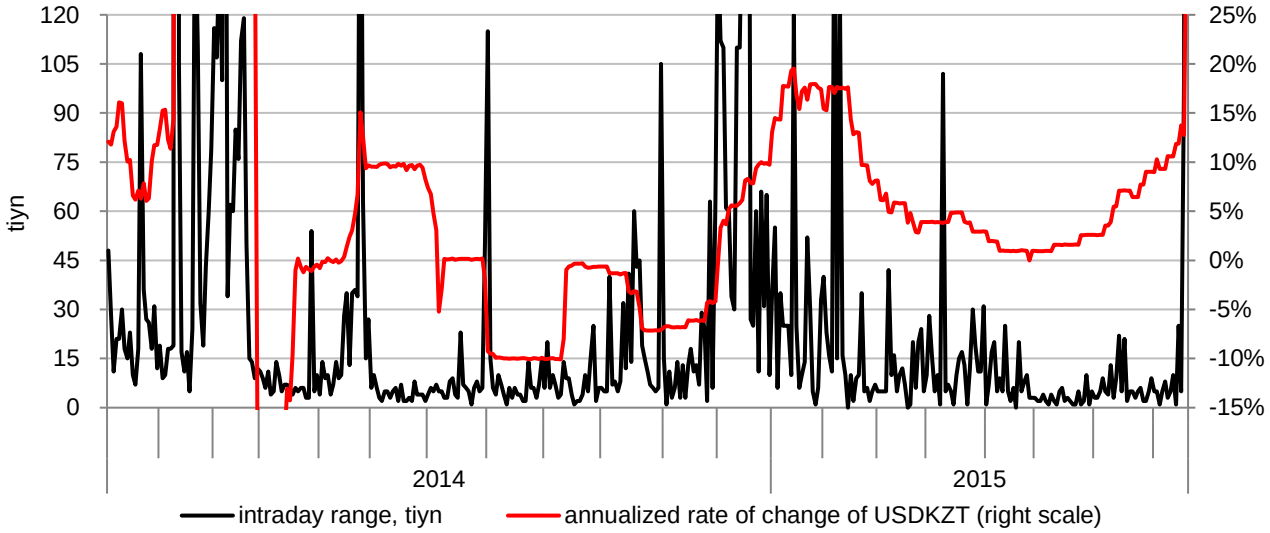
Historically, the market's capacity to model and forecast the exchange rate remains undeveloped. The ability to hold sufficiently large open positions for an extended period of time was constrained by prudential requirements, limited appetite for risk and limited capacity to absorb it, absence of views.

Finally, there is a risk of waning commitment to the free float that could manifest itself in the exchange rate volatility and elasticity declining to levels consistent with the rate management. The risk is associated with the long-established social views that attach stigma to exchange rate volatility and interpret it as a deficiency of monetary policy.

One stark illustration of the risks of low volatility comes from episodes of exchange rate management in 2014 and in H1 2015. Tenge was slowly depreciating under market pressure. During these episodes the pace of depreciation was slow, but could be easily extrapolated into the near future because of extremely low volatility (Figure 2.22).

**Figure 2.22 Gradual and predictable depreciation with low volatility breeds short positions in KZT**

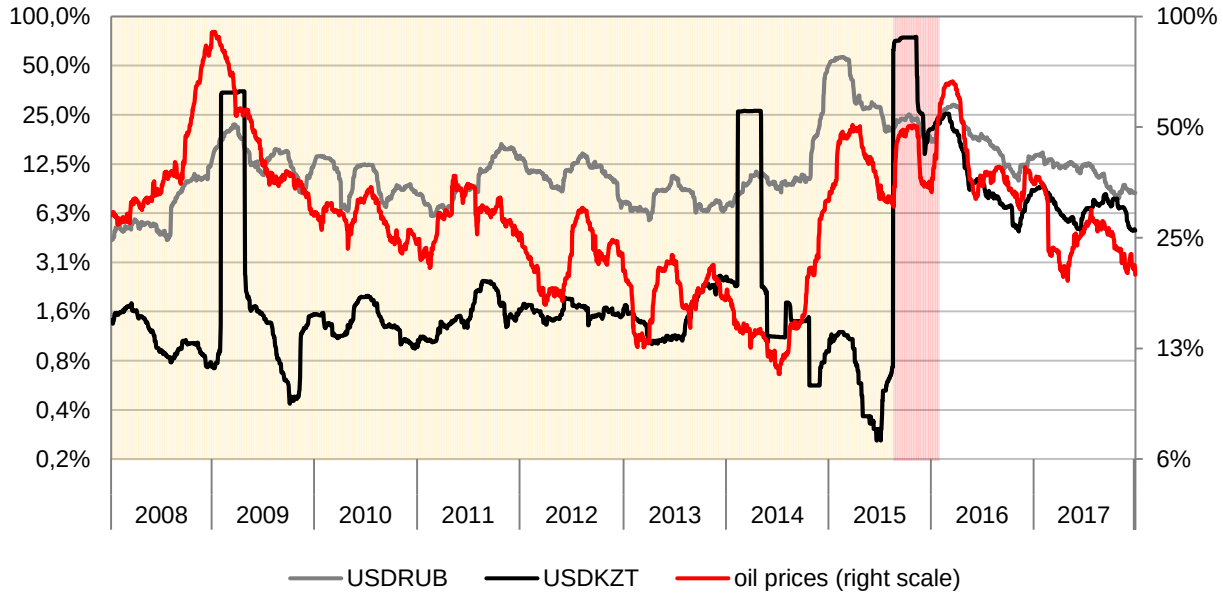
USDKZT range and the pace of change




Source: KASE, National Bank estimates
Note: Rate of change is expressed in annualized 30-day change. Tiyn is a one hundredth of tenge

Another comparison shows that the notion of fixed exchange rate is a misnomer. Volatility of the managed exchange rate is low only in the short-term. Longer samples that include few, but massive corrections produce estimates of the managed exchange rate volatility that are as high as under the free float (Figure 2.23).

**Figure 2.23 Volatility of USDKZT, USDRUB, and oil prices**

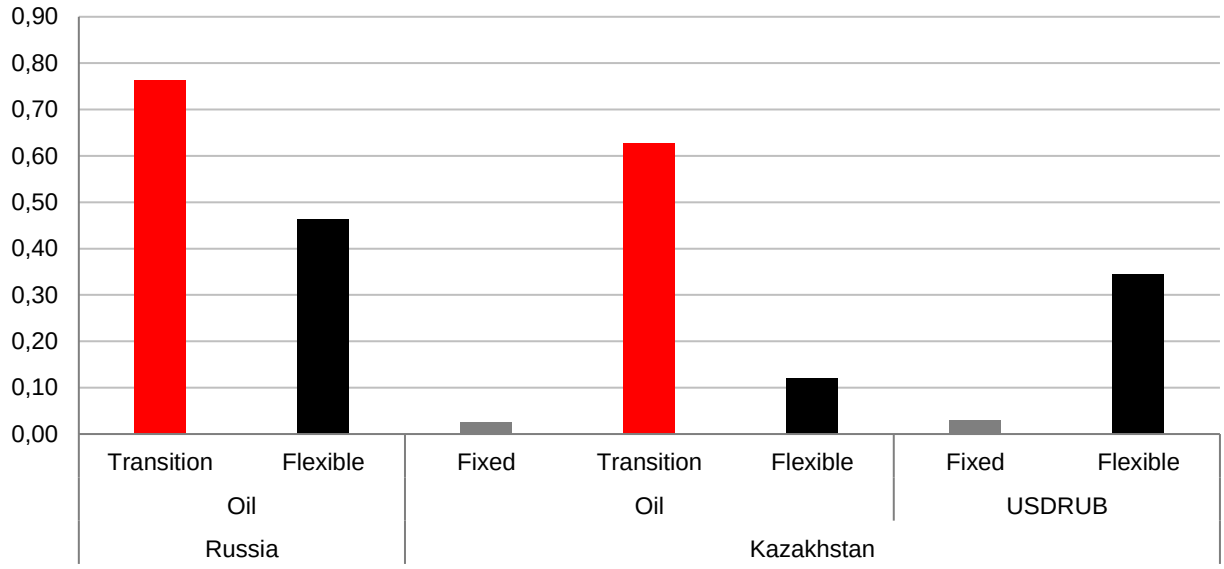



Source: National Bank, Bloomberg, National Bank estimates
Note: 1) This figure uses a logarithmic scale (base 2); 2) values of a 60-day moving average are used

Relatively low elasticity of the exchange rate with respect to oil prices and USDKZT is another indirect evidence of poor efficiency of the FX market (Figure 2.24). This suggests that a large proportion of variation in the exchange rate is due to noise, rather than the fundamentals. Fiscal policy could change the way the exchange rate depends on the fundamentals. Introduction of a new budget rule in the Russian Federation in 2017

significantly reduced the dependence of USDRUB on oil prices, and the elasticity with respect to the oil price.

**Figure 2.24 Elasticity of USDKZT and USDRUB**




Source: Bloomberg, National Bank estimates
Note: 1) Kazakhstan: fixed - 03.2014 - 08.2015, transition - 09.2015 - 01.2016, flexible - 02.2016 -12.2017. Russia: transition - 01.2012 - 11.2014, flexible - 12.2014 - 12.2017

The risk of weakening commitment to the free floating is one of the largest policy risks that could undo the recent gains. This risk is largely associated with public perception of what constitutes an effective monetary policy and to what extent stability of the exchange rate is a criterion. This risk could be monitored via various metrics above, the simplest of which is the volatility. Accordingly, in order to mitigate the risk all stakeholders need to be educated about the costs and benefits, actual and imaginary, of the two exchange rate arrangements and the risks of policy reversal. A complementary approach is to adopt a more countercyclical fiscal policy.

**Efficiency of primary liquidity management**

One of the top risks comes from the excess liquidity that the National Bank needs to absorb in order to keep the interest rate within the target interval. The financial costs of absorbing excess liquidity are borne solely by the National Bank. The amount of excess liquidity is substantial – at KZT 3.8 tn at end-2017, it amounts to 7% GDP and exceeds the supply of primary liquidity by an order of magnitude (Figure 2.17); and so are the costs of its withdrawal. By coming into conflict with the task of interest rates management and otherwise distorting policy incentives, these factors could cause greater harm than the mere cost of servicing notes, deposits and other instruments of liquidity withdrawal. For example, they could introduce a dovish bias in the monetary policy or, more ominously, raise doubts about the logic of liquidity management and interest rate stabilization and weaken public support for the recent monetary policy reforms.

The excess liquidity that emerged in 2016 has structural origins. Because of that it is not expected to disappear and will be affecting the monetary policy possibly for at least several more years.

To build immunity to these risks, monetary policy needs to be more independent and all stakeholders and the public in general need to be better informed and educated about the tradeoffs involved.

To address these risks at the source, the excess liquidity needs to be reduced, for example, by financing fiscal deficit by domestic debt rather than by net foreign borrowing. Replacement of the short-term notes with the longer-term debt issued by fiscal authority would rationalize the structure of government debt and allocate it between the fiscal and monetary authorities according to their mandates: National Banks would use short-term notes to manage high-frequency fluctuations in both demand and the autonomous factors while the Ministry of Finance would be issuing long-term debt. From a more systemic point of view, development of fiscal rules that determine the structure and sources of deficit financing would allow to significantly reduce not only this risk, but also limit the procyclicality of fiscal policy and the attendant risks.

A somewhat unrelated risk is related to spreads between repo and FX swap markets. Until recently, interest rates in the FX swaps market were not targeted, although in practice this market is no less important as a source of borrowed liquidity. At the end of 2016 and in early 2017, there were periods when swap rates were smaller than repo rates. These reflected demand for FX from some banks that were experiencing outflows of large FX deposits (Figure 2.16). To rectify the omission, in April 2017 the National Bank began to participate more systematically in the swap market and later established the rules for the bounds of the interest rate corridor in this market.

# III. Government debt market

**After the management of pension assets was nationalized in 2014, trading in government securities came to a halt. With the debt management focused solely on yields, volumes in the primary market fell sharply as well. The money market rates rose in response to a rising pressure on the FX, but the official yield curve changed little, less indicative of the current demand and increasingly reflective of past transactions. The interaction between the yield curve, its mandatory use in valuation and the avoidance of mark-to-market losses resulted in the widening of bid-ask spreads and further discouraged trading.**

**In 2016, the National Bank began to auction off, frequently and predictably, its own notes, with terms up to one year, in order to absorb excess liquidity. A liquid secondary market soon emerged, helping to pin down the interest rate expectations and making the short end of the yield curve current again.**

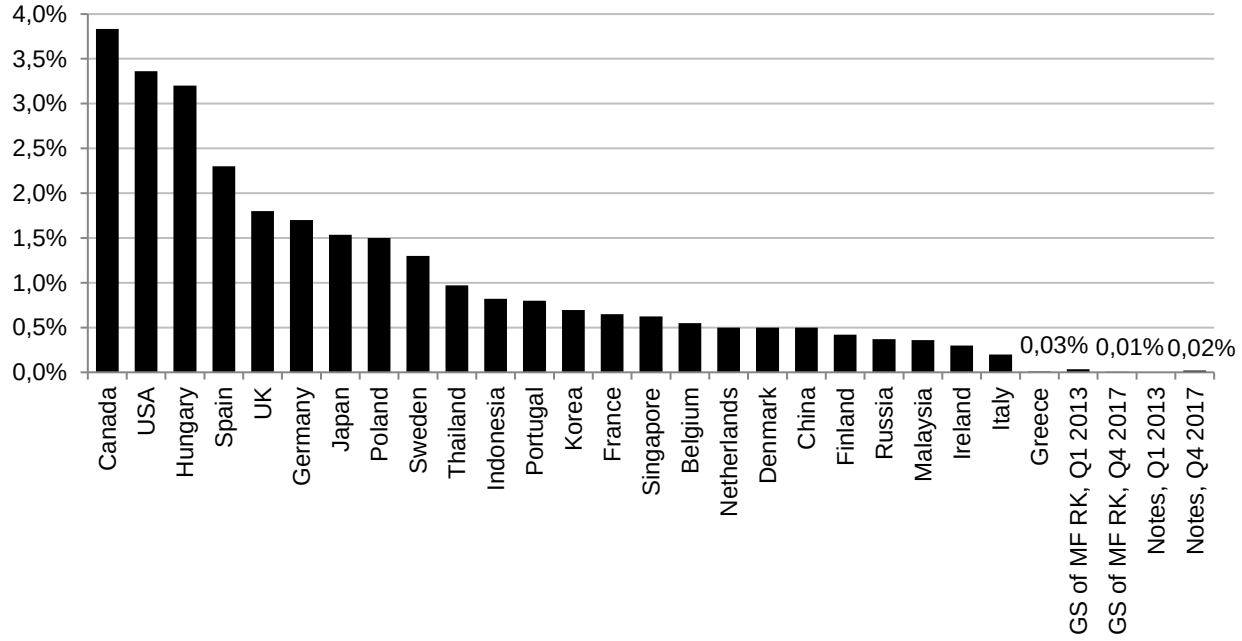
**The corporate debt market remained illiquid, beset by the lack of good issuers and discriminating institutional investors.**

## 3.1 The merger of pension assets and nationalization of their management

The historically low liquidity in the government securities market (Figure 3.1) got worse in 2014-2017 due to the disappearance of major institutional investors. Consolidation of pension assets and transfer of their management to the National Bank in 2014 led to a sharp decrease in the number of independent institutional investors, which resulted in a decline in government securities turnover in the primary market, where the UAPF acted as the main and sole buyer (Figure 3.2). Such a change in the structure of the market had an impact on the pricing process in the government securities market, which lost its market character.

**Figure 3.1 Government securities market in Kazakhstan is very illiquid**

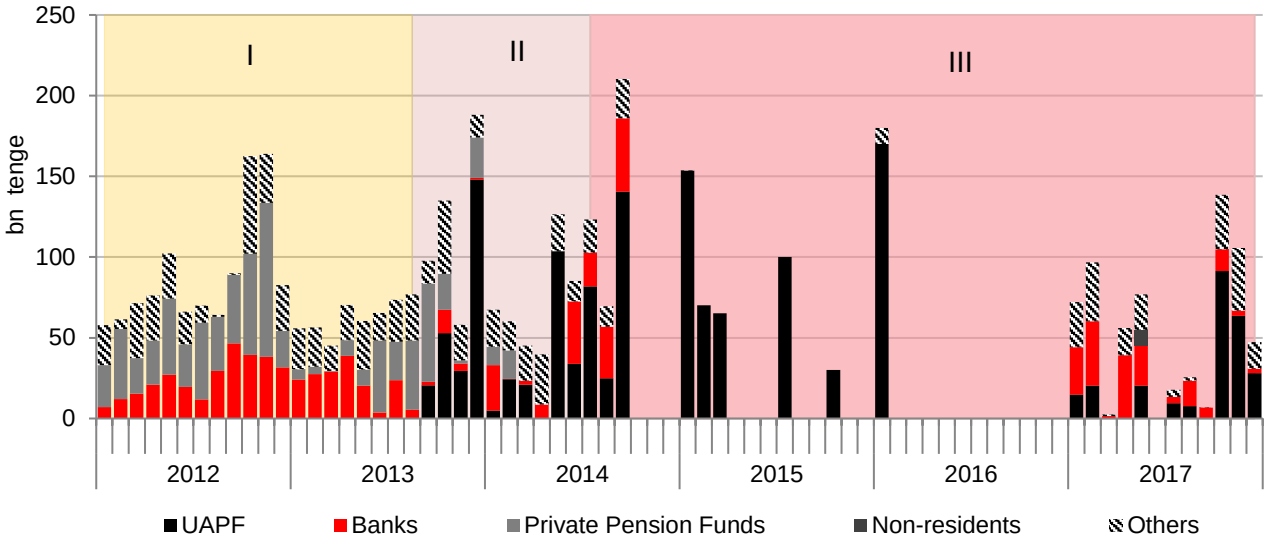
Daily turnover ratios of government securities




Source: Report "Government Bond Data Report" of the Association for Financial Markets in Europe, Asian Bonds, Central Bank of Canada, Securities Industry and Financial Markets Association, Kazakhstan Central Depositary

Note: 1) The turnover ratio is calculated as the ratio of turnover in the secondary government securities market to their volume in circulation; 2) Hereinafter, the sample does not include data on Eurobonds of the MF RK

**Figure 3.2 Volumes of primary market for government securities**

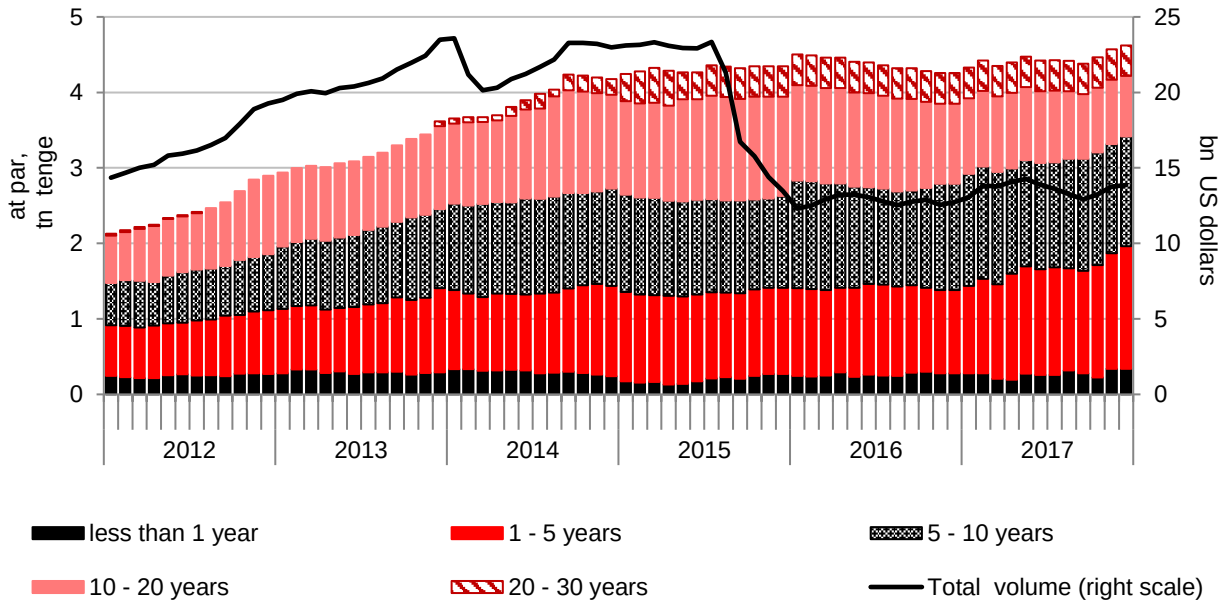



Period I – when pension assets were managed by private pension funds / asset managers
Period II – private pension funds transfer pension assets to the Unified Accumulative Pension Fund
Period III – when pension assets were held by the Unified Accumulative Pension Fund

Source: Kazakhstan Central Depositary
Note: The government securities allocated to a systemically important bank in July 2017 as part of its recapitalization were not included in the sample

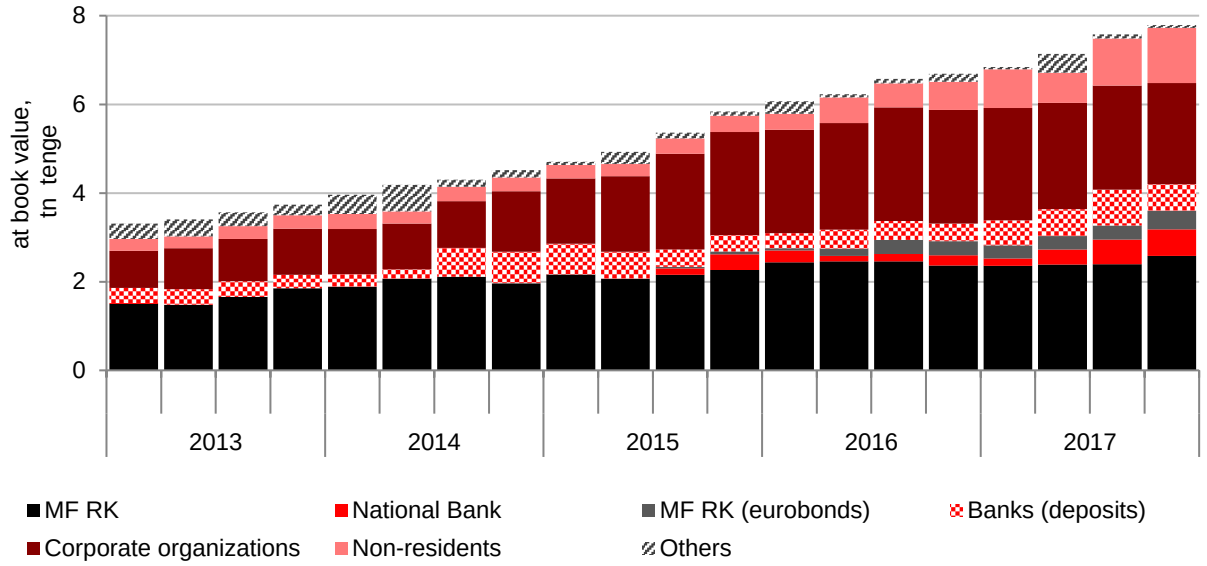
The change in the market structure and the concentration of long-term funds in one institutional investor influenced the composition of government securities holders. In the structure of holders of domestic public debt (KZT 4.6 tn at end-Q4 2017) UAPF held 2.6 tn (Figure 3.3, Figure 3.4).

**Figure 3.3 Outstanding volumes of government securities issued by MF**




Source: Kazakhstan Central Depositary
Note: The government securities allocated to a systemically important bank in July 2017 as part of its recapitalization were not included in the sample

**Figure 3.4 Structure of pension assets by issuers**

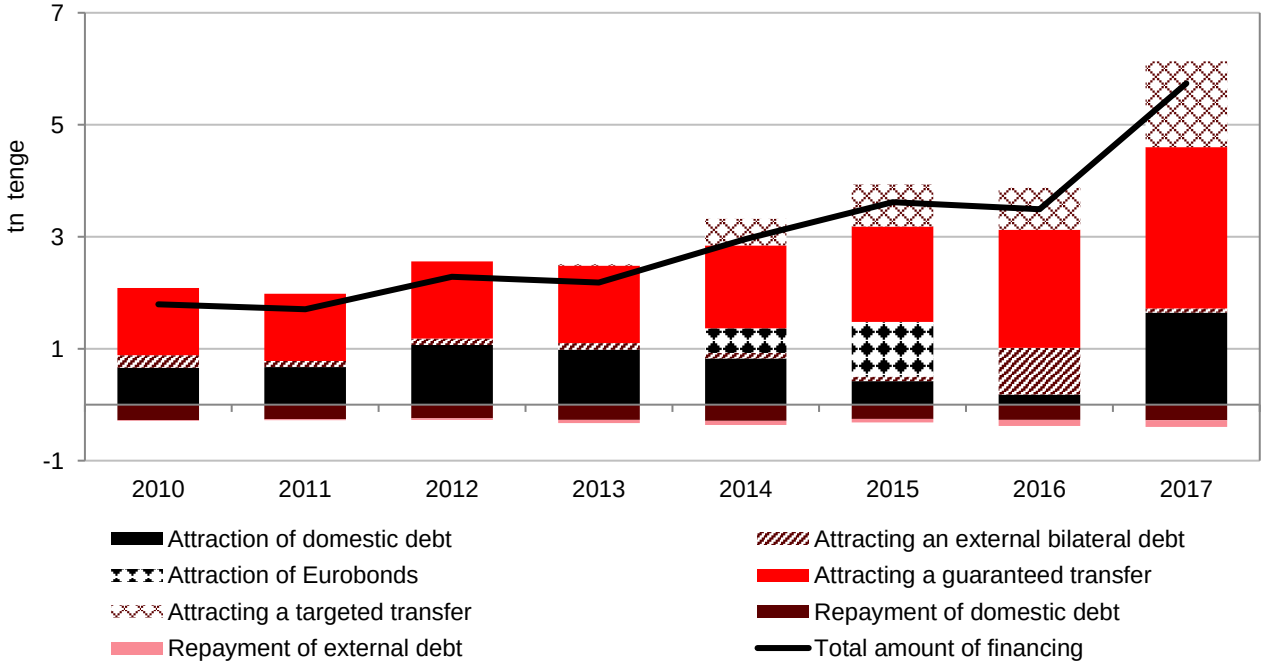



Source: Reporting of pension funds

## 3.2 Domestic debt policy and the primary market

In 2015-2016, the structure of deficit financing substantially changed. National Fund emerged as the main source (Figure 3.5). Domestic borrowing declined, partially replaced by foreign borrowing. The cost of funding became the dominant criterion for selecting financing decisions and in the assessment of debt policy performance. To accommodate this, auction design was based on reservation yields, which would be set too low to elicit enough bids for meaningful placement (Figure 3.6).

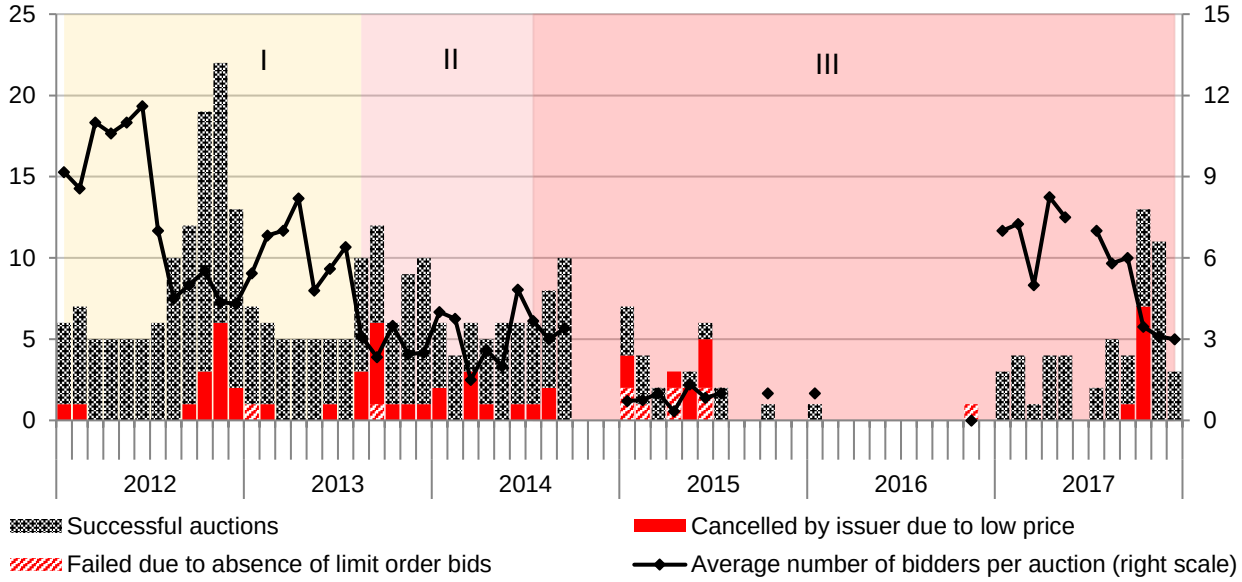
**Figure 3.5 Structure of deficit financing**




Source: MF RK

As a result, in 2015-2017, out of 83 announced auctions 8 were declared failed because of no bids and another 15 were canceled by the issuer (Figure 3.7).

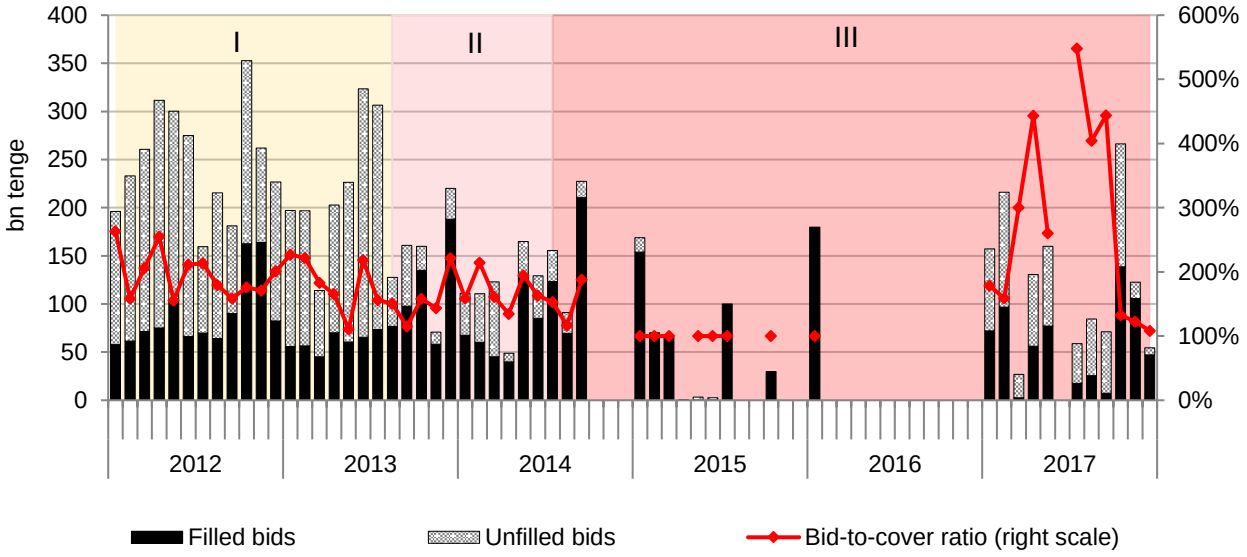
## Figure 3.6 Number of successful and failed auctions of MF debt




Period I – when pension assets were managed by private pension funds / asset managers
Period II – private pension funds transfer pension assets to the Unified Accumulative Pension Fund
Period III – when pension assets were held by the Unified Accumulative Pension Fund

Source: KASE
Note: 1) The government securities allocated to a systemically important bank in July 2017 as part of its recapitalization were not included in the sample; 2) For auctions that "failed due to absence of limit order bids", KASE does not report the number of market bids or the number of bidders who made market bids. The missing data was replaced by zeros in our estimates of the "average number of bidders per auction". This may result in underestimation of the statistic during H1 2015 when auctions often failed for said reason

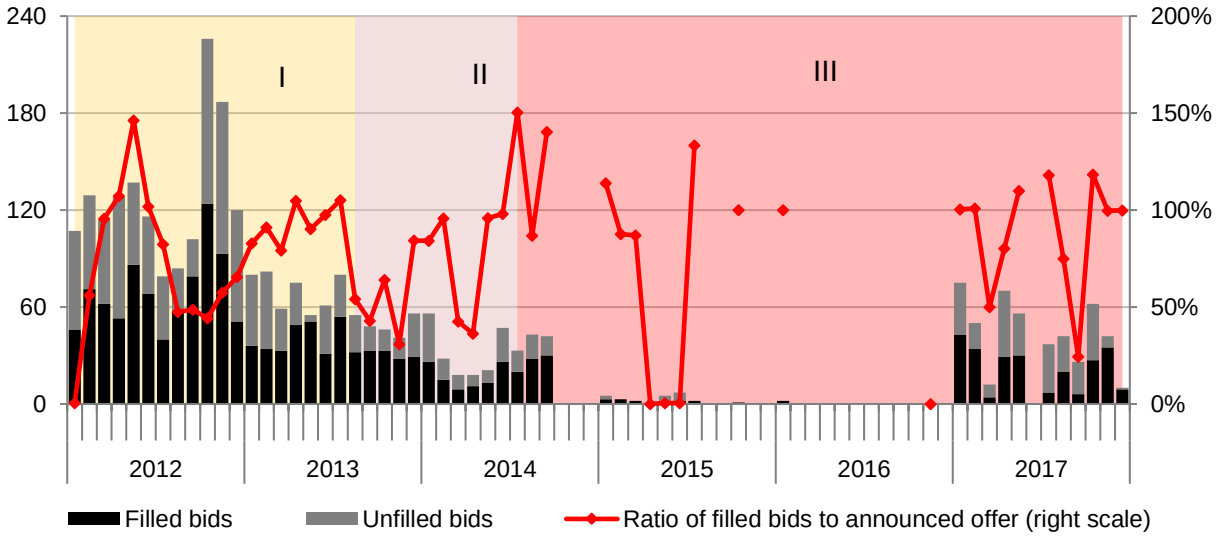
## Figure 3.7 Volume of filled and unfilled bids at auctions of MF debt




Period I – when pension assets were managed by private pension funds / asset managers
Period II – private pension funds transfer pension assets to the Unified Accumulative Pension Fund
Period III – when pension assets were held by the Unified Accumulative Pension Fund

Source: KASE
Note: 1) The government securities allocated to a systemically important bank in July 2017 as part of its recapitalization were not included in the sample; 2) Bid-to-cover ratio is calculated as the weighted average ratio of the number of submitted bids, both limit and market, to the number of filled bids, weighed by the announced volume of issuance. The statistic is based solely on successful auctions, because for auctions that failed or were cancelled, the ratio was undefined because of division by zero

**Figure 3.8 Number of filled and unfilled bids at MF auctions**

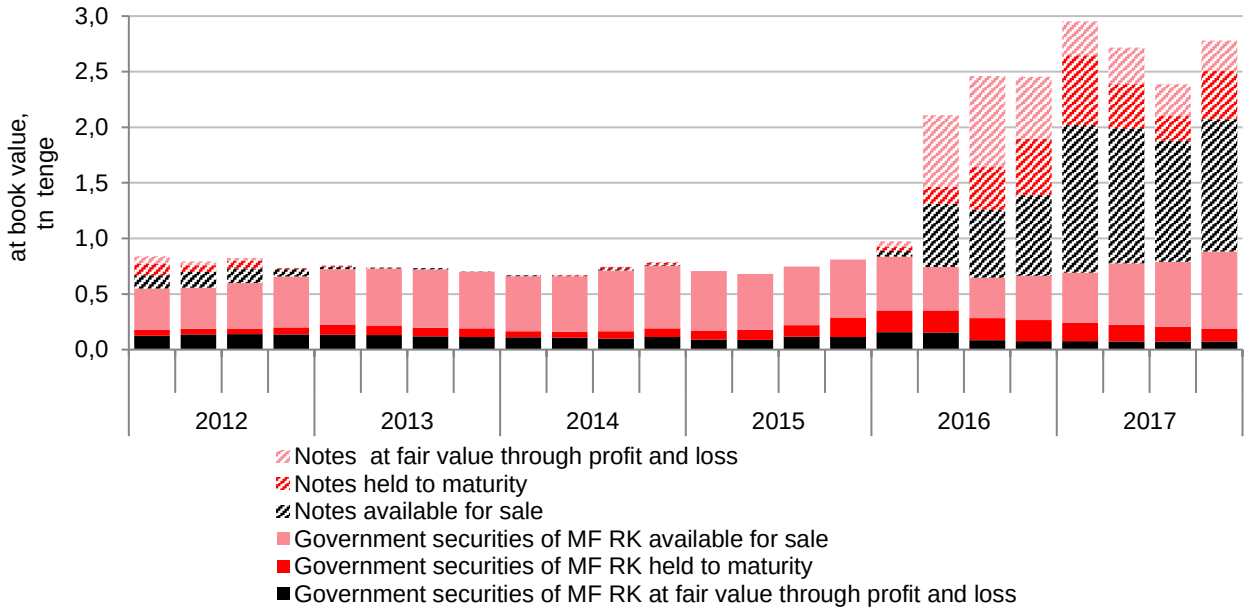



Source: KASE
Note: The government securities allocated to a systemically important bank in July 2017 as part of its recapitalization were not included in the sample

## 3.3 Bid-ask spread

In 2015, demand for tenge denominated assets sharply fell and yields rose. Beginning in Q3 2015 banks began to reclassify government securities in their portfolio as "held to maturity" (Figure 3.9). This allowed banks to avoid recognizing the mark-to-market losses, but also restricted them from selling.

**Figure 3.9 Banks' government securities portfolio, by accounting classes**



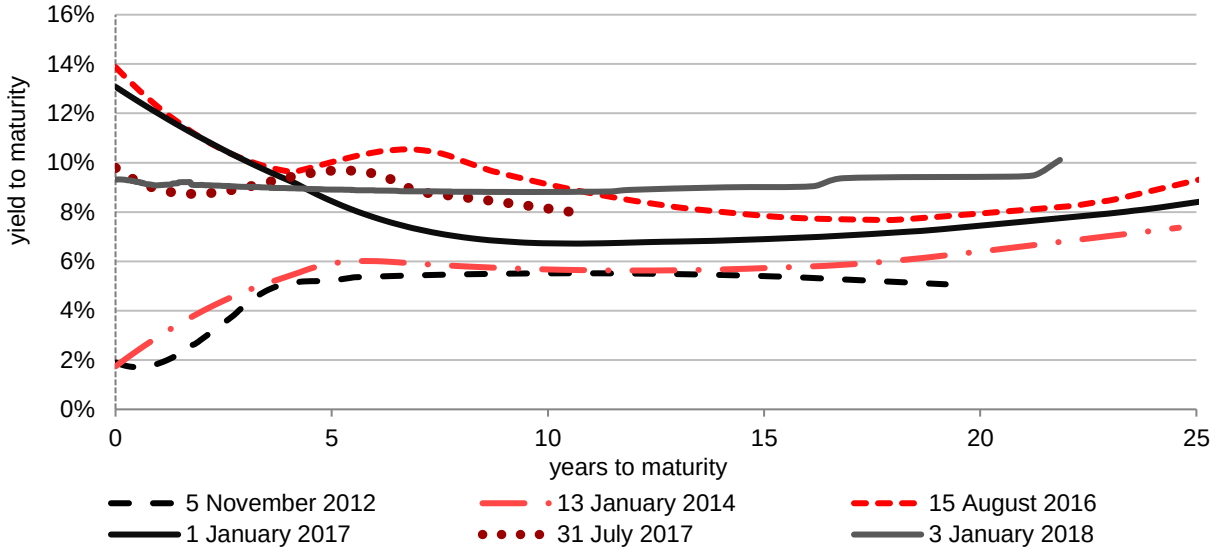

Source: Reporting of banks
Note: The government securities allocated to a systemically important bank in July 2017 as part of its recapitalization were not included in the sample

The market valuation used in banks' reporting was set weekly by KASE according to its valuation and yield curve methodology for government securities. To the extent that the yield curve was constructed based on non-market transactions or transactions several

months prior, with yields below current bid levels, the methodology suppressed the decline in the actual demand for the assets (Figure 3.10).

Liquidity in the secondary market suffered because of a vicious circle: the holders did not wish to sell at the “market price” to avoid the necessity of recognizing the losses and the buyers did not want to buy at the market price not to overpay.

**Figure 3.10 Risk-free yield curve**



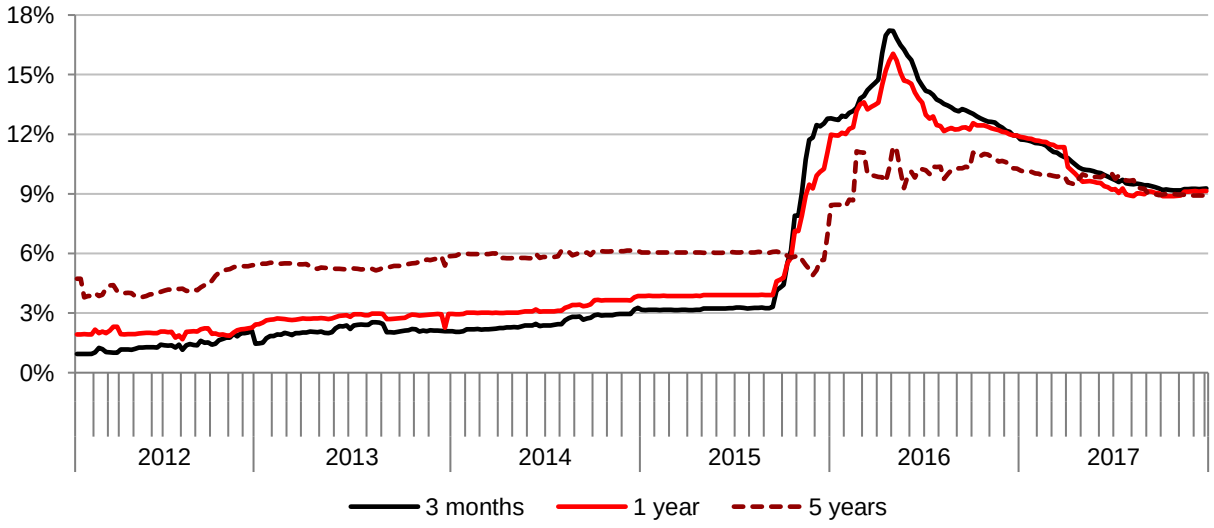

Source: KASE

## 3.4 Unfolding of the short end of the curve

Under the free float, the interest rate has stabilized and reconnected with the yields on government debt. This reduced the mispricing and narrowed the gap between supply and demand (Figure 3.11). However, the vicious circle was not broken and the market remained illiquid.

**Figure 3.11 Inversion of the yield curve under the free float and the subsequent flattening**

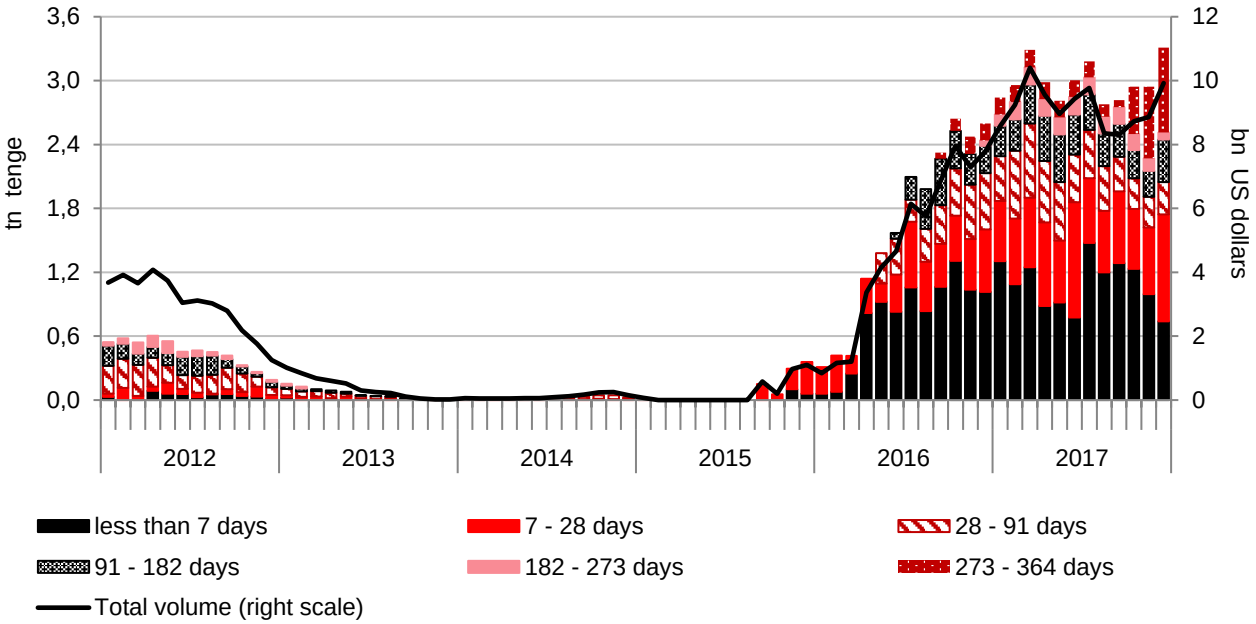
Yield to maturity




Source: KASE

In 2016, the National Bank began to issue notes regularly, as part of the emergent liquidity management. The daily average amount of absorbed liquidity through NBK notes rose from KZT 1.5 tn in 2016 to 2.9 tn in 2017 (Figure 3.12).

**Figure 3.12 National Bank notes in circulation, by maturity**

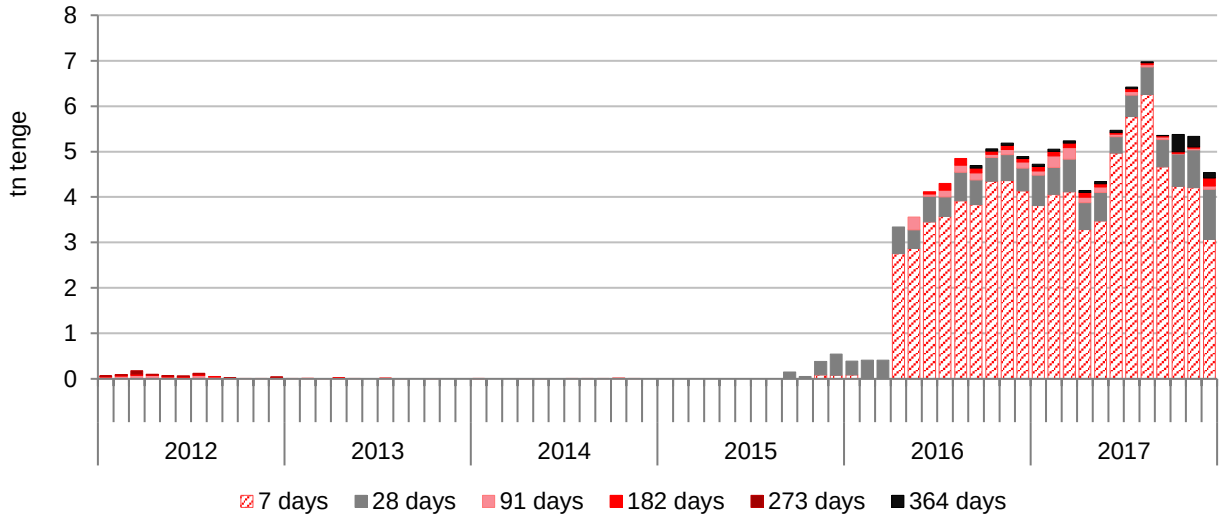



Source: Kazakhstan Central Depositary

Initially, these were short-term, but eventually a wide range of maturities, up to one year, appeared (Figure 3.13). On the secondary market the notes became much more liquid than the MF debt. This allowed the market to pin interest rate expectations to the price of an asset and so to build a credible yield curve, at least at the short end.

The longer end remained illiquid. This compelled KASE to change the methodology of the curve and to extend the sample further into the past in order to have enough points for the long end of the curve.

**Figure 3.13 National Bank notes, placement volume, by maturity**




Source: Kazakhstan Central Depositary

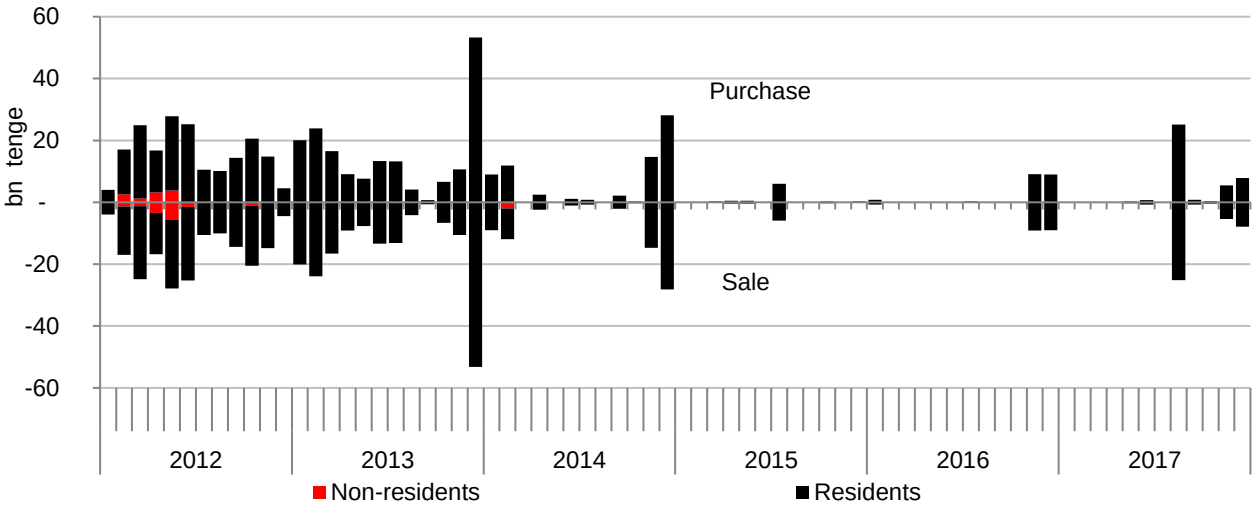
## 3.5 Risks and opportunities of the government securities market

In 2016-2017, the secondary market saw a minor revival, with residents being the main driving force. At the end of 2016 and in early 2017, non-residents became active, but their interest focused on the notes (Figure 3.14, Figure 3.15). Their preference for short-term assets may have been a preference for a more liquid market, but greater uncertainty about the future interest rates may have contributed as well. Risks to the market investors,

liquidity and uncertainty, are related and could be addressed by making the primary market for the long term government paper more liquid, mainly by rationalization of the debt policy rules.

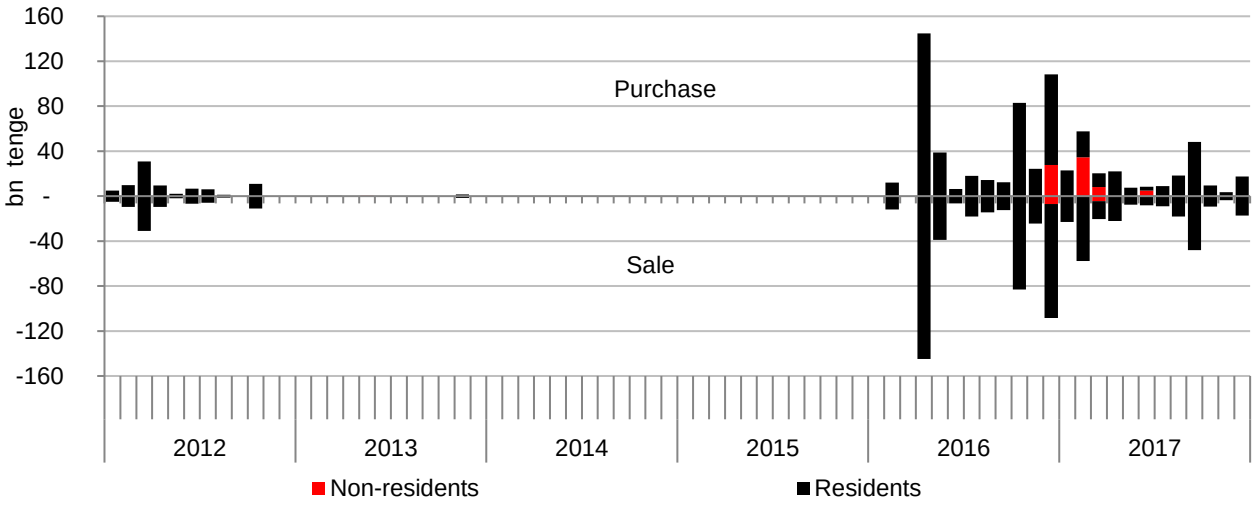
For the economy, the benefits that come with a larger pool of sophisticated investors (such as more efficient pricing, lower cost of funds, better liquidity) are partly offset by the risks of the destabilizing outflows. The institutions that mitigate these risks, such as explicit policy response to the inflows and outflows of hot money, remain under development.

**Figure 3.14 Secondary market in MF debt remains illiquid, dominated by residents**




Source: Kazakhstan Central Depositary
Note: A few large transactions were excluded as non-market

**Figure 3.15 Secondary market for National Bank notes became liquid, once they emerged as the main tool of liquidity management**




Source: Kazakhstan Central Depositary

# IV. Housing market

**Price adjustments accelerated in 2016-2017, under flexible exchange rate. A room for further adjustments remains, but with the elimination of major external imbalances, the risks became more symmetric and the domestic factors came to the forefront.**

**Housing availability in Kazakhstan is not much lower than in the peer group of countries, but the geographical mismatch between the supply of available housing and the supply of jobs creates a relatively large potential for construction and the primary market. The lack of creditworthy demand and high borrowing costs constrains this potential.**

**Credit risks in mortgages have declined to a relatively low level owing to a more careful selection, but could grow sharply and uncontrollably should the supply of mortgages expand beyond the boundaries of creditworthy demand.**

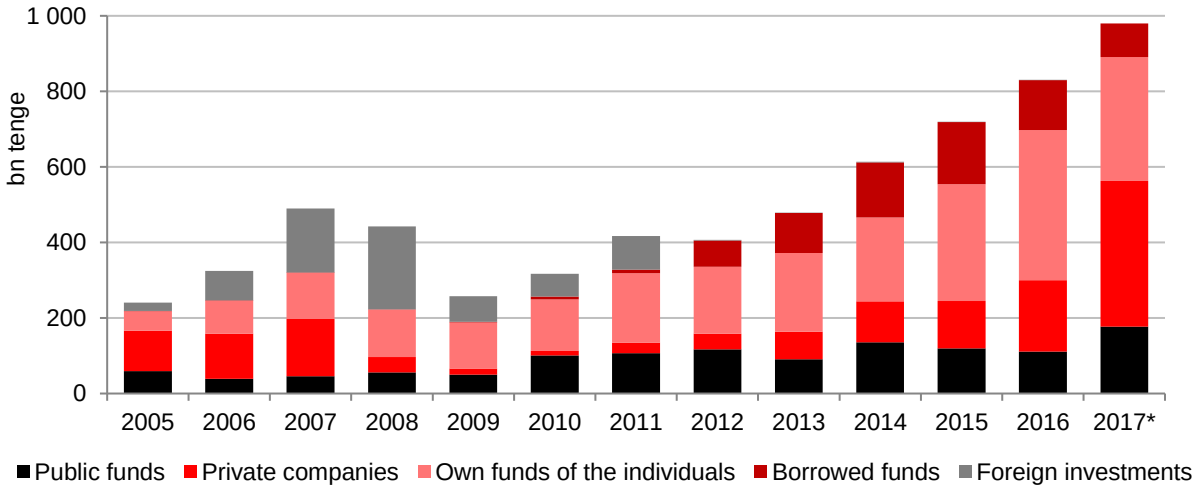
**Government subsidies allowed the demand to expand, at the costs to the public sector. The housing-savings program that combines subsidized rates with means and availability testing is responsible for a large and growing share of the mortgage market.**

**Development of market-based mortgages is held back by competition with subsidized programs and calls for elimination of structural and institutional inefficiencies in credit supply, including sustainable decline in inflation as a prerequisite for the lower cost of funding, better protection of creditor rights in order to reduce credit risk. In the longer term, the problem originates in the labor market, where structural unemployment is a major constraint on for creditworthy demand.**

## 4.1 The role of the market

Maintaining economic growth requires significant investment in fixed assets, including commercial and residential property. A growth of household income has led to an increase in residential property demand. A related need for long-term financing of housing construction and development was mainly satisfied through the employment of own funds of the individuals and private developers (Figure 4.1). Also, funds of banks were an important source of financing acquisition of residential property in the primary and secondary markets.

**Figure 4.1 Investment in residential property, by source of financing**




Source: Statistics Committee of Kazakhstan
Note: * preliminary data

The real estate market is an integral part of the financial system, with well-documented linkages and interdependencies that tend to amplify business cycles and increase systemic risks. The sector is important not only for financial development and financial stability, but also for social, human and economic development. Purchase of the housing is the largest investment in the lifetime for most households while rent or mortgage payment is the largest item in the monthly budget. Quality of the housing – its location, quality of the environment, access to social infrastructure, and other attributes – is the single largest determinant of living standards and human development. As a result, government programs aimed at improving availability and affordability of housing have become an important part of the social and development policies. These, however, require special care in application in order to avoid interventions that weaken market mechanisms.

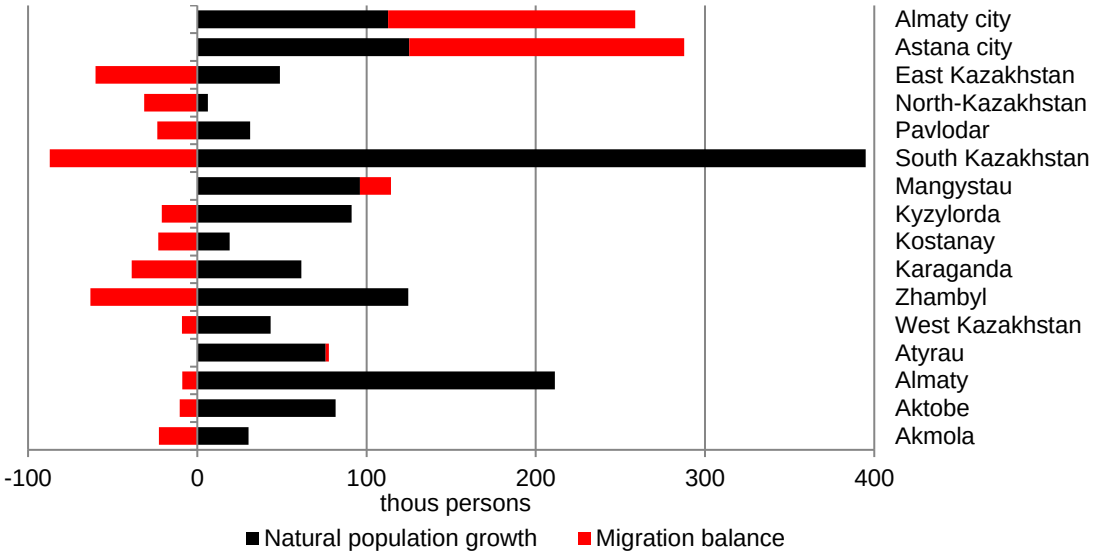
## 4.2 Urbanization and urban concentration

The housing market is deeply integrated into the economic and social life of modern economies. Its operation and the degree of development are shaped, directly or indirectly, by a variety of institutional and social factors. The most relevant ones are the level of public infrastructure development, accessibility and quality of education in urban and rural areas, a maturity of mortgage lending institutions and a level of property rights' protection, regulation of construction activities, social policy, and social stability.

The housing market is closely linked with the labor market. The relationship between the two can be seen most clearly in migration statistics. Migration reflects households' decisions to move their savings and labor from one region to another in search of the most attractive combination of housing and employment. They relocate to places that offer best available infrastructure for the jobs that match their skillset.

In Kazakhstan, as elsewhere, cities are more attractive than villages, and some cities are more attractive than others. The most attractive property is in Astana and Almaty, two largest cities with the most developed infrastructure. Housing in Astana and Almaty costs at least twice as much as in any other urban center. They grow faster than other regions, because of migration. Over the past six years, all regions, with the exception of Mangystau and Atyrau, experienced a net outflow of people of 0.4% per year on average (Figure 4.2). However, migration to Astana and Almaty – the largest recipients in absolute terms – comes mainly from other cities and only marginally from nearby rural areas.

**Figure 4.2 Absolute population growth for 2012-2017**



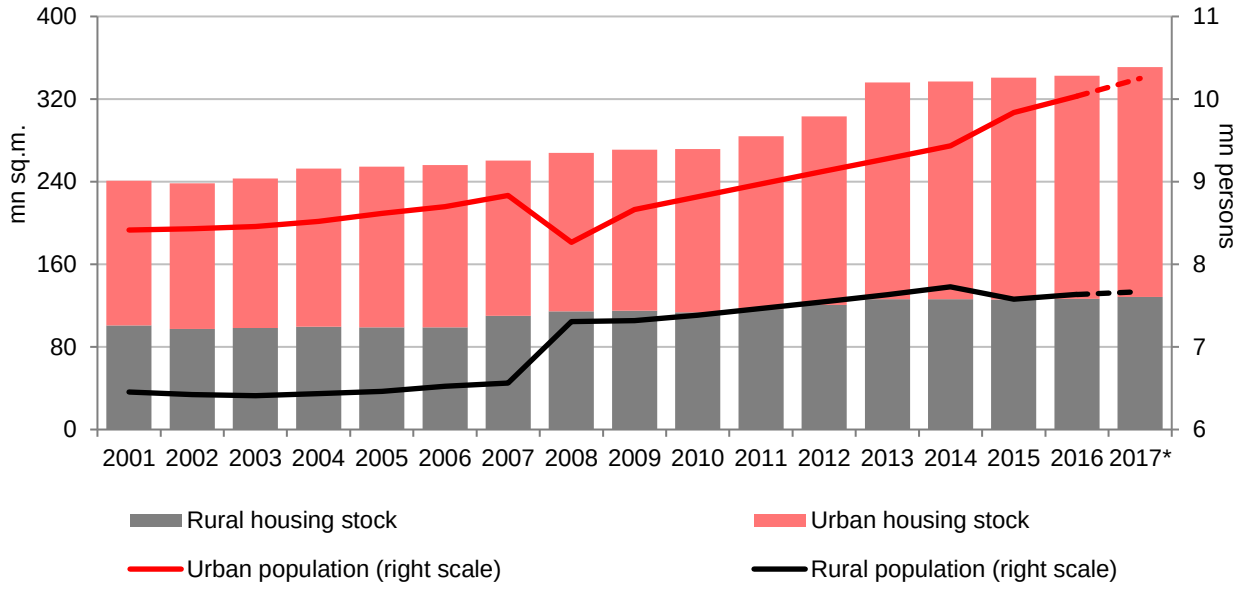

Source: Statistics Committee of Kazakhstan
Note: 1) Natural growth is a difference between the number of births and deaths; 2) Migration balance is the difference between the number of people who registered residence and those who deregistered

Shymkent prices are higher than in other regional centers[2] by 25% on average. Shymkent is approaching Astana and Almaty in terms of population and the public infrastructure. Prices in Aktau and Atyrau, among the smallest regional centers, are 1.5-2x higher than in other regional centers. Their prices reflect the large and widening surplus of jobs in the oil sector available in the region.

Urbanization remains relatively low and the pace of urbanization slow and uneven. Over the past fifteen years, the share of urban population remained nearly unchanged, with rural-urban migration rate roughly equal the rural-urban fertility gap (Figure 4.3).

Further urbanization is held back by limited opportunities for rural households in the urban labor market. This is observed in the metrics of structural unemployment, particularly prevalent among the first generation of migrants. House prices as a regulator of migration flows, play a secondary role. Together, the housing and the labor market, shape migration flows. Subsidies in the housing market such as interest rate subsidies for mortgage loans lower the barriers in the housing market, but fail to address the skill gap in the labor market.

**Figure 4.3 Residential floor space and population**

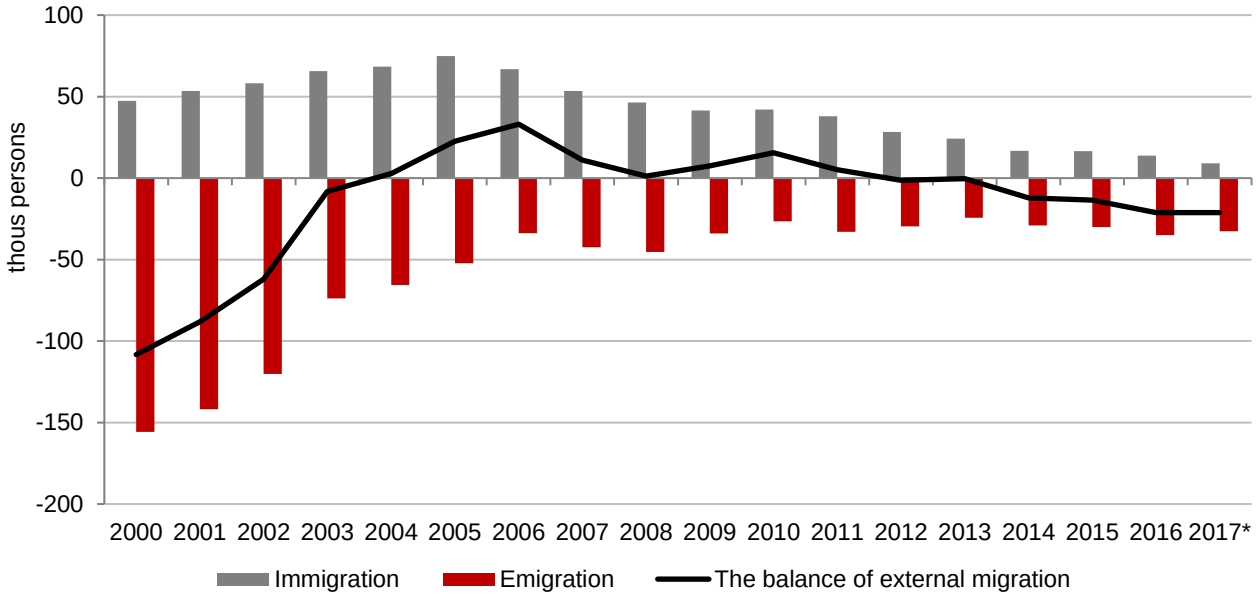



Source: Statistics Committee of Kazakhstan
Note: 1)*preliminary data; 2) The housing stock for 2017 was calculated by extrapolating trends of previous years due to the current data unavailability

Unlike the internal migration, the external migration makes negative contribution to urban population, to the net demand for urban residential property and real estate prices. In early 2000s, the outflows were high, but as the economy strengthened, the inbound migration overtook the outbound. Beginning in 2014, net emigration reappeared, mainly because of the continued decline in inbound migration, and remains on the rise (Figure 4.4). The impact of emigration on the housing market is deemed small compared to the impact on the labor market where a loss of the most skilled labor could exacerbate the problem of structural unemployment and hamper long-term economic prospects.

[2] Average is calculated excluding the indicators for cities with the highest level of prices in the Republic of Kazakhstan (Almaty, Astana, Aktau, Atyrau).

**Figure 4.4 External migration of the population of Kazakhstan**

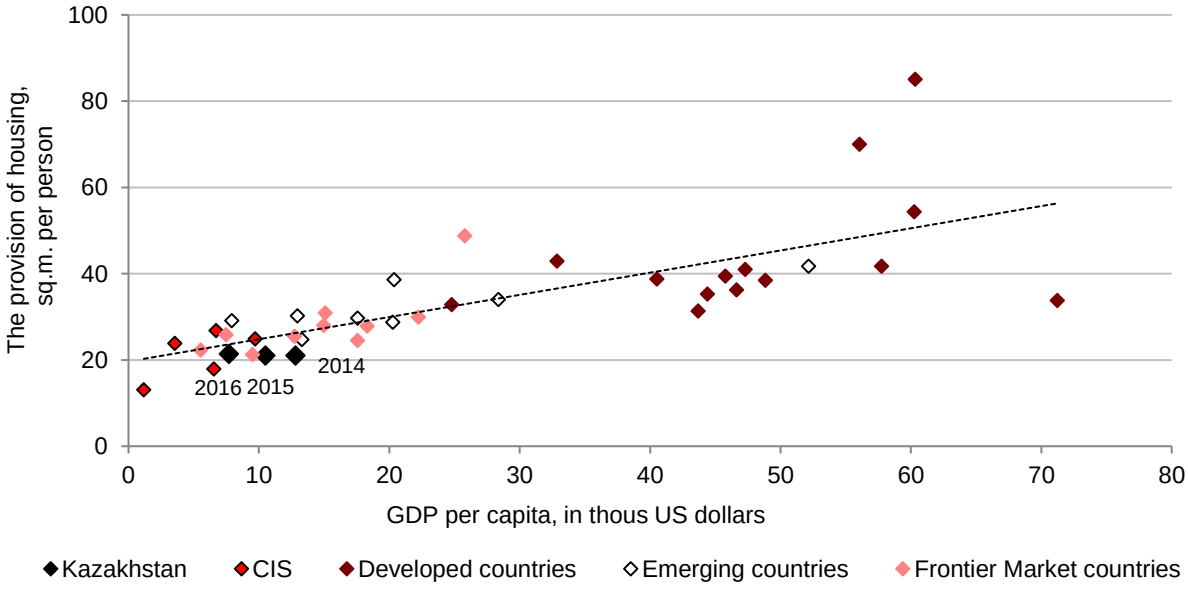



Source: Statistics Committee of Kazakhstan
Note: * preliminary data

## 4.3 Availability of housing

At 21 square meters per person, housing availability in Kazakhstan is just under the regression line on GDP per capita (Figure 4.5). The residual could indicate excess demand and the market direction in the longer run, but deviations could be large and last long, without showing signs of mean reversion. The boom in housing market in 2004-2007 and its subsequent collapse point to other sources of volatility in the housing market.

**Figure 4.5 Availability of housing, cross country comparison**



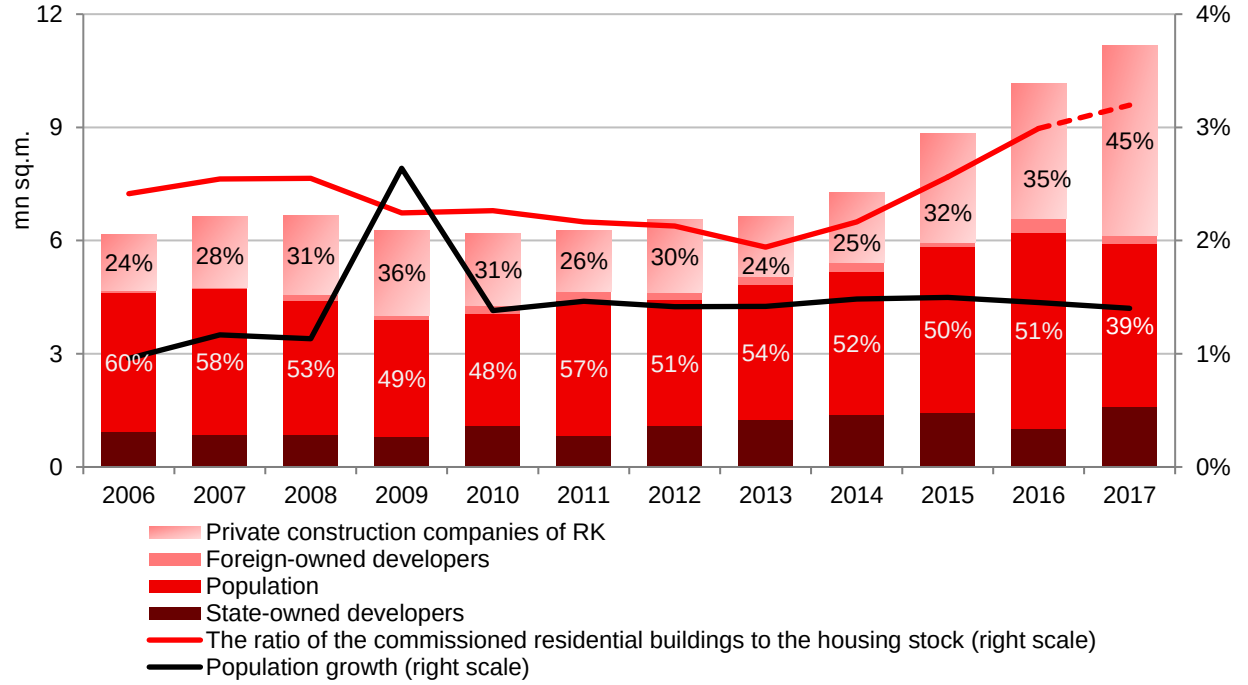

Source: Statistics Committee of Kazakhstan, IMF, Entranze, Statistical agencies of the Russia, Ukraine, Belarus, Australia, China, National Bank estimates
Notes: 1) The population housing provision is calculated as a ratio of the housing stock floor space to the number of population; 2) Countries are classified in accordance with the MSCI Index (Morgan Stanley Capital International Index), except for the CIS and the Republic of Kazakhstan; 3) Frontier Market countries include developing countries with low market capitalization, limited investment attractiveness, and limited liquidity of the stock market; 4) The data for the Republic of Kazakhstan covers 2014, 2015, 2016, and for other countries it covers either 2015, or 2016, depending on data availability

The availability of housing is gradually improving. At the current rates of construction (3.0% of the housing stock), population growth (1.5% per year), and GDP growth (3.5% per year), Kazakhstan will close the gap with the regression line in 7 years.

## 4.4 Housing construction

Up to 2014, construction of housing was at about 6-7 mn square meters per year, but then began to grow rapidly, adding 21.5% in 2015, 15.1% in 2016, and another 10% in 2017 to reach 11.2 mn square meters. The growth was achieved mainly by private companies and by households, especially in 2016. In 2017, the share of corporate developers reached record 45%, or 5 mn square meters. Astana and Almaty accounted for two-thirds of all residential construction. The share of state-owned developers rose in 2013-2014, but declined in 2016, the effect of fiscal contraction the year earlier (Figure 4.6).

**Figure 4.6 Residential floor space completions, by developers**

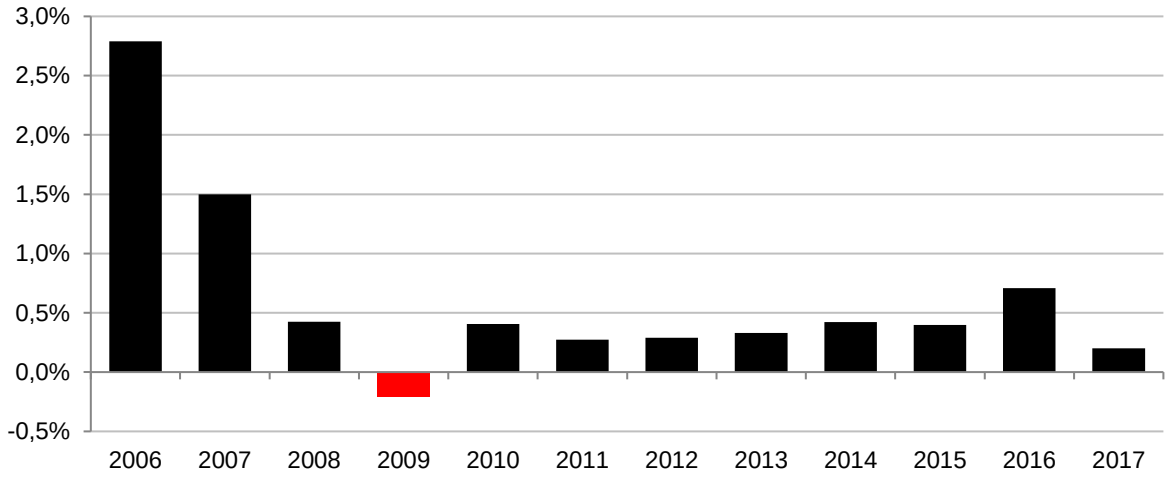



Source: Statistics Committee of Kazakhstan, National Bank estimates
Notes: 1) The residential buildings brought in use include individual and multi-apartment houses, dormitories and residential buildings; 2) Housing stock includes a total floor space of residential units, designed and used for permanent residence. The housing stock does not include dormitories, orphanages and homes for the elderly, country cottages, motels, sanatoriums, holiday homes, boarding houses, guest houses, hotels, barracks, and other buildings and premises intended for recreation, seasonal and temporary residence, regardless from the duration of residence of people in them; 3) The housing stock for 2017 was calculated by extrapolating trends of previous years due to the current data unavailability

Non-residential construction also grew. Fiscal stimulus swelled again in 2016 and strengthened the demand for infrastructure construction. As a result, sectors' contribution to GDP growth peaked and the wage gap with the rest of the economy widened (Figure 4.7, Figure 4.8). Sector's output growth decelerated to 1.9% in 2017, largely due to high base established by infrastructural projects year earlier.

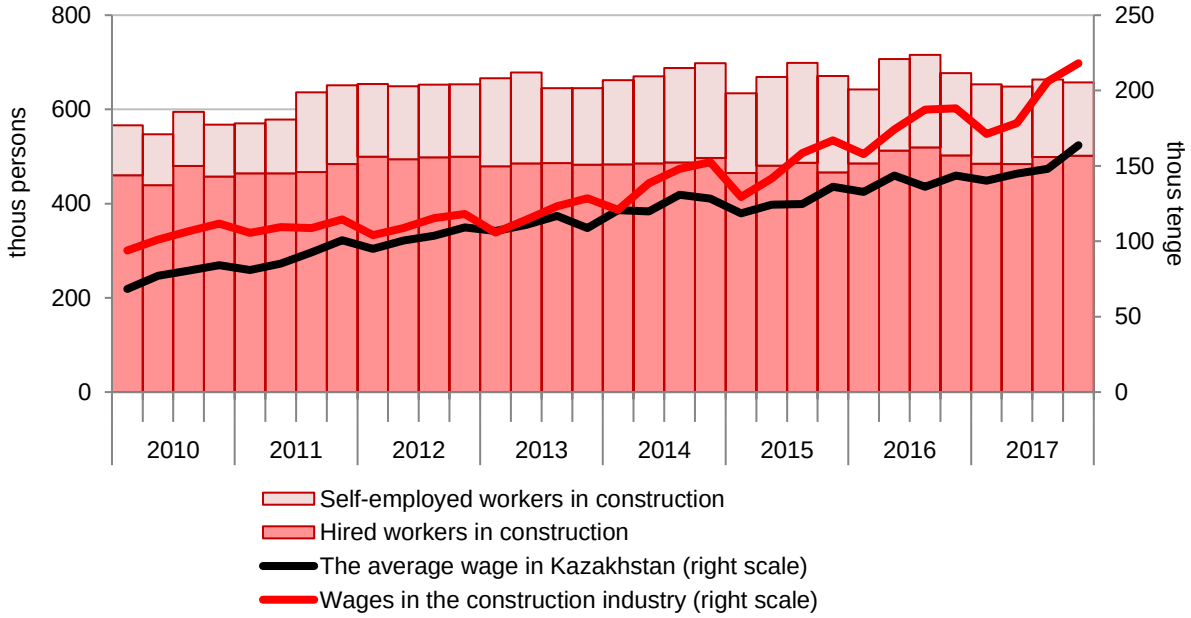
**Figure 4.7 Contribution of the construction to GDP growth**

In 2005 prices




Source: Statistics Committee of Kazakhstan, National Bank estimates
Note: Contribution to the GDP growth is calculated by multiplying a current year's growth rate of the construction industry gross output by its share in the GDP of the previous year

**Figure 4.8 Wages and a number of employees in the construction industry**

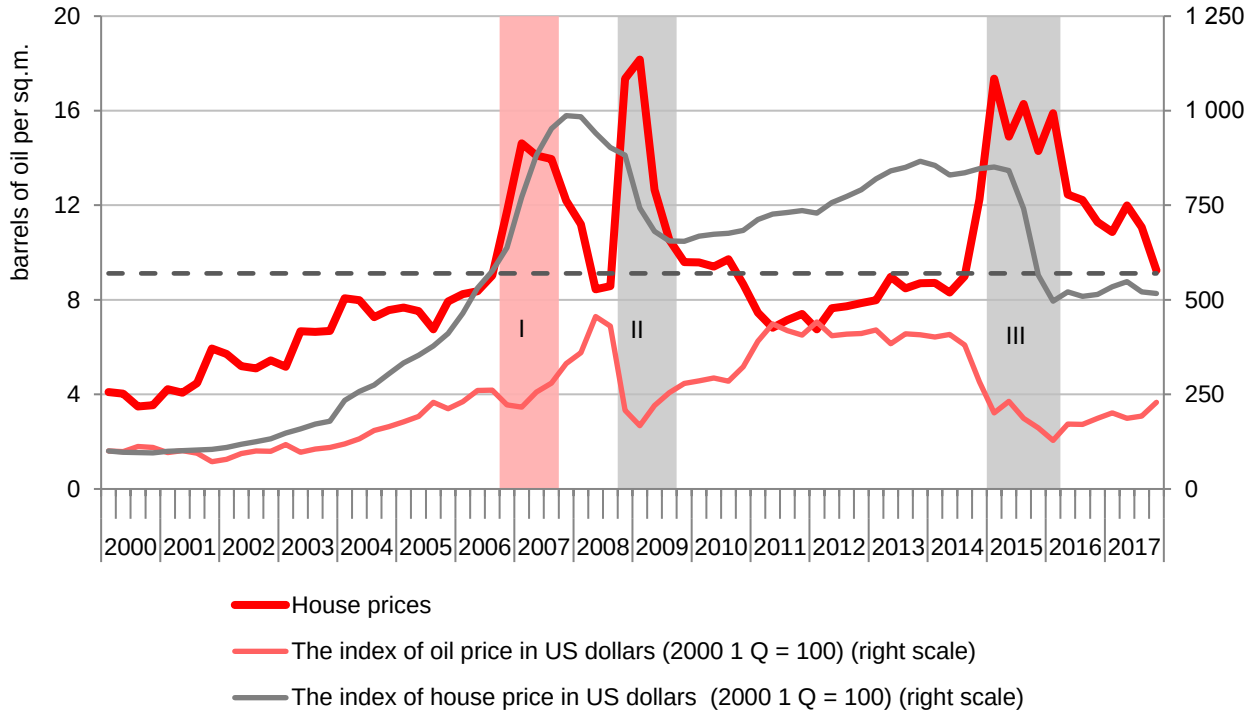



Source: Statistics Committee of Kazakhstan

## 4.5 Pricing

A key determinant of demand for housing, household income is linked, mainly through fiscal channels, to export revenues and the oil price. Not surprisingly, oil turned out to be a most stable measure of the market value of housing (Figure 4.9). Since 2004, when oil production crossed 60 mn tons per year, the price of a square meter varied, generally, between 7 and 10 barrels. Deviations from this range were associated with a boom in the housing market in 2006-2007 and the defense of the fixed exchange rate in 2008-2009 and in 2015.

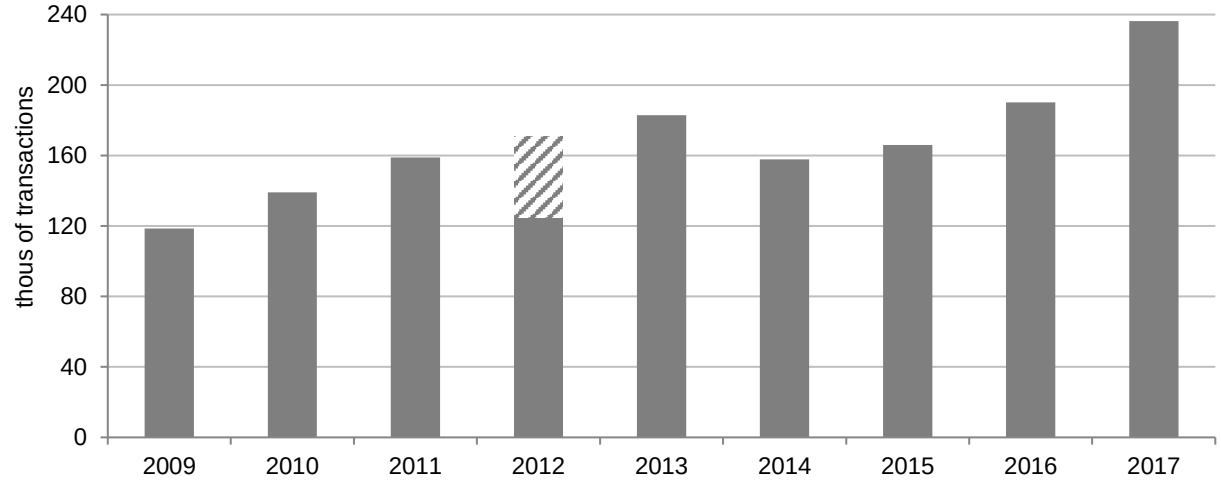
**Figure 4.9 Housing prices, in barrels of oil**




Source: Statistics Committee of Kazakhstan, World Bank, National Bank estimates
Note: 1) Gray dotted line represents arithmetic average of house price in barrels of oil for the period from 2000 to 2017; 2) I - housing bubble, which is characterized by the values of the following indicators being above their average values for the period from 2003 to 2017: house price in real terms, house price-to-rent ratio, house price-to-wage ratio, the ratio of the volume of issued mortgage loans to house prices; 3) II, III - periods, where the rate of decline in oil price amounted to more than 36% against the prices of the corresponding quarter of the previous year

Deviations in the last two episodes were due to price rigidity, which manifested itself in a sharp reduction of market activity in 2014-2015 (Figure 4.10).

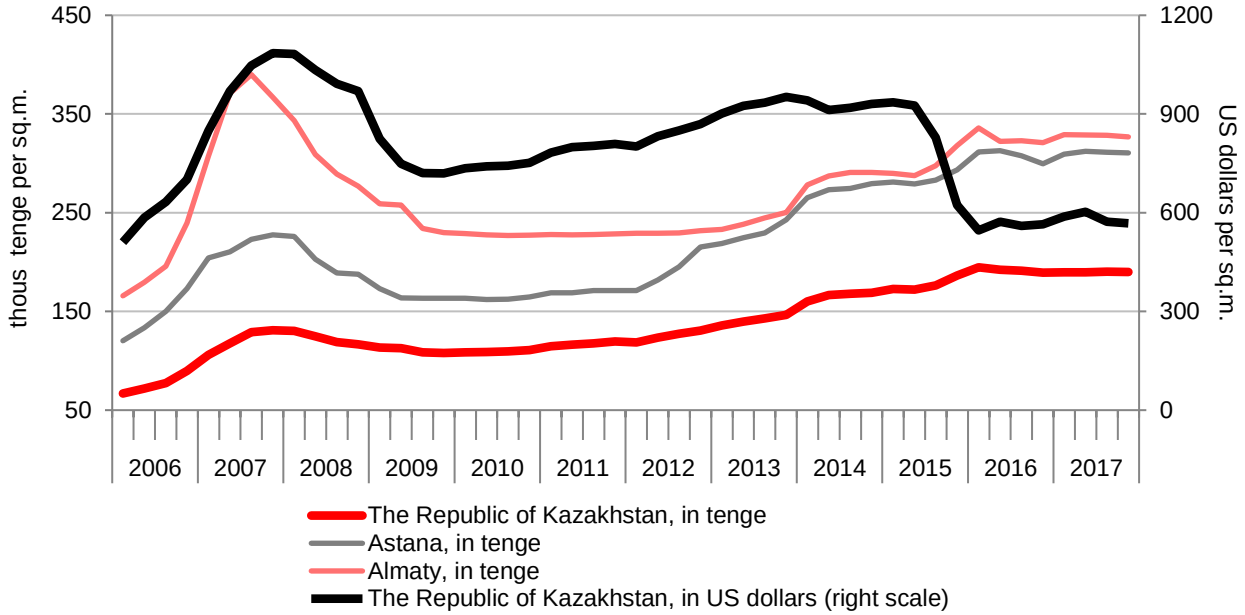
**Figure 4.10 Number of transactions with residential property**




Source: Statistics Committee of Kazakhstan, National Bank estimates
Note: Due to data unavailability, a number of transactions for Q4 2012 is calculated as the average value of the number of sales transactions for Q4 of 2011 and 2013

Exchange rate adjustment allowed prices in tenge to rise sharply, reaching a peak in Q1 2016, while prices in USD fell by half. Starting from Q2 2016, tenge prices remained stable at the level of 190 thousand tenge per square meter (Figure 4.11).

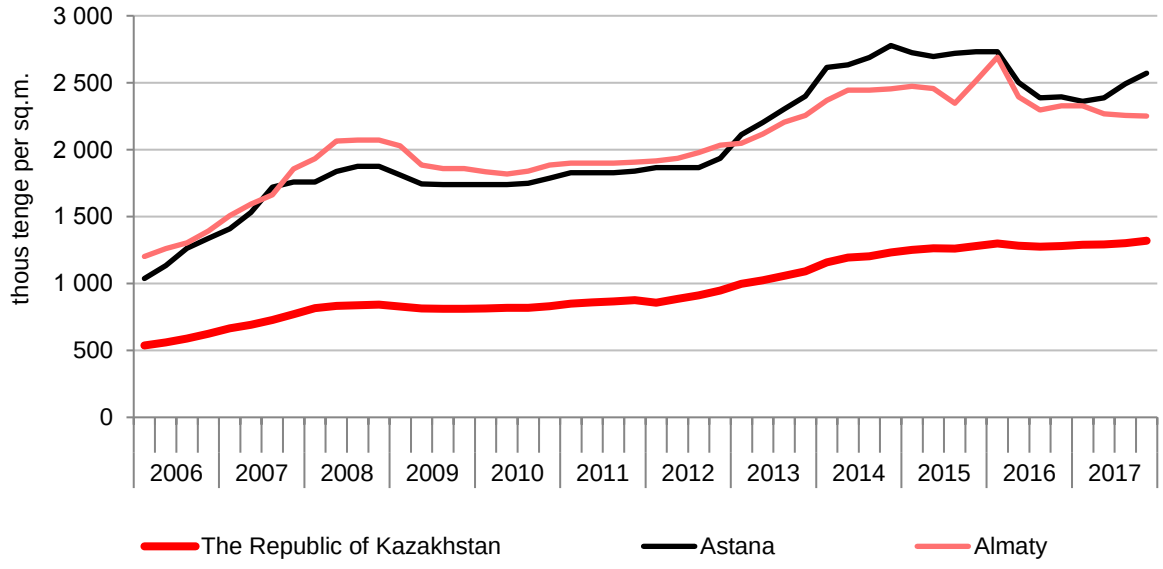
**Figure 4.11 Housing prices, nominal**




Source: Statistics Committee of Kazakhstan
Note: Housing prices are calculated as the arithmetic average of prices for new, elite, comfortable, and uncomfortable housing sites

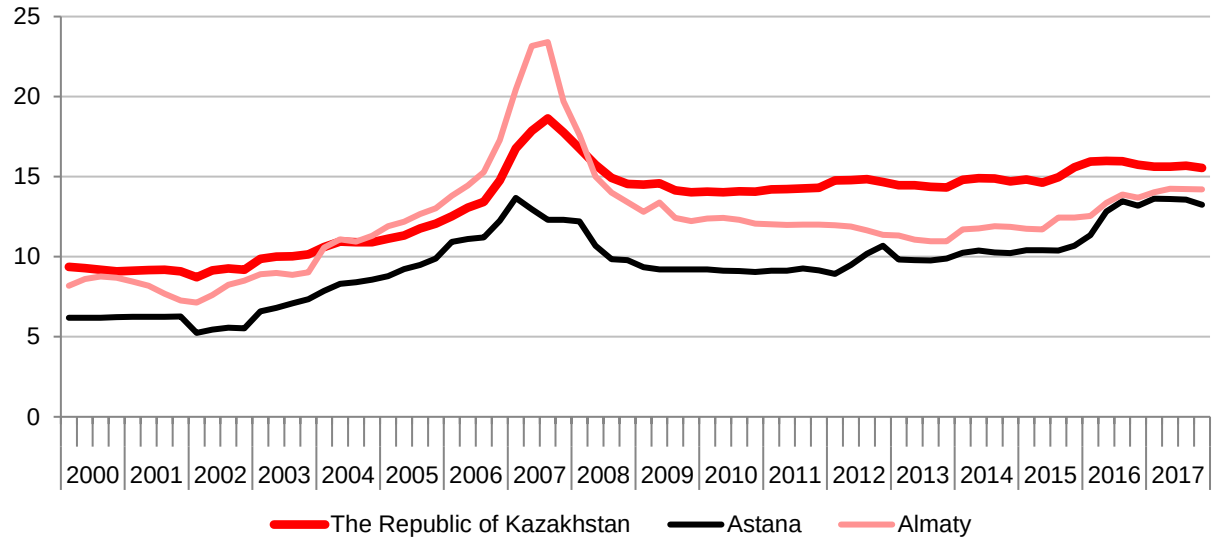
Indirect indicators also suggest price softness in Astana and Almaty. In 2016-2017, rental rates caved in these markets (Figure 4.12), lifting price-to-rent from 10.7 to 13.3 in Astana and from 12.4 to 14.2 in Almaty. Country-level, the ratio did not change significantly (Figure 4.13).

**Figure 4.12 Rental rates for housing with amenities**




Source: Statistics Committee of Kazakhstan

**Figure 4.13 Housing price-to-rent ratio**



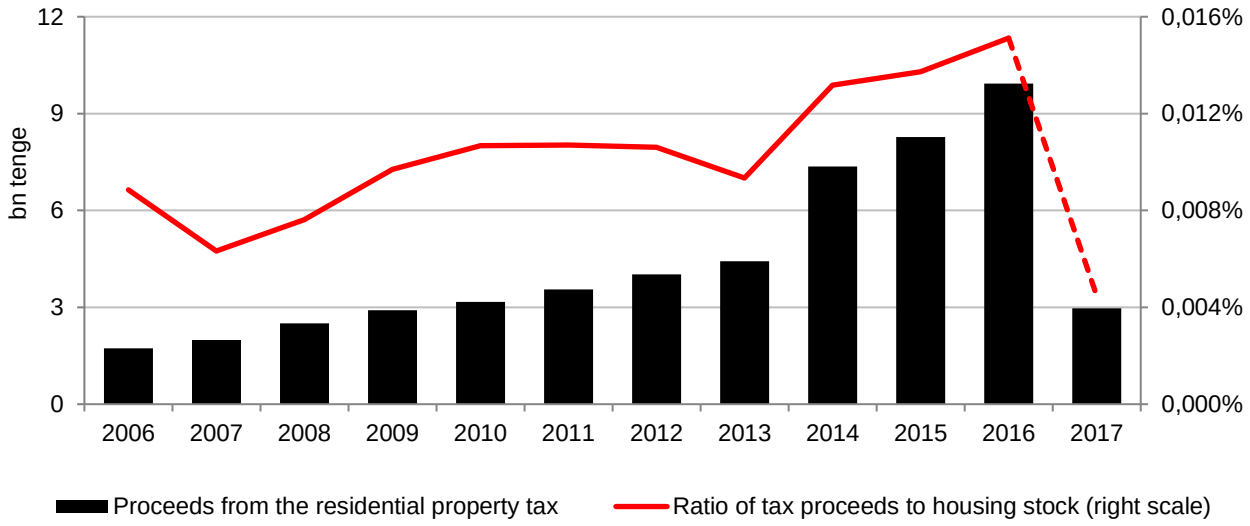

Source: Statistics Committee of Kazakhstan, National Bank estimates
Note: The housing price-to-rent ratio = House prices / (12 * Rental price of housing per month)

Prices for luxury housing continued to rise slower than prices in other segments, amid further differentiation and segmentation of the markets, with rising expectations of quality and changes in the tax policy.

In 2014 the residential property tax was made more progressive, space-wise, while the valuations for taxation purposes were effectively doubled. In the next three years the collections rose 2.1x (Figure 4.14). A sharp drop in revenues in 2017 was the result of changes in tax calendar, not a sign of lower rates or weaker collection discipline. Effective in 2017, the payment due date was extended by twelve months, well into the second half of the year after the assessment year.

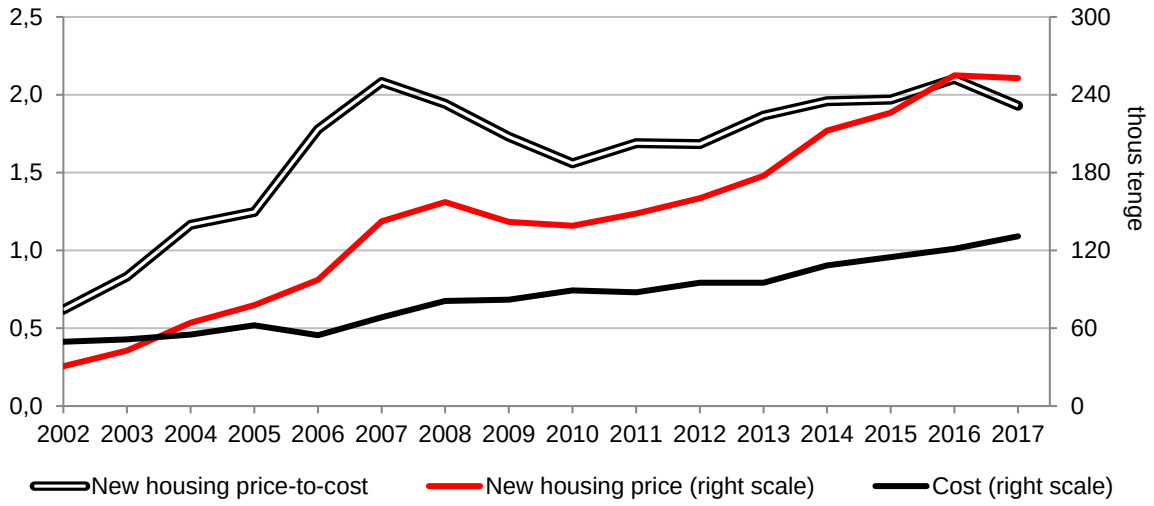
In 2015-2016, prices of new housing grew faster than the cost of construction, but in 2017 prices remained flat (Figure 4.15), as the supply of new housing under the state program Nurly Zher expanded on the predecessor programs such as Nurly Zhol.

**Figure 4.14 Collection of residential property tax**




Source: State Revenue Committee of MF RK, Statistics Committee of Kazakhstan, National Bank estimates
Note: 1) The housing stock in value terms is calculated by multiplying the floor space of the housing stock by average house prices; 2) The housing stock for 2017 was calculated by extrapolating trends of previous years due to the current data unavailability

**Figure 4.15 New housing price-to-cost ratio**

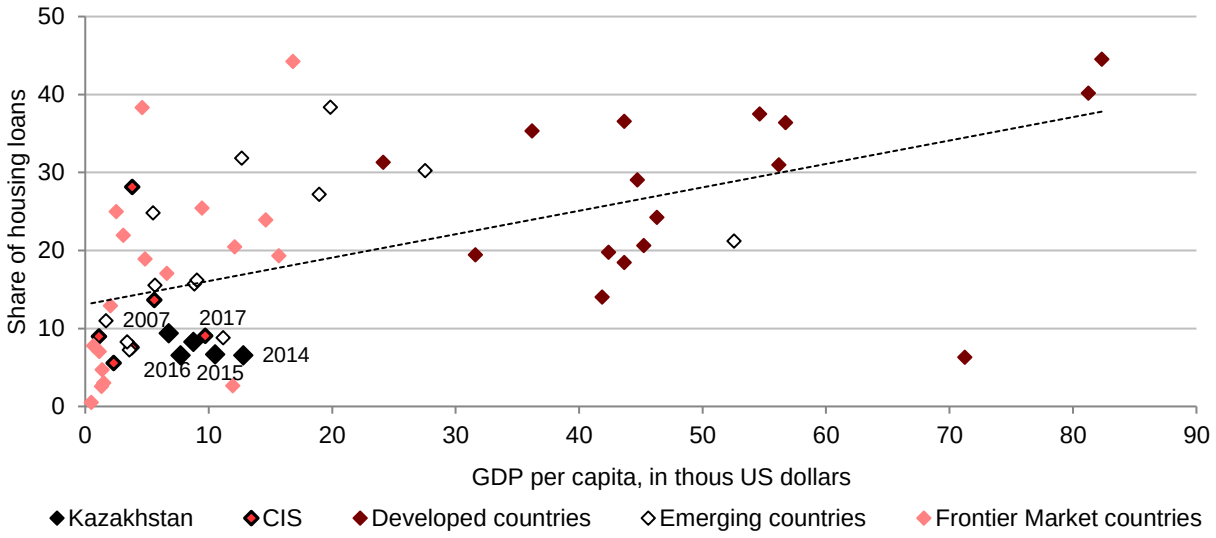



Source: Statistics Committee of Kazakhstan, National Bank estimates
Note: Samples of housing items used for calculation of the price and cost of new housing can differ

## 4.6 Mortgage lending

Mortgages constituted a relatively low proportion of the banking system's loans (Figure 4.16). Mortgage portfolio continued to decline steadily in real terms since 2007, when origination dropped sharply (Figure 4.17). The data on origination includes restructured and refinanced loans, and because of it could overestimate new lending.

**Figure 4.16 Mortgages in the loan portfolio**




Source: IMF, reporting of banks, National Bank estimates
Notes: 1) Housing loans include mortgage loans and loans for the construction of individuals' housing; 2) Countries are classified according to MSCI Index (Morgan Stanley Capital International Index), except the CIS and the Republic of Kazakhstan; 3) Frontier Market countries include developing countries with low market capitalization, limited investment attractiveness, and limited liquidity of the stock market; 4) Data for the Republic of Kazakhstan covers 2007, 2014, 2015, 2016, 2017, and for other countries it covers either 2015, or 2016, depending on data availability

In 2017 mortgage lending amounted to 12.7% of the value of housing construction. The indicator was at its historical maximum of 48% in 2006 and in H1 2007, at the peak of the housing boom and immediately before its collapse. In 2008 it fell to 8.1%, rose to 18.6% in 2013 and then declined again, partly due to construction growth.

Mortgage lending by commercial banks remains depressed. Among the alleged reasons is the elevated credit risk due to barriers to repossession. Lack of capital to absorb new credit risks and low incomes of the in need of housing are other reasons.

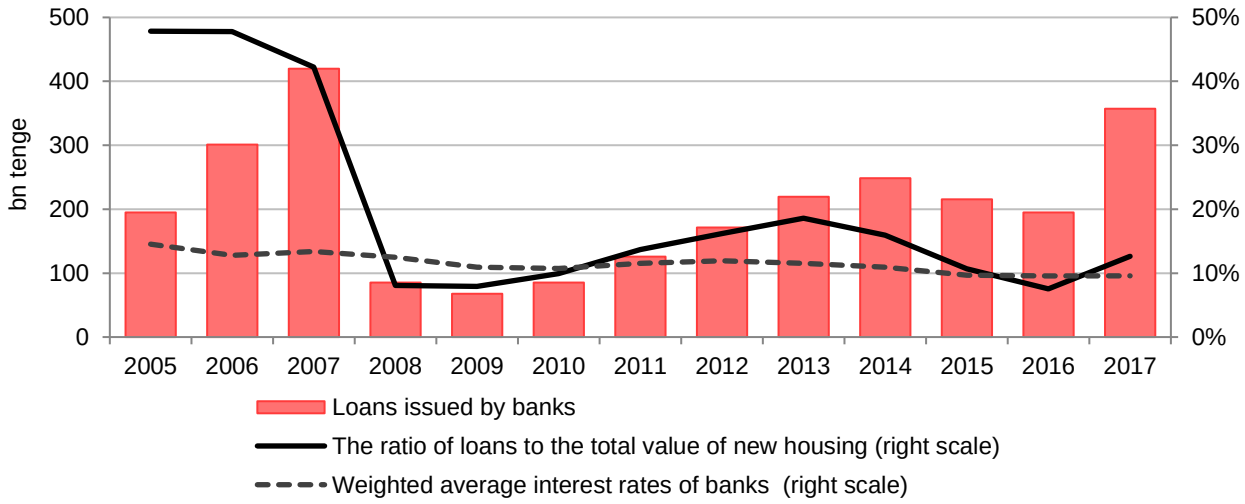
Various programs to offer subsidized housing lending were designed and offered as a remedy. They became the main tool to improve the affordability of housing. Housing Construction and Savings Bank (HCSBK), a state-owned bank, is the largest operator of these programs and the only operator of Nurly Zhol in 2015-2016. The bank specializes in mortgage lending and was responsible for 60% of the total housing lending in 2015-2016.

Its main product is a scheme whereby clients have to save at a low interest rate before receiving a housing loan at a low interest rate. The government subsidizes the scheme by contributing annually to the saving accounts of the participants. The scheme offered the rates of 3.5-5.0%, with 50% down coming from the saving account at least three years old. Compare these with the market conditions of 20-50% down payment and interest rate of 15-25%.

In 2015 HCSBK offered additional “compensation” in the amount of 35% of the account on the condition that clients do not use the funds to purchase housing until a set date. This, together with market uncertainty due to tenge depreciation, could have affected the reduction in the mortgage issuance of banks in 2015-2016.

In 2017, mortgage lending reached a maximum over the past 10 years, amounting to 357 bn tenge. Deferred demand from the “compensated” clients of HCSBK and partner banks under Nurly Zher contributed to the one-off increase. This state program affected the primary housing market by subsidizing the supply of housing as well as subsidized mortgages. This may also led to the shift in demand to the primary market (Figure 4.17).

**Figure 4.17 Mortgage housing loans issued by banks**




Source: Reporting of banks, Statistics Committee of Kazakhstan
Note: The total value of newly built housing is calculated by multiplying the floor space of residential buildings brought in use by new housing average prices

## 4.7 Housing affordability and mortgages

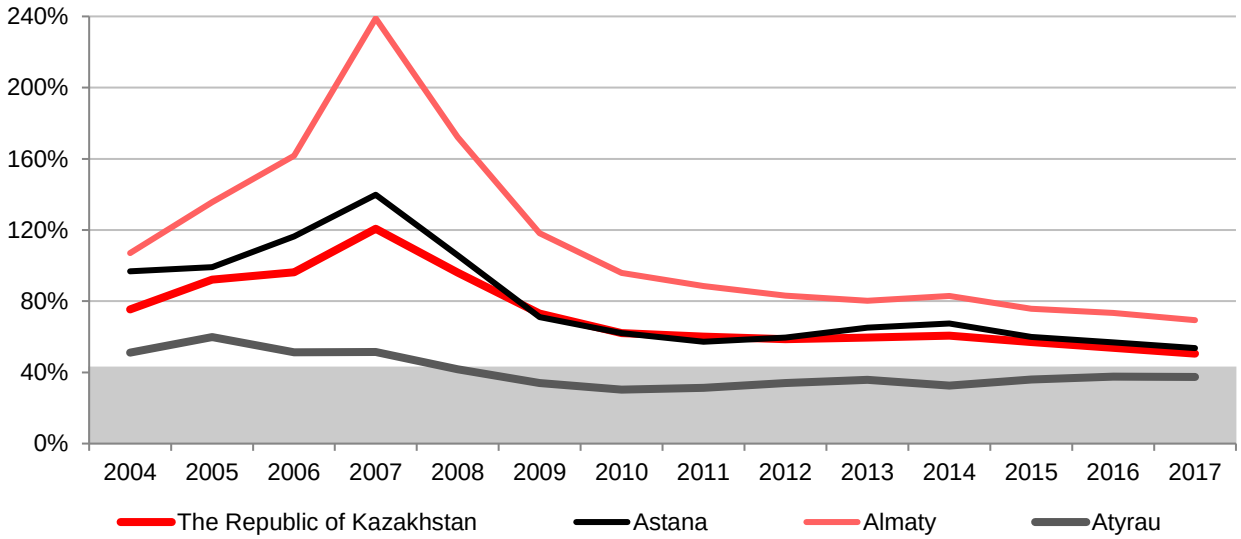
Affordability remains low due to high interest rates for mortgages and low incomes of the households. The ratio of monthly mortgage payment to average income, calculated at average house prices and typical terms for a mortgage loan, exceeded the recommended levels[3]. The indicator improved somewhat in Astana and Almaty, but affordability remains

[3] The Consumer Financial Protection Bureau in the USA recommends monthly payments for mortgage loans in the amount of not more than 43% of the monthly income of the borrower.

low nevertheless, especially in Almaty, where the calculated payment is about 70% of the average income (Figure 4.18). The abovementioned statistics overestimate the housing affordability owing to the fact that the average income is higher than the median level of income.

**Figure 4.18 Affordability of mortgage loan for housing with amenities**

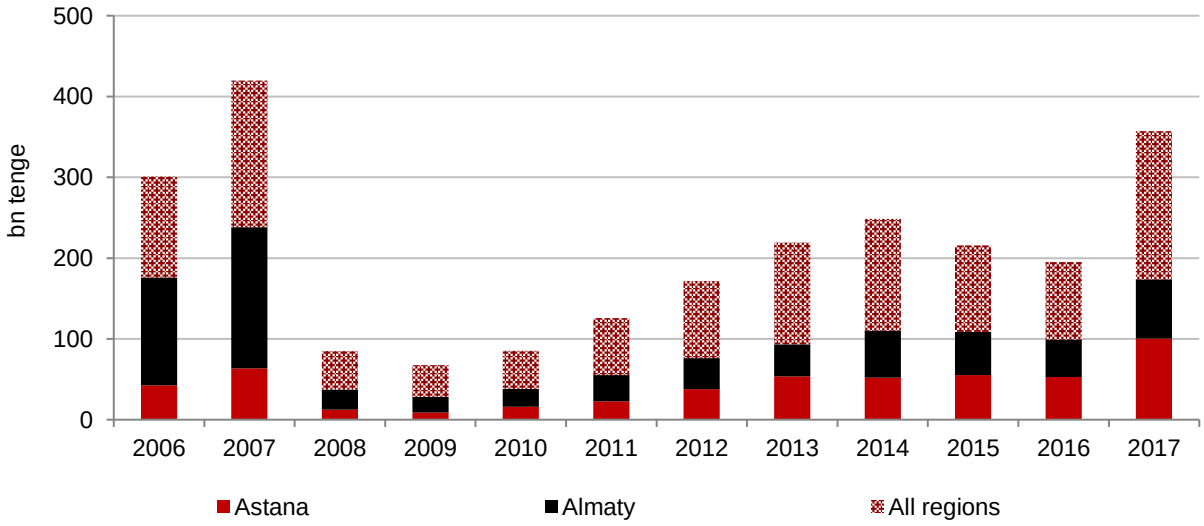
Estimated mortgage payments to the average wage




Source: Statistics Committee of Kazakhstan, reporting of banks, National Bank estimates
Note: 1) According to the Qualified Mortgage Rules of the US Consumer Financial Protection Bureau dated from January 10, 2014, monthly payments for mortgage loans should not exceed 43% of the monthly income of one borrower; 2) Monthly payment for a mortgage is calculated on the basis of the following conditions: house prices constitute the average price for a new, elite and comfortable housing; the floor space of purchased housing equals to 54 sq. m. (18 sq. m. * average family consisting of 3 persons); down payment is 30%; loan term is 20 years; and average interest rates on mortgage loans are used

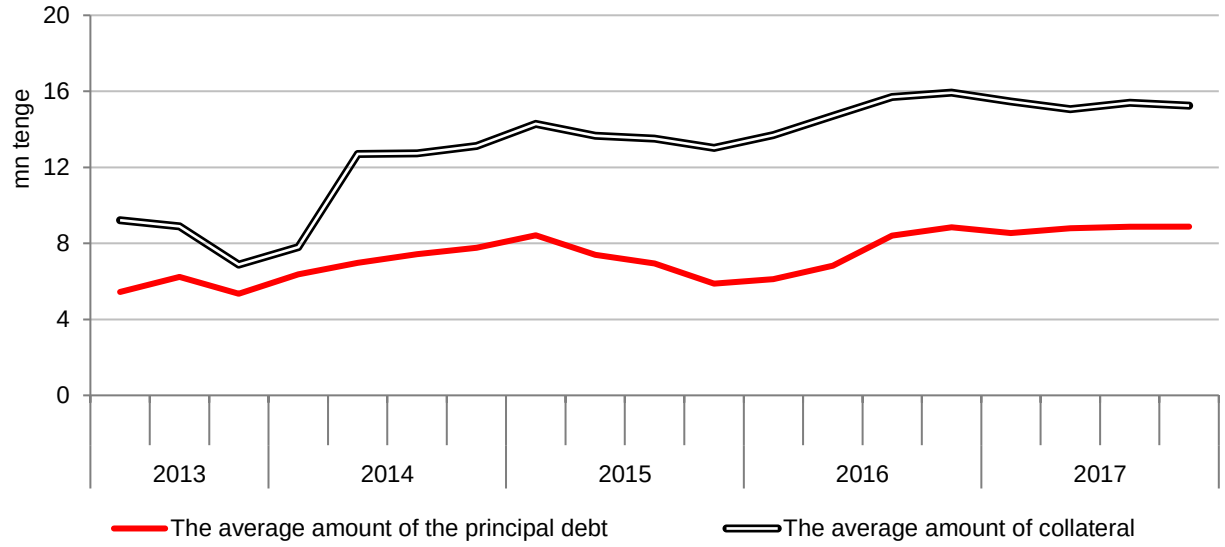
Demand for mortgages is effectively confined to Astana and Almaty where it finances purchases of relatively small apartments (Figure 4.19). The average size of a mortgage loan issued in these cities in 2015-2017 was KZT 9-12 mn, the median – KZT 6-10 mn. The stated collateral value for these loans was double the size of the average loan and corresponded to floor space of 50-56 square meters (Figure 4.20).

**Figure 4.19 Mortgage origination, by region**




Source: Reporting of banks

**Figure 4.20 Average mortgage and average collateral in Astana and Almaty**




Source: Credit register, National Bank estimates
Note: 1) The average amount of the mortgage loan is calculated on the basis of a sample of loans issued by the banks (without taking into account the data of mortgage organizations), based on the following criteria: a borrowing entity is an individual; a purpose of lending is an acquisition/purchase of residential property; collateral - residential property; source of financing - all sources of financing, except for PLF; 2) In the 2nd quarter of 2014 one bank was excluded from the sample, the values of which differed significantly from the values of other banks

A large, and rising, share of mortgages was issued with the support of government interest rate subsidies. At subsidized interest rate the number of households with acceptable payment-to-income ratio substantially increases.

Credit risks associated with a decline in housing prices is relatively low under current prices, requirements for down payment, and the floating exchange rate. Foreign currency mortgages as a rule impose more selective criteria and are almost nonexistent.

For more details on credit risk of housing loans, see Section 5.2.

## 4.8 Systemic risks

Systemic risks associated with housing market remain by historical levels low, while market-based mortgage lending remains depressed.

Market-based supply of mortgage loans is constrained by the inability of the lenders to foreclose quickly and safely. Banks are often unable to repossess out of court or to foreclose, as courts often side with the mortgagees. The inability of the legal system to enforce contractual obligations raises the probability of default and the loss given default, making market-based mortgages unnecessarily risky. As a result, banks ration the product, which seems only prudent under the circumstances. Prospects for expanding market-based mortgages largely depend on the legal reforms to protect creditor rights.

State programs of subsidized mortgages substitute the market-based products and compete with them. These could lower the cost of relocation to the urban labor market and accelerate urbanization, at the expense of urban taxpayers. Expansion of state-subsidized mortgage programs is limited by the size of the target demographic, given that much of the rural youth lacks the skills that the city demands.

To ensure a sustainable growth in demand for mortgages inflation would have to come down to low single digits under the free float. In the longer run structural unemployment would need to be reduced.

# V. Credit risk

Credit risk management is central to commercial banking. It bridges the informational asymmetry and acts on it, by structuring and directing capital to users that it selects. By doing this it creates economic value and imparts broader social and economic relevance to the sector. It supports and maintains solvency of an individual bank. It could also become critical to financial stability of the system, if poor practices proliferate. It is this aspect of banking in Kazakhstan that the risks events of the last few years point to as wanting.

Poor credit risk management finds reflection in low quality of lending decisions, low quality of monitoring, suboptimal response to signs of delinquency, inaction or suboptimal action in default, including how the actions and the state of the loan are reflected in financial, regulatory and managerial accounts.

In 2014-2016, quality of loans throughout the system declined markedly. In some banks it was large enough to result in insolvency and the need for remedial action, such as allocation of losses among shareholders and creditors, suspension or revocation of the license, liquidation or other type of resolution, bailout. None of these could be initiated before the losses were recognized.

Poor quality of credit risk reporting allowed bad lending practices to continue being undetected, and so contributed to the scale of the losses and the spread of these practices. Some of the previously unrecognized losses were recognized by some banks in 2017. However, according to the National Bank estimates, part of low quality loans remain on the banks' balance sheets and under provisioned, continuing to exert pressure on banks' capital and their ability to lend. Some of these losses the shareholders will be expected to cover by injection of capital under the Program on financial sustainability enhancement.

Credit losses are inevitable, but their scale in the case of Kazakhstan indicates that poor lending practices became endemic and in some banks effectively fraudulent lending became prevalent. To ensure that banks lend in good faith and bank credit creates value rather than destroys, it is extremely important that banks are well capitalized and well supervised, their losses are recognized in a timely manner, in order to detect and resolve the insolvent banks immediately to minimize further losses.

This section presents some of the most obvious evidence of the reasons for the low quality of assets, as well as possible solutions to these problems.

## 5.1 Quality of reporting

**Poor quality of credit risk accounting became evident when financial reporting and prudential indicators of asset quality began to differ significantly from the metrics unburdened by prudential requirements. This section describes these discrepancies and links them to lending and supervisory practices, standards and reporting requirements.**

Quality of credit risk reporting began to improve when supervision enhanced attention to it. Some of the previously unrecognized nonperformance was identified and losses acknowledged by individual banks in 2016. In 2017, the process of identification of nonperformance and recognition of losses continued. In September 2017 the National Bank introduced the methodology of regulatory provisioning and initiated the Program on financial sustainability enhancement (see section 9.2 for more details). However, the issues of reliability, objectivity, and informational value of asset quality data remain relevant in 2018 as well.

One of the main reasons for banks understating the losses is the lack of capital. Banks continue to manage the stock NPL and LLP to avoid breaching capital adequacy

requirement: the greater the loss, the bigger the gap between its objective and self-the reported estimates.

While the lack of capital may be cyclical, the ability of the banks to hide losses is more persistent and more systemic. To improve the quality of credit risk reporting at well capitalized banks, supervision needs to set achievable targets for reporting standards, data collection and data management, their integration with managerial accounts and decision-making, supported by persistent monitoring of compliance. However, in the case of the undercapitalized banks, supervision should be able to use own judgement about asset quality.

**Non-performing loans and loan loss provisions**

Until mid-2013, banks had to classify loans as standard, several categories of doubtful and bad (non-performing)[4], and also to create provisions in accordance with the National Bank's Rules on the formation of regulatory provisions[5]. The Rules used a variety of parameters, including indicators of loan servicing, the financial condition of the borrower, the quality and the value of collateral. The Rules required banks to constantly monitor the state of the borrower.

In 2013 the Rules were replaced by IFRS 39 standards, which relied on the opinion of the management of the bank. This gave the management more room to interpret the facts and a stronger mandate by shifting the debate to the ground where the supervision was no longer the standard setter and where its ability to challenge the management's opinion was substantially diminished. This resulted in a substantial underestimation of the loan losses, replete with misstatement of fact and fraud.

The difference between the banks' and supervision assessments was due not only because of the choice of the standards, but also because of which party had the right to apply them. The supervision became much more limited in exercising its judgment about the status of the loan, the state of the borrower and the value of the collateral. On the date of transition, non-performing loans declined by 12% and provisions by 3%.

The discrepancy between the reported and the objective indicators of loan quality peaked in 2015, when the prudential requirement for non-performing loans was tightened to no more than 10% of the loan portfolio. The requirement was intended to encourage bank to resolve non-performance. In reality the write-offs were few and far between, and banks continued to label the effectively non-performing loans as standard and so kept them on the balance sheet. This was achieved by manipulating the definition of non-performing loans by way of the following: restructuring or refinancing, capitalization of interest and negative amortization, term extension, rotation between acknowledged and unacknowledged non-performing loans.

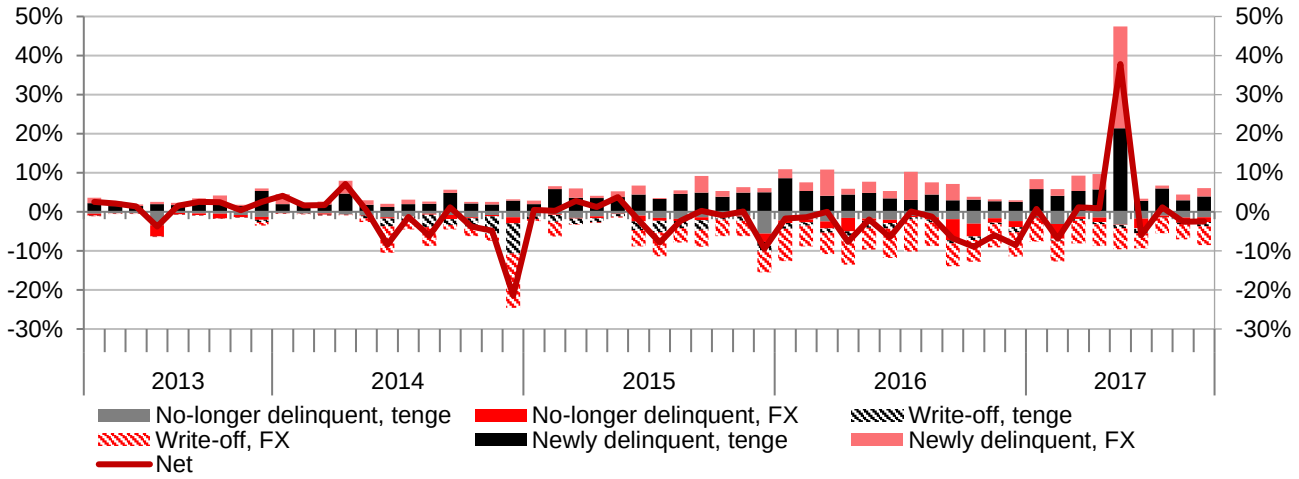
In 2014 the bulk of write-offs occurred at the end of the year. Starting from H2 2015, banks began to write off on a more regular basis. At a bank level symptoms of NPL rotation began to show, with periodic spikes in NPL90+ followed by their return to Standard. A large jump in H1 2017 was due to the recognition of non-performing loans by a bank whose license was revoked at the end of the year (Figure 5.1).

[4] Since mid-2013 non-performing loans have been defined as loans with past due payments of principal and/or interest by 90 days or more (NPL90+).

[5] Rules for the Classification of assets, contingent liabilities and establishing provisions (reserves) against them (the resolution of the Board of the Agency of the Republic of Kazakhstan on regulation and supervision of the financial market and financial organizations No 296, dated December, 25, 2006)

**Figure 5.1 Change in the stock of NPL90+: newly delinquent, no-longer delinquent, and write-offs**

Month-to-month percentage change in the stock of non-performing loans for the banking system ex BTA Bank




Source: Credit Register, National Bank estimates

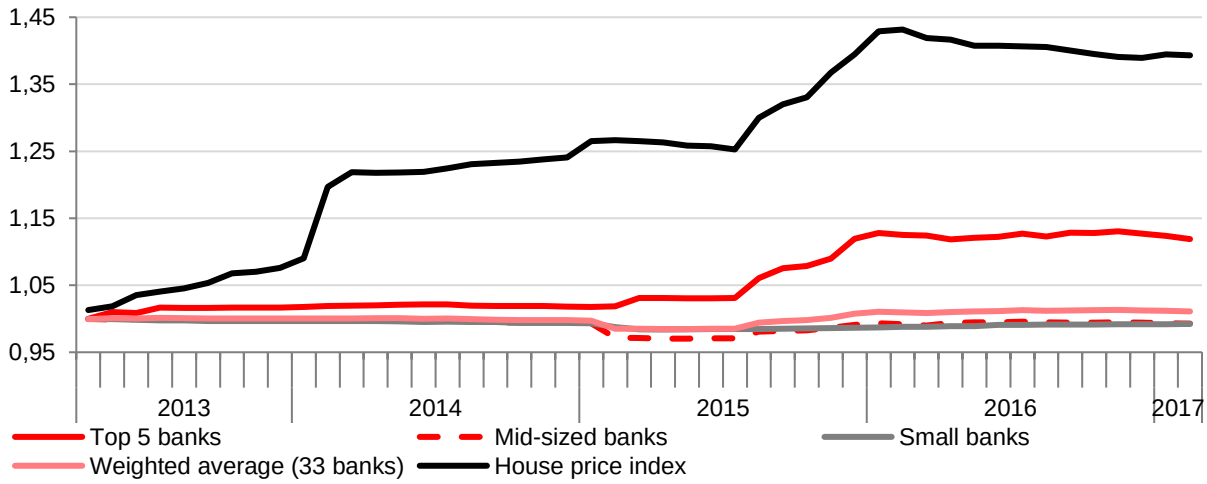
Note: Newly delinquent – loans that are 90+ days overdue in the current month, but not in the previous month; no-longer delinquent – loans that were 90+ days overdue in the previous month, but not in the current month

## Collateral

In managerial accounting the accuracy of collateral valuation is key to successful operation of a bank as it has bearing on the prospects of loan repayment, as a screening device and an incentive, and the prospects of recovery, again as an incentive but also as it's a liquidation value. In financial accounting, the appraisal value of the collateral sets the upper limit on loan losses and so affects the amount of loan loss provisions.

It also affects regulatory provisions. If a secured loan in default remains on the balance sheet non-performing for too long, the assumptions of the financial account may need to be questioned, whether the book value of the collateral or the ability of the lender to foreclose on it.

**Figure 5.2 Value of collateral index and housing price index**




Source: Credit Register for value of collateral index, Statistics Committee of Kazakhstan for house price index

Note: 1) The collateral here represents only residential and non-residential buildings and does not include other types of property; 2) The chart reflects the practice (frequency) of collateral revaluation; 3) Banks are ranked by the size of loan portfolio as of 01.01.2017

Quality of collateral appraisal and valuation practices was poor and remains so despite some improvements. Failure to maintain valuation current is common, even when market prices change. Since spring 2013 and until 2015, according to Credit Register, few revaluations of residential and non-residential real estate took place. In 2015, revaluations were undertaken only by small and mid-sized banks. After 2015, upward revaluation that matched the real estate market was observed among top five banks (Figure 5.2).

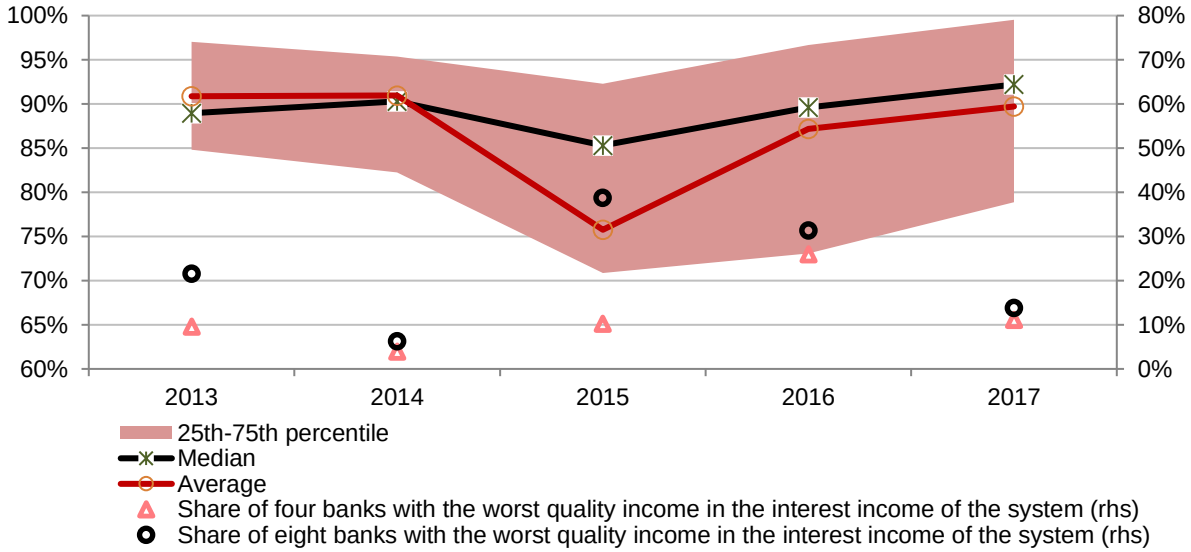
**Interest income received and accrued**

Aggressive recognition of interest income remains a common practice. It overstates the interest income and accumulates the stock of accrued interest, at the cost of quality of earnings and quality of assets.

The quality of interest income dipped sharply in 2015 but next year recovered from 75% to 90% (Figure 5.3). In 2015 a meaningful proportion of the interest income earned by the system came from banks with poor quality interest income, but subsequently this proportion substantially declined.

**Figure 5.3 Quality of interest income**

Ratio of received-to-accrued interest income




Source: Reporting of banks, National Bank estimates

**Doubtful loans**

For the purposes of presenting the state of the asset quality and the quality of its reporting, this report defines the notion of doubtful loans. A loan is placed into this category based on loan-level data (Credit Register). Quality of a loan is judged based on the estimation of cash flows to and from the loan balance, both principal and accrued interest. Lack of payments on the loan suggests that the borrower either stopped servicing it, never did, or does not need to according to the terms of the contract (repayment at maturity). Either way, the absence of cash flow is taken as a sign of high credit risk. The longer the delinquency, the greater the risk.

For doubtful and non-performing loans provisions were estimated based on the estimated value of the collateral. The longer the delinquency, the greater is the discount and the loan loss provision.

An important element in the assessment of the quality of a loan is data, especially fact-based data, such cash flows data, including cash flow of a borrower, cash flow to and from the loan at every stage of its life, on and off balance sheet, including the flows from

foreclosure, sale to third party, legal expense, etc. The lack of such data establishes the environment that is conducive to bad reporting and bad lending practices.

## 5.2 Quality of the loans

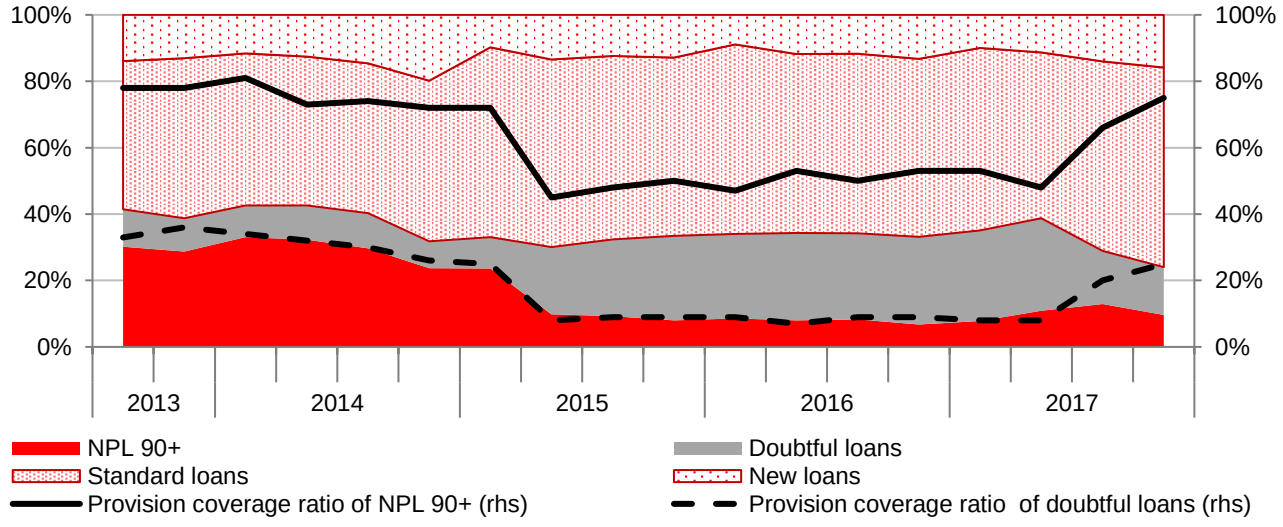
**A large part of banks' credit losses was covered in 2017 by the Program on financial sustainability enhancement and, to a much lesser extent, by the shareholders' injection of capital. As a result, significant amount of previously unreported non-performing loans was recognized in 2017. Loan quality deteriorated due to the shocks to the borrowers' income as well as the inability of the lenders to effectively work out the non-performance without acknowledgement of the losses.**

In 2014 loan portfolio consisted of a significant portion of NPL90+, doubtful loans were a smaller part, provisions coverage ratio for NPL90+ and doubtful was higher than in 2017. The share of NPL and provisions substantially declined after the write-offs in 2014-2015 and restructuring/refinancing aimed at improving the appearance of the loans in financial reporting.

In 2017, the size of the loan portfolio shrank significantly as a result of structural change in the sector. Since end-2016, two banking licenses were revoked, some banks recognized non-performing loans. As a result, the level of non-performing and doubtful loans declined significantly in 2017.

In 2017, the level of credit risk for the system, except a few banks undergoing restructuring and resolution, declined. However, doubtful loans with low coverage continued to exert pressure on capital and to constrain banks' ability to lend (Figure 5.4). The bulk of the remaining non-performing and doubtful loans was provided to corporate clients.

**Figure 5.4 Structure of the loan portfolio**



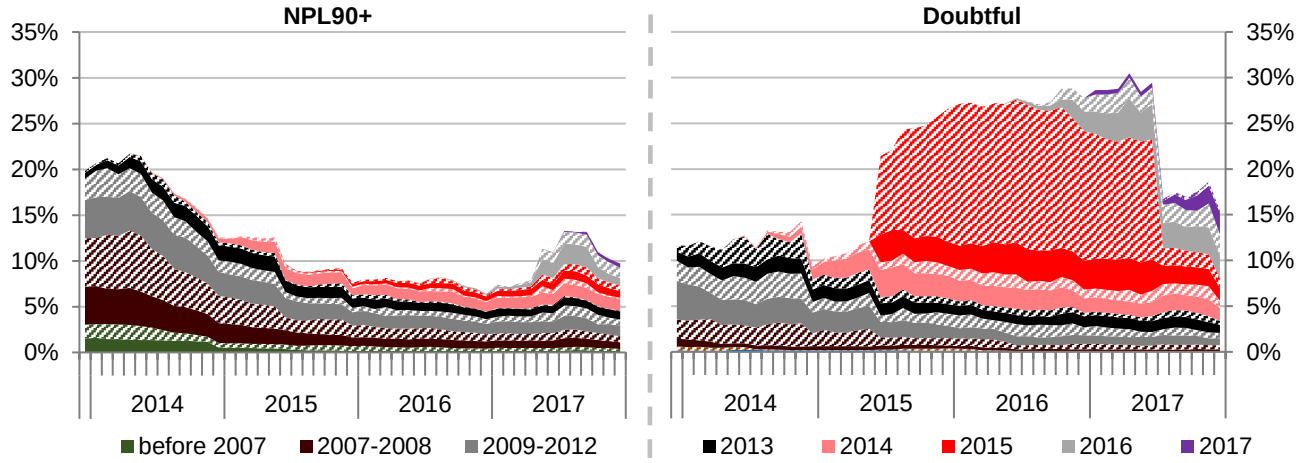

Source: Credit Register, National Bank estimates
Note: New loans – issued during the quarter. NPL90+ are the loans reported by banks as overdue. Doubtful – are the loans with signs of delinquency as estimated by the National Bank staff ex NPL90+

Most non-performing loans as of 2014-2015 were originated in 2006-2007 and by 2017 have been recognized as such and written off. Most non-performing and doubtful loans at the end of 2017 were issued in 2013-2014, by banks that grew loan portfolio at extremely high rates. Quality of the loans issued during the downturn of 2015-2016 is difficult to attribute to this period because during it the practice of hidden refinancing of the problem loans became especially widespread. Contraction of the doubtful FX-denominated loans issued in 2015 was mainly due to KKB Bank (the largest bank at the time) selling the

claim against BTA Bank (not part of the banking system at the time) to a state-owned distressed assets fund (Figure 5.5).

**Figure 5.5 Non-performing and doubtful loans by year of issue**

Banking system less BTA Bank




Source: Credit Register, National Bank estimates
Note: Solid color – loans in tenge, stripes – FX loans
NPL90+ are the loans reported by banks as overdue. Doubtful – analytical category that includes loans with signs of delinquency as estimated by the National Bank staff ex NPL90+.

If fully covered by loan loss provisions, NPL should not present immediate threat to solvency. However, when non-performance is prevalent, banks face longer term risks to solvency such as unrecognized non-performance, risks yet to be realized, including on loans yet to be issued.

Prevalent non-performance indicates a failure of the bank to lend prudently. It suggests that loans in good standing or yet to be issued may have same low quality. It also suggests that the bank is engaged in activities that are deliberately reallocative and value destructive and its lending practices need to stop or be stopped to minimize the losses of the investors.

Unrecognized non-performance and its variations, such late and partial recognition, are an integral to such activities. As was shown above in the discussion of the quality of reporting, banks often underprovision, underrecognize, and otherwise manipulate accounting standards to manage and minimize the stock of LLP.

During the period, the largest and most complex transaction with distressed assets was the sale of the claim against BTA Bank from KKB Bank to the Problem Loan Fund (PLF) in 2017 (see section 9.1 for more details). At the time BTA Bank was an ex-bank that was controlled by the majority shareholder of KKB.

KKB Bank and its future majority shareholder had acquired BTA Bank in a series of transactions during 2014-2015. In 2015 KKB exchanged assets and liabilities with BTA Bank and gave BTA Bank several loans to net the value of the exchange. Together they were greater than the rest of KKB's loan portfolio and were structured as credit lines, the bulk of them dollar-denominated. BTA Bank surrendered the banking license and became by far the largest single borrower of the system. Provisions on the loans to BTA Bank were created at a very low level.

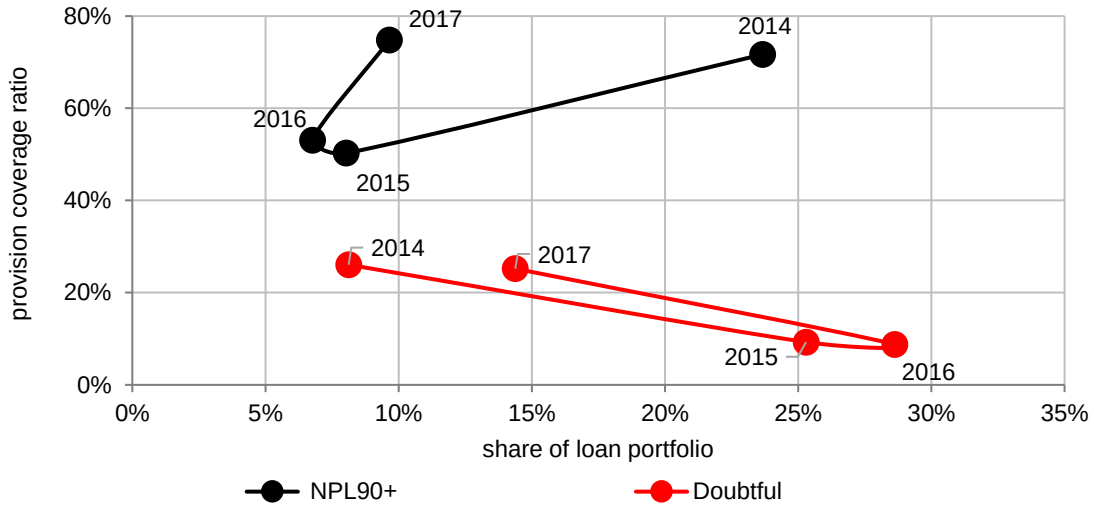
Before the exchange, the quality of the combined assets of the two banks was low. The exchange appears to have improved the quality of the assets. After the exchange KKB Bank released substantial amount of loan loss provisions, mainly by setting a very low

provisions against the credit line to BTA Bank (see section 9.1 for more details). However, for the purposes of analysis, the claim against BTA Bank was placed into doubtful category given that the cash flow from the credit line was insignificant.

This transaction made a big change in the sector's asset quality indicators. In H2 2015 and 2016 signs of deterioration in debt servicing began to appear on loans issued during the active lending period in 2012-2014. Not reported by banks as non-performing, these loans were nevertheless identified by the staff analysts as doubtful. In 2017, doubtful loans declined because KKB Bank sold its claim against BTA (the credit line) to the Problem Loan Fund while the official NPL90+ increased because KKB Bank recognized previously unrecognized non-performance (Figure 5.6).

**Figure 5.6 Provision coverage for NPL and doubtful**

Banking system less BTA Bank

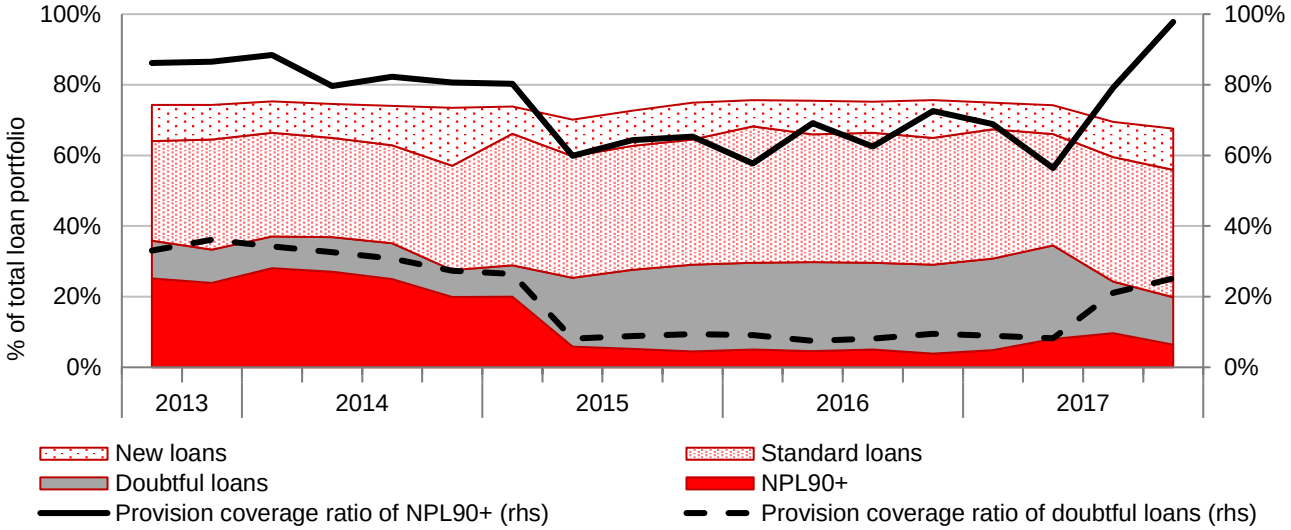



Source: Credit Register, National Bank estimates
Note: NPL90+ are the loans reported by banks as overdue. Doubtful – analytical category that includes loans with signs of delinquency as estimated by the National Bank staff ex NPL90+

Corporate loans accounted for 70% of the loan portfolio and had lower quality that the retail loans, if doubtful were used as an indicator rather than overdue loans (NPL90+). Corporate loans declined in 2017, largely due to the purge of BTA credit line. At the end of 2017 doubtful remained high although with low provision coverage, while NPL90+ was almost fully covered (Figure 5.7).

A large part of corporate portfolio consisted of jumbo loans, often in foreign currency. They were worse than other corporate loans. Large loans with no signs of servicing (doubtful), but not recognized as overdue or non-performing, with no provisions are the most likely to have been related party loans. Inadequate assessment of risks for such loans, when issued and during their lifetime, coupled with poor corporate governance was responsible for their proliferation and the accumulation of risks and fragilities in the affected banks and in the system.

**Figure 5.7 Quality of the corporate loan portfolio**




Source: Credit Register, National Bank estimates

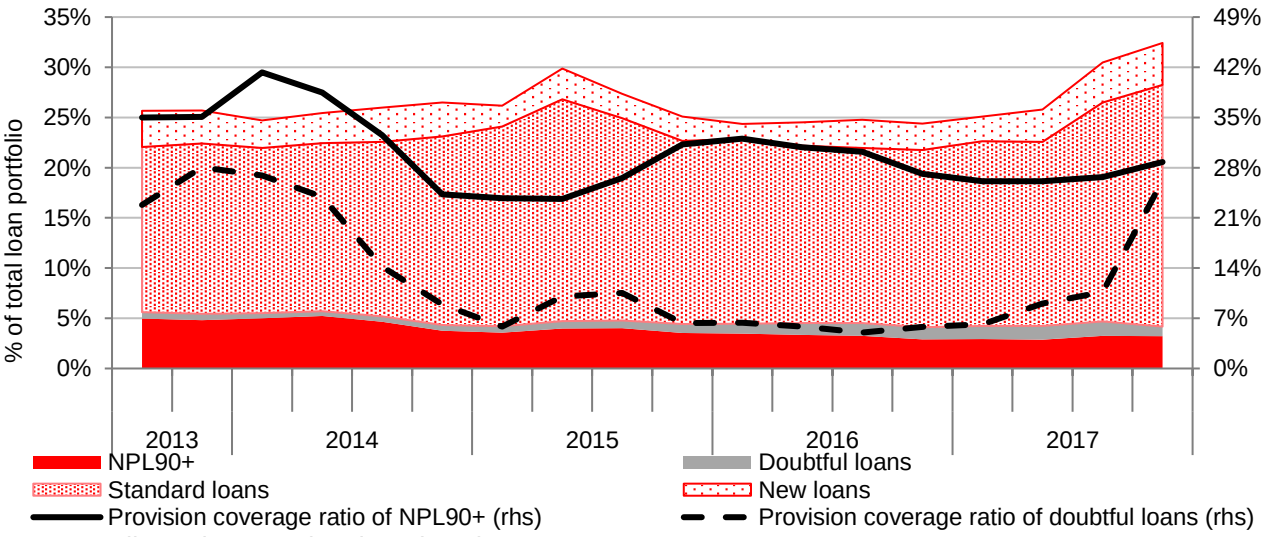
Note: New loans – issued during the quarter. NPL90+ are the loans reported by banks as overdue. Doubtful – analytical category that includes loans with signs of delinquency as estimated by the National Bank staff ex NPL90+.

Retail was different. Large loans were much smaller individually and as a group occupied a smaller proportion of the portfolio. However, as was the case with the corporate portfolio, jumbo retail loans were predominantly FX-denominated and of lower quality than smaller loans. Hardly any small retail loans were in foreign currency.

On average, retail loans in Kazakhstan are of better quality than corporate. Doubtful loans did not add much to the reported NPL, unlike in the corporate portfolio where underreporting was widespread. This suggests that banks were better at recognizing non-performance in retail loans than in corporate.

Provision coverage for doubtful retail in 2017 increased significantly compared to the reported NPL which stayed unchanged at 29% (Picture 5.8).

**Figure 5.8 Quality of the retail loan portfolio**



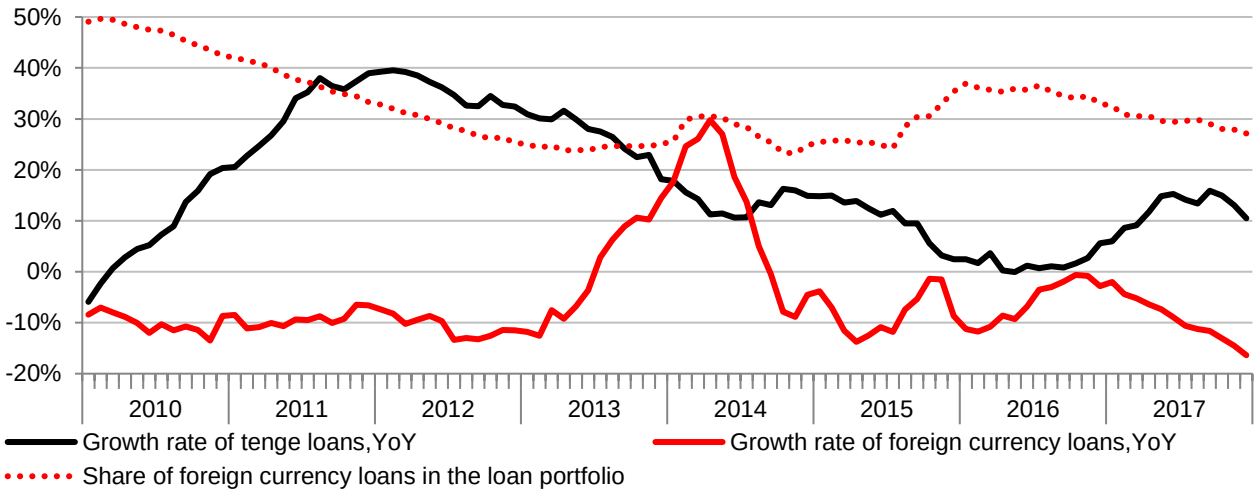

Source: Credit Register, National Bank estimates

Note: New loans – issued during the quarter. NPL90+ are the loans reported by banks as overdue. Doubtful – analytical category that includes loans with signs of delinquency as estimated by the National Bank staff ex NPL90+

### Indirect foreign exchange risk

Dollarization of the loan portfolio has declined from the historical high of 61% in 2009 to 26.5% in 2017. Some banks have a higher share of these loans (Figure 5.9).

**Figure 5.9 Growth of the loan portfolio**



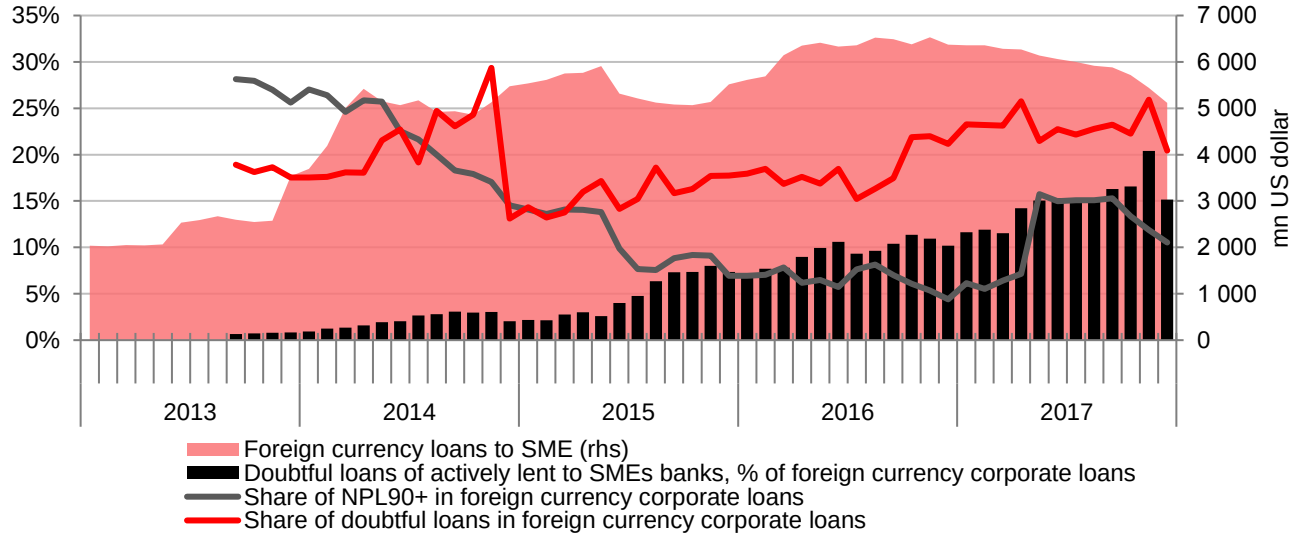

Source: Reporting of banks
Note: Growth rates were calculated for the system excluding KKB Bank and BTA Bank. Growth of the foreign currency loans is in US dollars.

In 2014-2016 foreign currency lending to SME suddenly accelerated. This spurt was driven by top five and several mid-size banks, which lent without proper assessment of credit risk and their ability to absorb it. This category of loans experienced the most pronounced deterioration in quality in response to the shocks of 2015 (Figure 5.10).

Only in 2017, first time in five years, did tenge-denominated loans to SME grow faster than FX-denominated SME loans. As a result, SME loans' dollarization level dropped from 47% at 2016 to 36% at the end of 2017.

**Figure 5.10 Quality of FX-denominated loans to SME**

Banking system less BTA Bank




Source: Reporting of banks, Credit Register, National Bank estimates
Note: NPL90+ are the loans reported by banks as overdue. Doubtful – analytical category that includes loans with signs of delinquency as estimated by the National Bank staff ex NPL90+

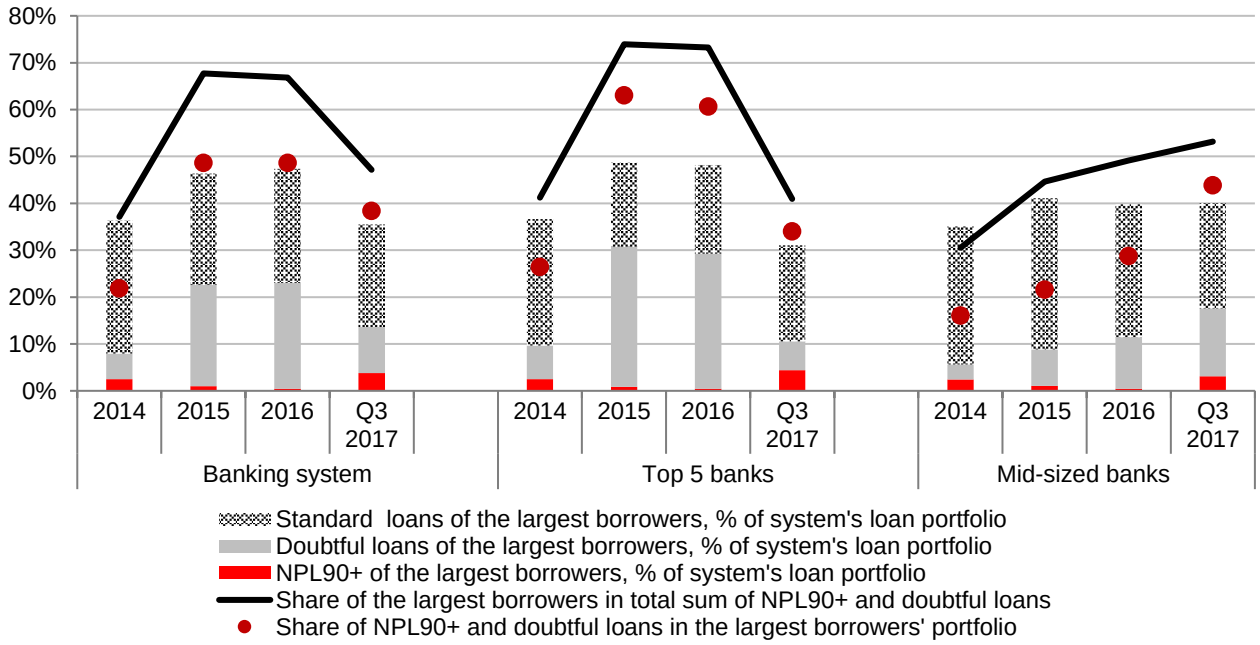
As is the case across countries, SME is a natural corporate borrower for commercial banks. However, without proper risk assessment procedures, vigilant supervision and effective corporate governance, lending is easily subverted to non-productive uses. Affiliated lending is most often done through lending to paper SMEs: they are easier to incorporate and are less transparent than other legal entities.

**Large exposures**

High dependence on a few large borrowers makes the loan portfolio particularly vulnerable by exposing it to idiosyncratic credit risks. A bank can reduce this risk by either elimination of the exposure or through risk sharing. Failing that, it may need to increase its risk absorption capacity. Similar, concentrated lending to a single economic activity concentrates the risks of the lender and increases the need for capital.

Presently, high concentration on large exposures is a serious risk factor for all banks, large and small. At the end of Q3 2017 25 largest borrowers account for 35.5% of a bank's loan portfolio. In some banks the concentration is much higher. The total bank debt of the 25 largest borrowers of the banking system accounts for 8% of the systems' loan portfolio (Figure 5.11).

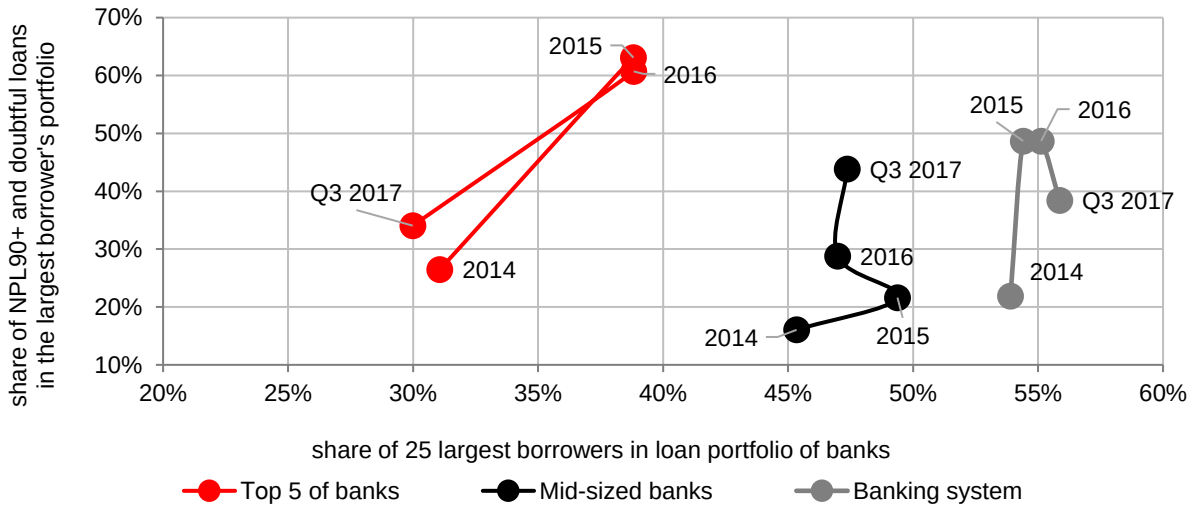
**Figure 5.11 Exposure to 25 largest borrowers and its quality**




Source: Credit Register, National Bank estimates
Note: Banks are ranked by the size of their loan portfolio as of 01.10.2017 and are grouped according to the rank. 'Top 5' is self-descriptive. 'Mid-sized banks' are those ranked 6th to 25th.
NPL90+ are the loans reported by banks as overdue. Doubtful – analytical category that includes loans with signs of delinquency as estimated by the National Bank staff ex NPL90+

The concentration had peaked in 2015-2016 after KKB's opened a credit line to BTA Bank, which at end-2015 accounted for more than half of KKB's loan portfolio. In 2017, after KKB Bank transferred the claim against BTA to Problem Loan Fund, concentration declined to 35% for the banking system and to 31% for the Top 5. For mid-sized banks, the share of the 25 largest borrowers remained almost unchanged at 40%.

**Figure 5.12 Loan quality of 25 largest borrowers**




Source: Credit Register, National Bank estimates
Note: Banks are ranked by the size of their loan portfolio as of 01.10.2017 and are grouped according to the rank. 'Top 5' is self-descriptive. 'Mid-sized banks' are those ranked 6th to 25th.
NPL90+ are the loans reported by banks as overdue. Doubtful – analytical category that includes loans with signs of delinquency as estimated by the National Bank staff ex NPL90+

Since 2014, loans to the largest borrowers deteriorated significantly for all groups of banks. This process continued in 2017, when the decline in loan quality was due to the growth of NPL90+ and the continued growth in the share of doubtful loans in the portfolio of mid-sized banks (Figure 5.12).

**Credit risk in mortgage lending**

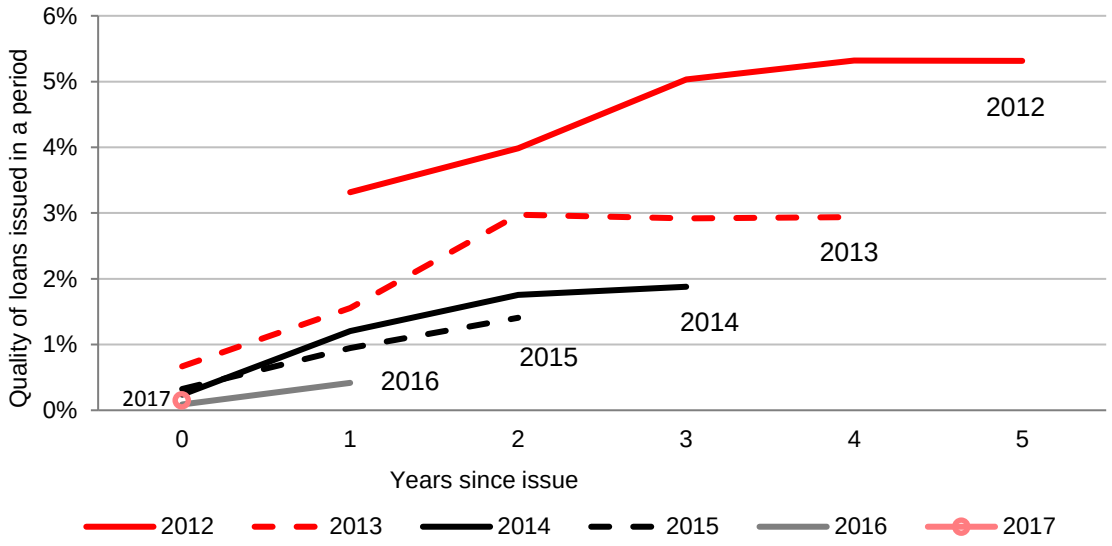
For several years now the mortgage market has been shifting towards predominantly subsidized products. In order to make mortgage lending grow mortgages need to become more affordable, including the market-based products.

In recent years, the measured credit risks in mortgage lending have steadily declined, a spike in 2015 notwithstanding. In part, this was due to a shift towards state-subsidized interest rates (under the programs of housing savings loans, Nurly Zhol, Nurly Zher). The "save-first, borrow later" housing-savings schemes self-select the most responsible and prudent borrowers with savings and strengthen their commitment to payment discipline as time goes. Banks that offer market-based products, (with rates above 17%, 20% down) began to screen borrowers more thoroughly.

As a result, quality of mortgage loans[6] is significantly better than of other products. Mortgages issued after 2012 were of better quality and mainly issued in tenge. All vintages suffered from the shocks of 2015 (Figure 5.13).

[6] Loans to individuals for the purchase of residential property, while the acquired or other residential real estate or both is pledged as collateral.

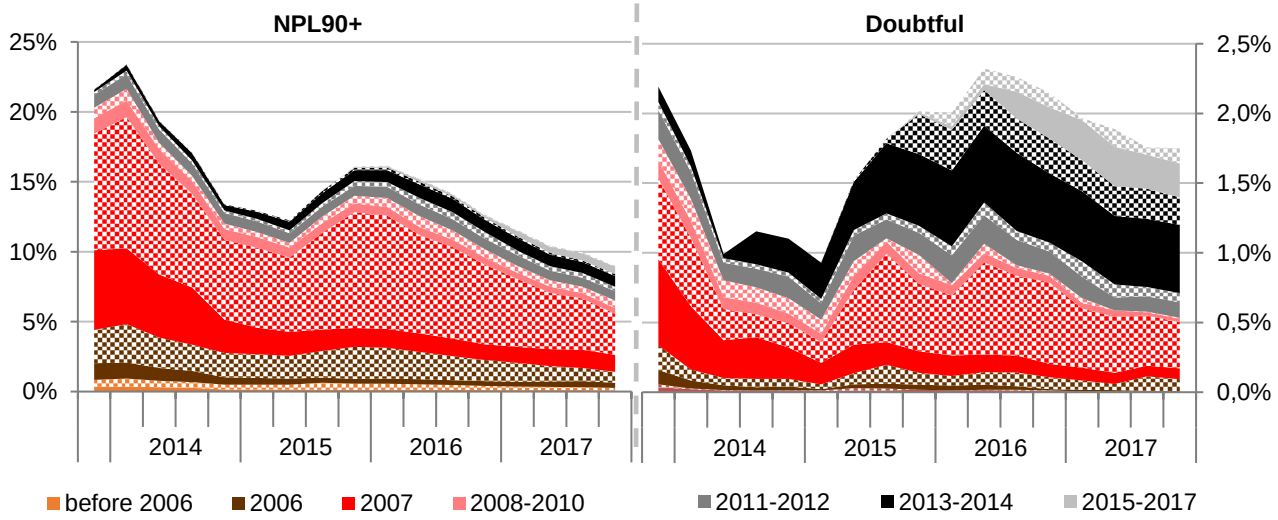
**Figure 5.13 Cumulative default rate by vintage and maturity of mortgage loans**




Source: Credit Register, National Bank estimates
Note: Default rate at given maturity is measured by cumulative reported NPL as a percentage of loans issued. Loans issued in 2016 exclude KKB Bank.

Foreign currency risk that used to be an issue, by now has subsided. Widespread before 2008, mortgages lending in foreign currency has been on decline and practically disappeared by 2016[7]. As of end-2017 almost two thirds of reported non-performing mortgages were issued in 2007 or earlier, with almost a half issued in 2007. As is the case with non-jumbo retail loans, the share of doubtful mortgages is low – (Figure 5.14).

**Figure 5.14 Loan quality of mortgages**

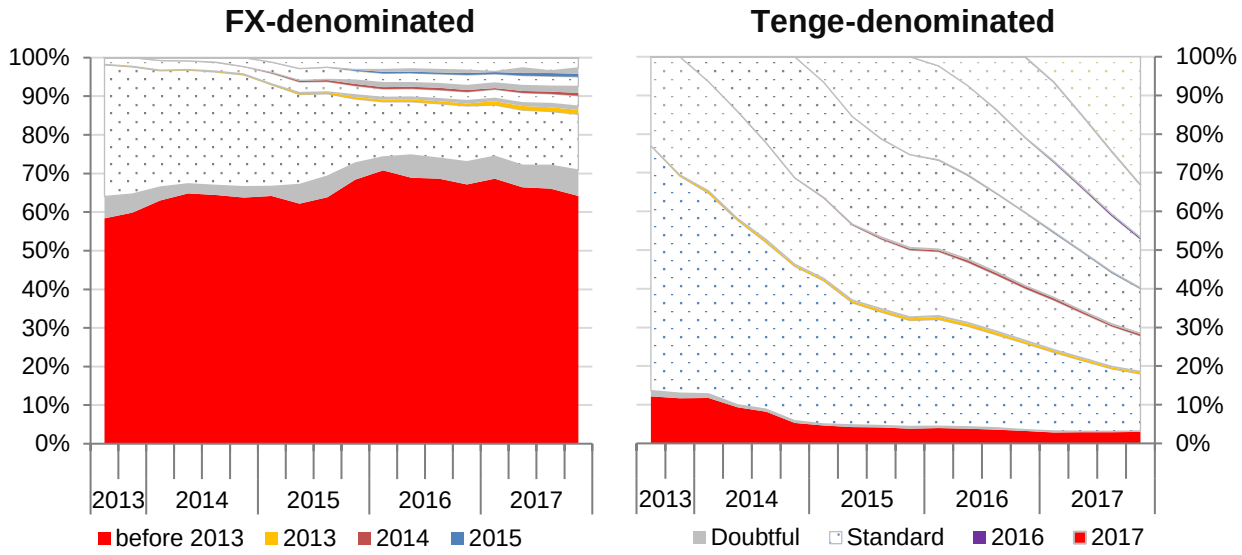



Source: Credit Register
Note: Solid color – loans in tenge, checkered filling – FX loans
NPL90+ are the loans reported by banks as overdue. Doubtful – analytical category that includes loans with signs of delinquency as estimated by the National Bank staff ex NPL90+.

[7] According to paragraph 3-1 of Article 34 of the Law of the Republic of Kazakhstan "On Banks and Banking Activities" from January 1, 2016, it is prohibited to provide mortgage loans in foreign currency to individuals who do not have income in that currency for 6 consecutive months preceding the date of the request to the bank.

Losses on mortgages issued in foreign currency before 2008 have been mostly recognized. Losses on eligible FX-denominated mortgages were averted by subsidized refinancing and conversion to tenge under government programs. Currently, 69% of the remaining FX-denominated mortgages are non-performing, of which 85% were issued before 2008. Tenge-denominated mortgages are of much better quality, with non-performing loans at 4% (Figure 5.15).

**Figure 5.15 Composition of mortgage loans by delinquency and vintage**



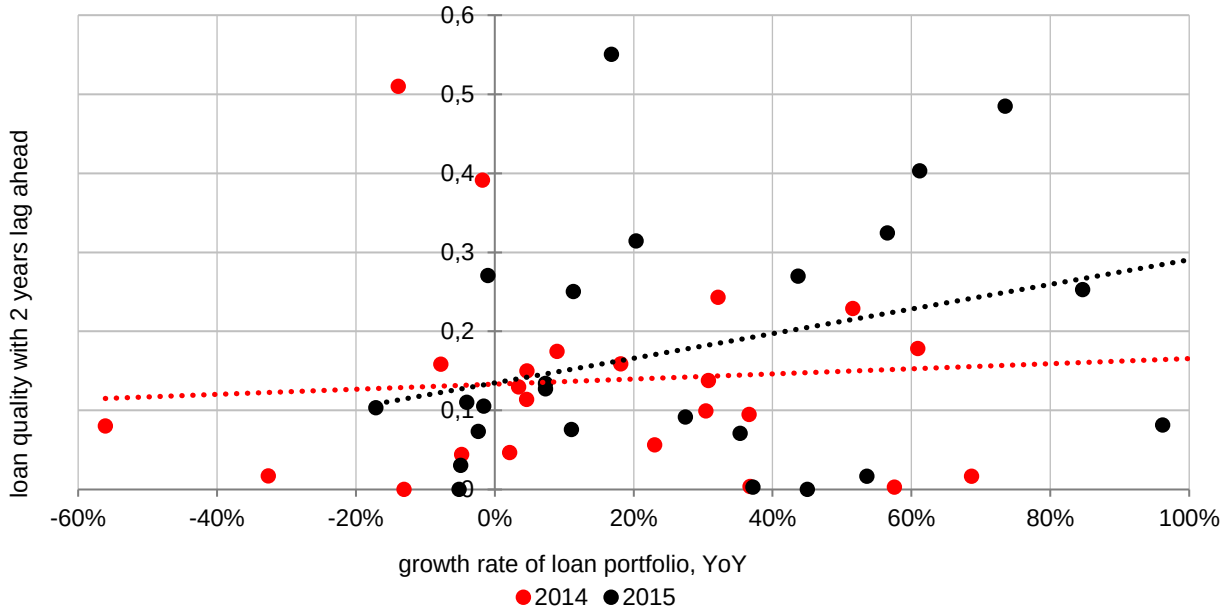

Source: Credit Register, National Bank estimates
Note: Each vintage is represented by three adjacent areas, from the earliest at the bottom to the latest at the top. From bottom to top, each vintage begins with NPL, followed by Doubtful (Unreported NPL) and Standard loans. The vintage of NPL is color-coded by solid color according to the legend. All Doubtful are represented by solid grey and all Standard – by dotted pattern, regardless of the vintage.

## Quality of credit decisions

**The quality and efficiency of decision making in the management of credit risk, through the lifecycle of the loan, is the most decisive determinant of the quality of the loan portfolio. While capital adequacy may provide risk absorption capacity in the short run, sound and prudent management is vital for the ability of the bank to create value and meet the long term needs of its many stakeholders.**

Corporate governance is a key to healthy performance of a bank. The quality of the credit process, risk management systems and internal audit are all critical to the long term survival of the bank. These processes help to ensure quality of the loan portfolio, cash flow, net income and capital. When a bank decides whether to grant the loan or not, it must make a reasonably thorough and objective assessment of borrower's ability to repay, including the size of its equity and the stability of its income. However, in pursuit of rapid growth, banks may skimp the principles of sound credit risk management. First to suffer is the quality of credit risk analysis. The resultant credit losses strengthen the unwillingness to recognize them, quality and informational value of the financial reports suffers next. This relationship between pace of growth and quality of the loans is illustrated by Figure 5.16.

**Figure 5.16 Rapid growth tends to come at the expense of credit quality**




Source: Credit Register, National Bank estimates
Note: Quality of the loans reflects the National Bank estimation of the expected losses on a horizon of 2 years and expressed in the share of NPL90+ and doubtful loans in the loan portfolio of a bank. Each point represents a combination of one bank – one year

**Related lending** is one of the main factors to compromise the integrity and objectivity of credit analysis. Without internal control, such practices tend to spread within an organization and in many cases cause bank's insolvency. Diagnostics of related lending , whether by supervision or within corporate governance framework, is hindered by the lack of rules governing disclosure about shareholders of the borrowers, and ease with any formal restrictions could be circumvented. Hard direct evidence of affiliation between the two parties is difficult to find, making rule based supervision extremely restrictive.

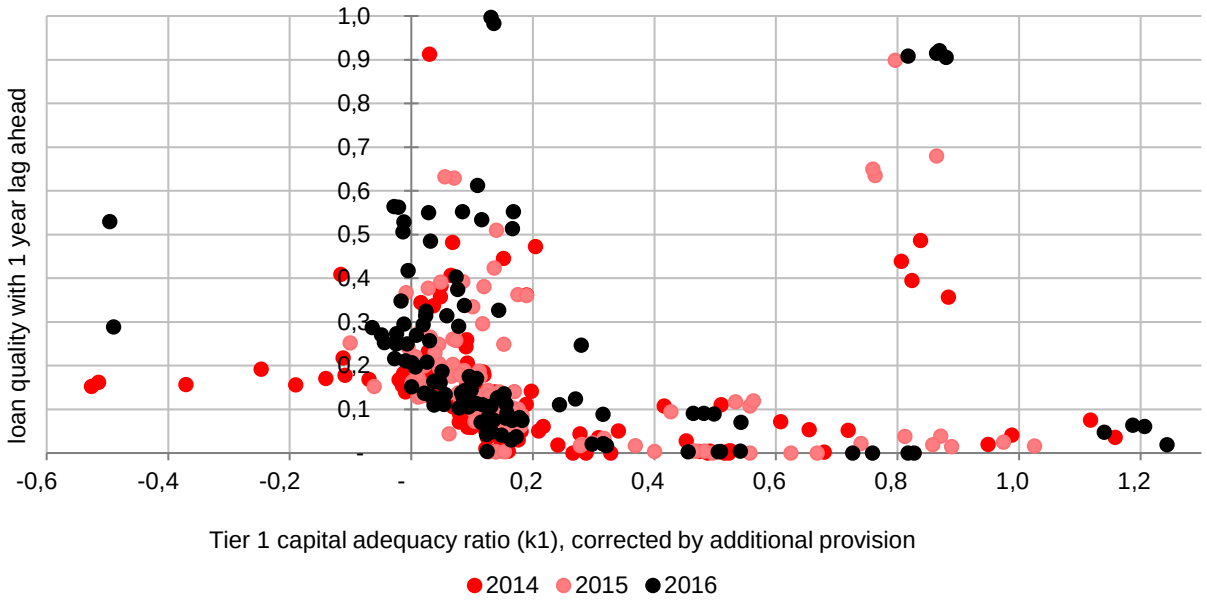
A supervisor should be able to make judgement about a loan based on indirect evidence, where the strength of the judgement should reflect the entirety of facts and contexts. As a rule, strongly favorable terms of the loan, with extremely lenient repayment schedule, are good indicators of related party lending. Such loans, related or not, tend to go bad much more often than the loans made on general conditions. Supervisory regime should be based on the principles of motivated regulatory judgement. In the context of related lending, it means **presumption of affiliation** where the supervision uses motivated judgement to identify related loans based on indirect evidence and lets the bank to argue otherwise.

The **quality and adequacy of bank's capital** is another factor that affects quality of underwriting, by aligning incentives of the managing shareholders' with the minority investors, and thus is the key to sound and prudent approach to the credit risk management and to less overbearing and efficient regulation.

The relationship between capital adequacy and quality of underwriting is illustrated in the figure below. Gambling for resurrection, the heavily undercapitalized banks tend to make bad lending decisions more frequently than the well-capitalized banks. The mechanism which governs the behavior of these nearly insolvent banks is well documented in corporate finance literature and is not specific to commercial banks. Lack of capital distorts the incentives and shifts the balance of risks towards extremely risky lending that is ex ante value destructive. In many cases, especially without personal accountability, such risky lending promises personal benefits to the decision makers and effectively amounts to

asset stripping. Consequently, bad banks need to be removed from the system at the first sign of capital loss in order to ensure good quality of credit decisions and to avoid value destruction (Figure 5.17).

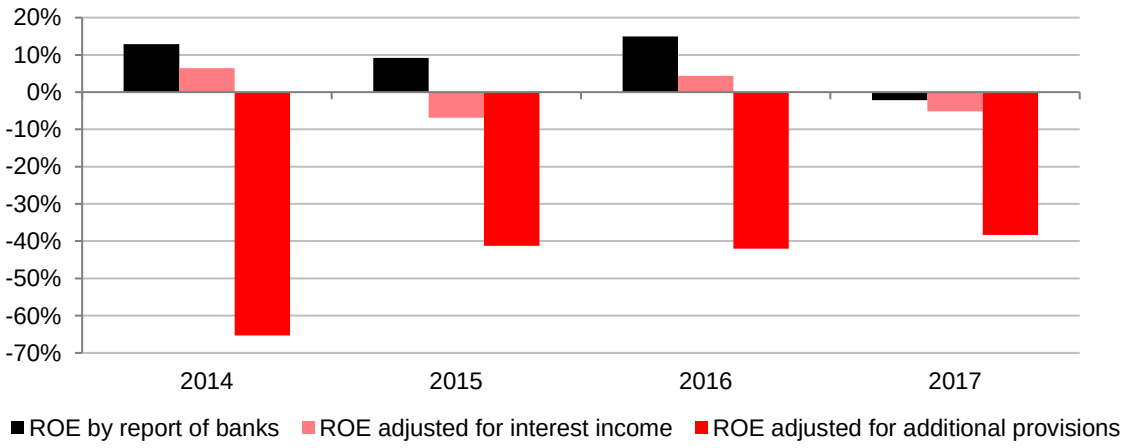
**Figure 5.17 Undercapitalized banks tend to underwrite poorly**




Source: Credit Register, National Bank estimates
Note: Capital adequacy ratios were estimated based on expected losses on one year horizon. Each point represents bank-end of quarter combination. Each bank is represented by dozen points, four for each year. Twelve observations in the upper right corner belong to a small bank with small loan book.

With credit losses and cost of risk underreported, returns on equity during 2014-2016 are oddly stable and healthy. The trend reversed in 2017 when some noted banks recognized some of the losses on previously unreported NPL. A more realistic representation of the returns on bank capital would take into account the low quality of interest income as well as the provision charge against unrecognized NPL. Then the estimated ROE of the sector is significantly negative during 2014-2017 (Figure 5.18).

**Figure 5.18 Return on Equity**




Source: Reporting of banks, National Bank estimates
Note: Adjustment of net income and capital was made based on the quality of interest income received in cash. Adjustment of net income and capital was based on the additional provision charge for estimated unreported non-performing loans

## 5.3 Practice of resolving non-performing loans

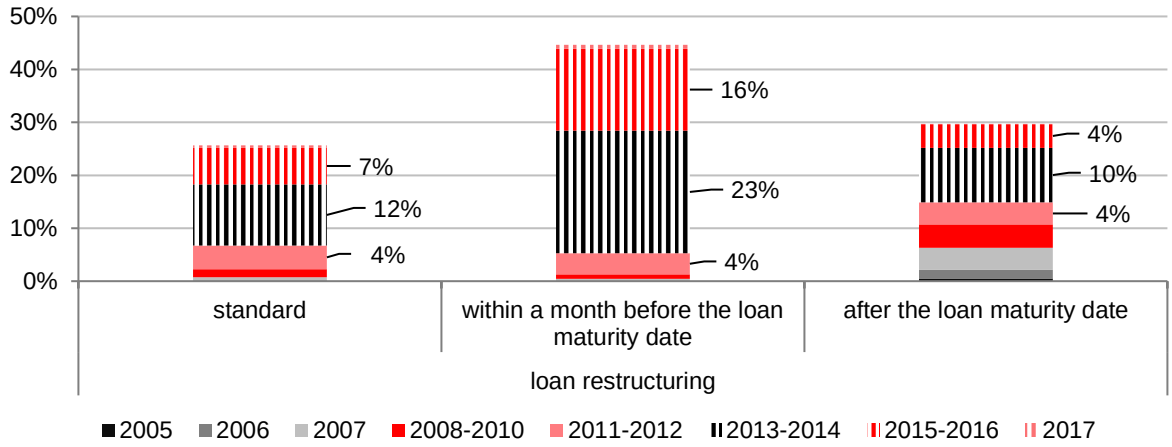
**Resolution of NPL begins with their recognition. For good banks corporate governance could be sufficient for prompt recognition and their effective resolution of NPL. However, if non-performance affected too large a part of the loan book, the management will be inclined to delay recognition for an extended period of time. The vigilant supervision and proper bank resolution are needed to effectively preserve the value of the NPL.**

For several years, non-performance has not always been reflected by banks in financial reporting. This was due to both the reluctance to admit to the losses and the lack of capital to absorb them. The management is strongly conflicted in its decision to recognize a related-party non-performing loan because doing so would trigger legal action against the affiliated borrower. Related-party NPLs as a rule have no collateral or substantially overvalued collateral. Overvalued collateral is often used to delay or to avoid recognition of losses on non-performing loans. Its foreclosure/liquidation would only reveal the actual loss-given-default, making the conflict even stronger.

To ensure objective financial reporting, a bank needs to start with a sufficiently healthy balance sheet and then sustain its capital position by operating prudently and efficiently. This requires that banks focus on building business processes and core capacities that previously were perceived as not essential, the capacities such as informational systems of integrated data collection, data analysis and managerial reporting, risk management, internal decision making arrangements, internal control, interaction between bank's shareholders and its management. Perceptions are changing, but working out non-performing loans continues to be perceived in the industry as essentially non-banking activity.

Loan restructuring, if done right, could be effective at minimizing losses on a non-performing loan. However, in the past, restructuring was more often aimed not at the recovery, but at improving its appearance in financial reporting. About 75% of all corporate-loan term modifications during 2013-2017 raise doubts about their value to the bank: some of them were preceded by de facto non-performance, were not accompanied by modifications to other terms to motivate performance and were not followed by improvements in service. In 30% of cases term extension was carried out after the borrower failed to repay on maturity and in 45% of cases – just a month before the maturity date (Figure 5.19).

**Figure 5.19 Term extension for corporate loans**




Source: Credit register, National Bank estimates
Note: The graph is based on the facts of restructuring for Q2 2013 - Q3 2017 by the year of the loan issued

## Box 1. Methodology of credit risk stress testing

During 2017, the National Bank developed a loan level approach for stress testing banks' loan portfolios. The approach is based on the estimation and prediction of the probability of default and losses given default at the level of individual loan. The data used was the Credit Registry – the loan level database maintained by the National Bank.

**Methodology of asset quality assessment**

The methodology starts with the diagnostic of the current state of the loan and then proceeds to build statistical models to predict the losses on a one year horizon.

The main idea is to estimate the cash flows to and from the loan balance to identify its standing. According to the international experience and corporate finance theory, the absence of cash payments on an asset is an objective indicator of its deterioration. Since the database does not contain the data on the cash flow, it was estimated from the month-to-month changes of the principal remaining and the balance of accrued interest, regardless of the contracted repayment schedule. The duration of the spell of “non-declining principal” was used as a determinant of the probability of repayment.

The database also contains the indicator of non-performance “overdue >90 days” as identified by the bank. Reported by banks as NPL, the indicator depends on the opinion of the bank’s management and is used to actively manage the stock of bank’s NPL and LLP. The alternative indicator of asset quality developed by the staff is more objective in that it depends on facts rather than biased opinion and is far less susceptible to manipulation of financial reporting and regulatory returns.

Statistical models were constructed to estimate probability of default for each loan. The methodology uses different models or combinations of models for different loan groups. Loans are grouped based on functional classification and size. Models were chosen based on accuracy of prediction, robustness of the results and interpretability.

Provisions are determined based on the expected losses within a year and include estimation of the probability of default and an ad hoc procedure for estimating the value of collateral. The value of collateral is estimated based on progressive discounting of the value of the collateral as percentage of the loan value as the delay between default and foreclosure increases.

**Validation of the methodology**

The methodology is in the process of continuous development, but its forecasting ability has been tested by back-testing. The model based on 2016 data predicted the losses of problem banks in 2017 matched well with the actual losses. In-sample predictive power is confirmed by high values of statistical metrics (Table 1.1).

**Table 1.1 Metrics of stress testing models**

| Model | Recall | Precision | F-score | ROC-AUC |
|---|---|---|---|---|
| Logit | 0,68 - 0,86 | 0,74 - 0,9 | 0,69 - 0,88 | 0,79 - 0,86 |
| Calibrated Random Forest | 0,70 - 0,75 | 0,73 - 0,76 | 0,71 - 0,74 | 0,75 - 0,89 |
| Stacking | 0,68 - 0,89 | 0,67 - 0,9 | 0,68 - 0,89 | 0,79 - 0,92 |

Note: 1) ROC-AUC – area under ROC curve, numerical evaluation of the model’s quality; Precision is the ratio of the number of correctly predicted defaulted loans to the total number of predictions (Σ True positive/Σ condition positive Predicted); Recall – the ratio of the number of correctly predicted defaulted loans to the total number of defaulted loans (Σ True positive/Σ Condition positive); F-score is the harmonic average of the two previously mentioned metrics (2/(1/Recall + 1/Precision)); 2) Values in the table reflect the spread of metrics across different samples.

**Future development**

The methodology is aimed at early identification of problem loans and problem banks for the supervisory purposes and risk management. Further development will change the unit of analysis from a loan to a borrower. This is expected to produce an accurate and earlier identification of non-performance by removing the effects of cross-lender refinancing practice. At the same time, poor quality and incompleteness and lack of access to administrative data remain a major obstacle for the development of a more sophisticated and powerful methodology. For largest corporate borrowers the development should focus on the analysis of the borrowers' credit risk based on the data provided to the lender. In this direction, further work is required to improve the quality of information, particularly in the Credit Register, and the integration with administrative databases.

# VI. Funding risks of banks

## 6.1 Liquidity and funding risk. Foreign exchange risks

**In 2016, the National Bank established an interest rate corridor and for the first time in its history began to provide and withdraw primary liquidity at its ceiling and its floor. This let the National Bank to respond more flexibly and predictably to structural shortage/excess liquidity. Predictable and consistent access to primary liquidity through the money market significantly reduced liquidity risks.**

**Free float helped to mitigate FX risks and, more importantly, liquidity risks for the system. Banks where loans generate little cash continue to experience liquidity shortages and net outflow of funds. Liquidity risks have become largely derivative of solvency risks.**

**Major funding risks for well-capitalized banks include high dependence on state and quasi-public sector, concentration of deposits, especially in foreign currency, dollarization of liabilities and risks to sustainability of funding.**

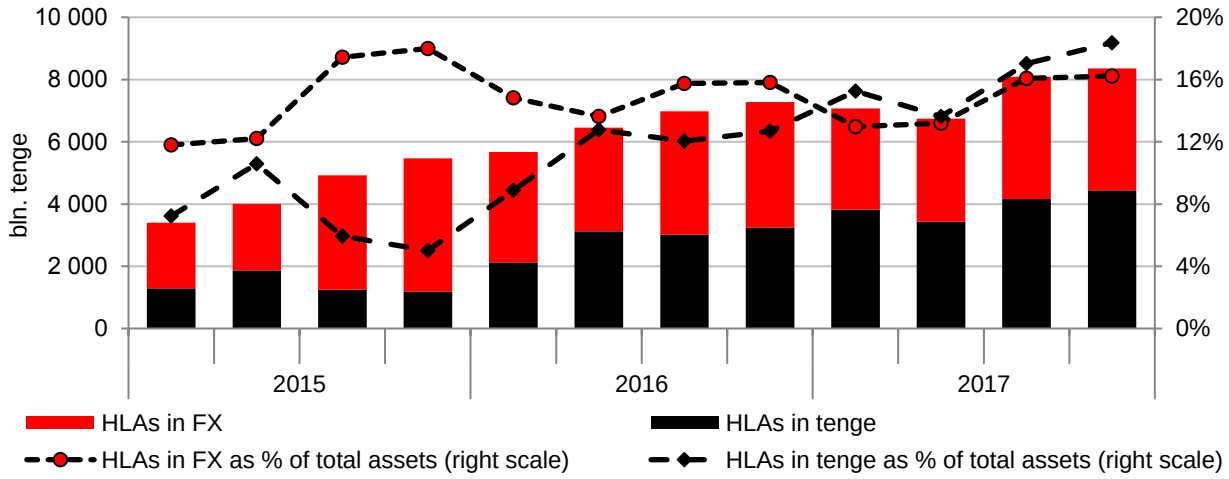
### Current state of liquidity structure in the sector

In 2017, excess liquidity in the system continued to shape the way banks managed liquidity. By excess liquidity we here mean the net amount of liquidity that the National Bank needs to withdraw in order to bring the targeted money market rate (overnight repo) to the target level, that is, to be equal the base rate or to be above the floor of the interest rate corridor.

Liquidity risk, acute in 2014-2015, by mid-2016 have subsided and ceased to be systemic. In 2017 only some banks experienced shortage of liquid assets due to poor quality of loan portfolio, which limited their operational cash flow.

The volume of tenge-denominated highly liquid assets (HLAs) at the end of 2017 stood at KZT 4.4 tn, x3.5 the 2015 level (Figure 6.1). The total amount of HLAs, tenge and FX, reached KZT 8.4 tn, or 35% of banking system's assets and 40% of liabilities. At the end of 2017, the currency structure of the HLAs have stabilized. HLAs split roughly equally between tenge and FX (53% and 47%, respectively). Compare this to 2015 when tenge HLAs was a fraction of FX HLA (22 % and 78% respectively).

**Figure 6.1 Highly liquid assets by currency**




Source: reporting of banks
Note: HLAs includes cash, gold, correspondent accounts, interbank deposits and government securities

Accumulation of excess liquidity was effected by two main factors: fiscal deficit being financed by the sale of government's external assets and de-dollarization of banks'

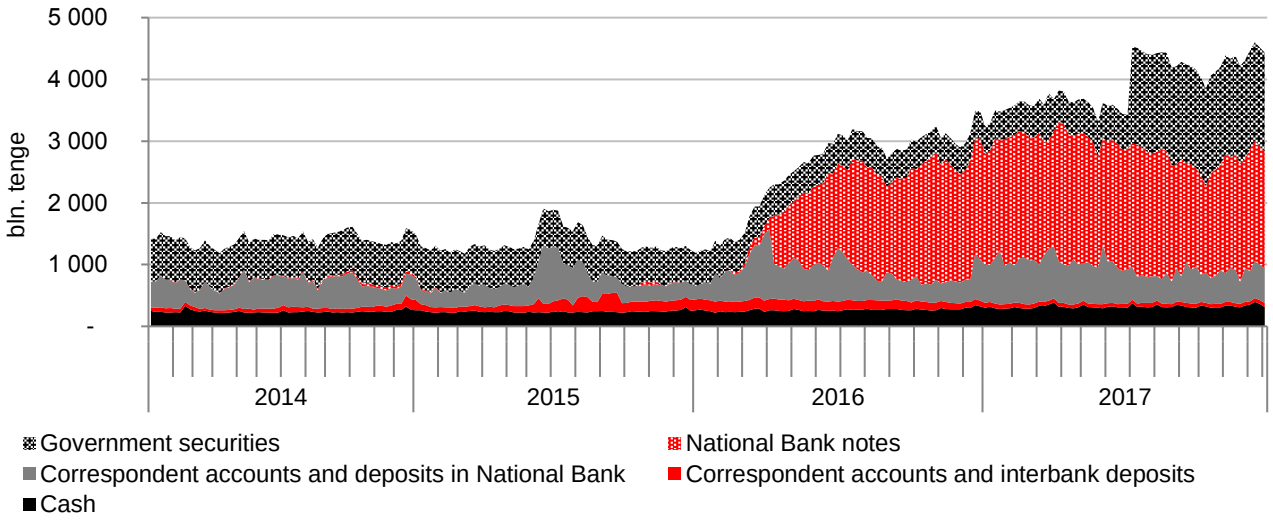
liabilities. These were accompanied by gradual repayment of long-term currency swaps issued before 2016. Repayment of swaps reduced the supply of primary liquidity as well as the net FX assets of the National Bank.

Also in 2016, banks reduced demand for primary liquidity, especially for the correspondent accounts in tenge at the National Bank. Thus, compared to 2014-2015 when the tenge correspondent accounts in the banking system ranged from KZT 250 to 400 bn, in 2016-2017 the demand decreased to KZT 200-230 bn. This resulted due to decreased motivation to accumulate liquidity as it was in periods of high uncertainty in rates and liquidity supply. Stabilization of interest rates and predictability of terms of borrowing in the money market allowed banks to reduce demand for accumulation of liquidity in advance and to attract liquidity in the money market when necessary.

The National Bank absorbed liquidity surplus through several instruments: notes, deposits, money market instruments, including overnight repo and one-day FX swaps (details in Section 2.4). At the end of 2017, National Bank notes, deposits and correspondent accounts at the National Bank amounted to KZT 2.5 tn, or 55% of tenge-denominated HLAs (Figure 6.2). The supply of government bonds issued by MF increased in Q3 2017, but had no bearing on the management of primary liquidity as it was an element of bank restructuring and was accompanied by restrictions on the sale (see Section 9.1).

As short-term interest rates continue to decline, the margins on tenge-denominated liquidity operations will be squeezed and force banks to reduce tenge-denominated HLA and to begin lending.

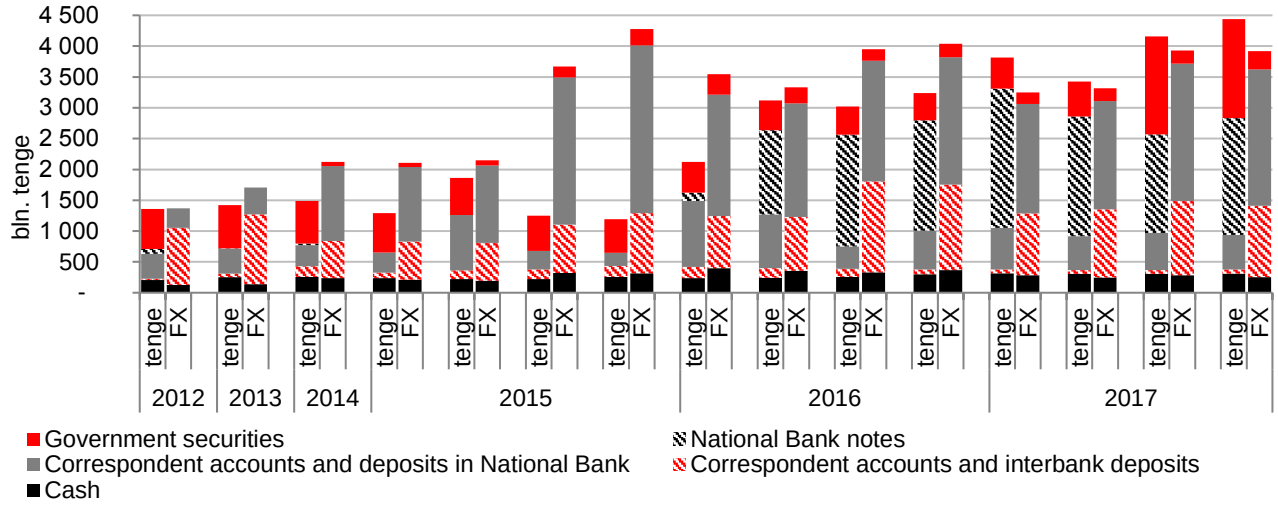
**Figure 6.2 Banks' HLAs in tenge**




Source: reporting of banks

Banks kept FX primarily on the correspondent accounts and deposits with the National Bank and at non-residents banks, which amounted to 57% and 29% of HLAs in FX at the end of 2017, respectively (Figure 6.3). Significant increase in FX claims against the National Bank was due to the introduction of long-term FX swaps during acute liquidity shortages and their revaluation after tenge weakened in 2015.

**Figure 6.3 Structure of banks' HLAs by instruments and currencies**



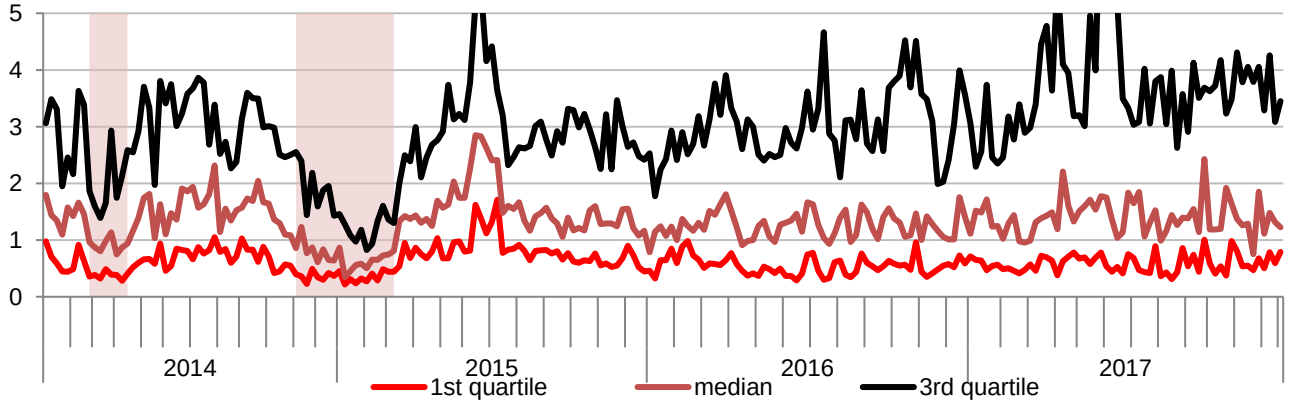

Source: reporting of banks

**Box 2. Liquidity shortage in 2014-2015 and stabilization policy of the National Bank.**

**Liquidity shortage in 2014-2015.** In 2013-2015, exchange rate expectations led to the conversion of deposits from tenge to dollars. In high dollarization of liabilities banks had to convert liquid tenge assets into dollar assets to limit currency risks. The latter led to increased demand for tenge liquidity.

At the beginning of 2014 and 2015, according to indicator of the adequacy of tenge correspondent accounts and deposits at the National Bank banks in all quartiles experienced outflows from these accounts. From January to March 2015, at the first quartile of banks, the balances of tenge funds at the National Bank did not cover the one-day standard deviation of the deposit base (Figure 2.1). The banks' demand for liquidity increased in period of high volatility of rates and unpredictability of the primary liquidity supply. The rates volatility increased due to the high fluctuations of supply from autonomous factors that banks could not withstand (withdrawals to the Treasury account during the tax week and a gradual flow back after). At the same time the National Bank did not have the necessary monetary policy tools to stabilize the volume and cost of primary liquidity supply.

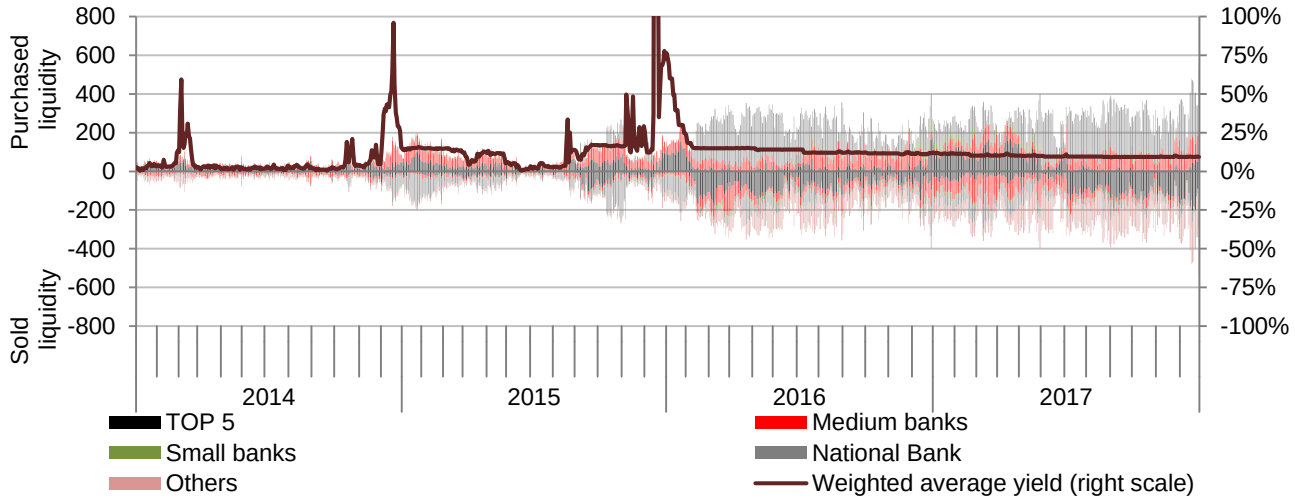
**Figure 2.1 Ratio of funds on correspondent accounts and deposits at the National Bank to the day sigma of deposits in the national currency**




Source: reporting of banks
Note: The volatility of deposits is calculated as the standard deviation of the deposit base for 3 months per one day, calculated on the basis of daily balances on clients' deposits

The shortage of tenge liquidity was periodic and caused high volatility of interest rates in the repo and swap markets in 2013-2015. Although banks held government bonds, the repo market could not satisfy the tenge liquidity demand due to the reduction of the national currency supply at the time of devaluation expectations. This led to a significant increase in the volatility of repo rates, contraction of the market and the growth of short-term deals, primarily with 1-day maturity (Figure 2.2). During this period, the volume of borrowing in the repo market was limited not by the volume of government bonds held by banks, but by the volume of the aggregate tenge liquidity supply.

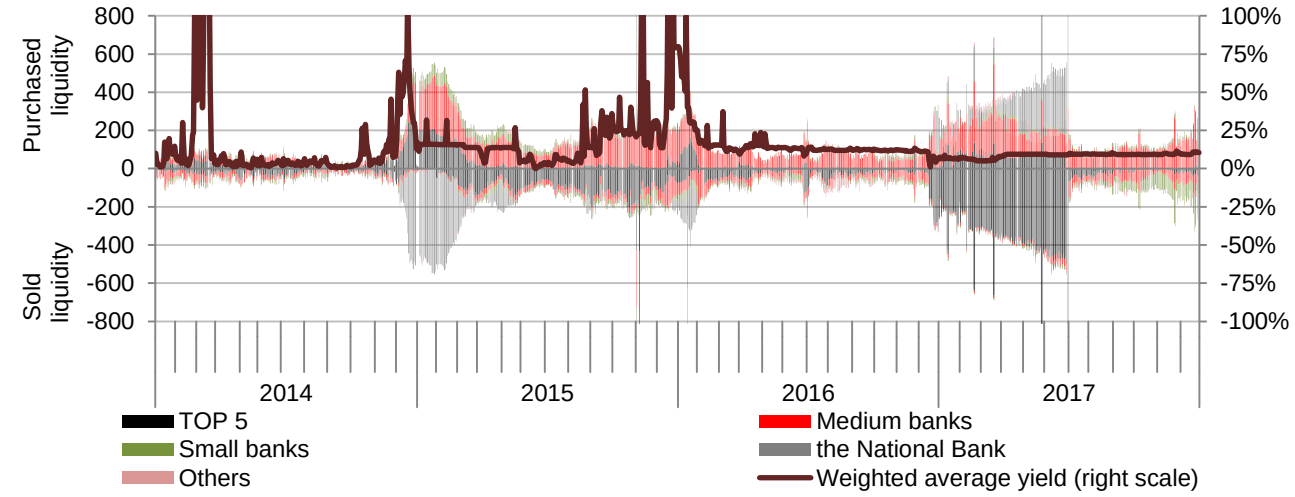
**Figure 2.2 Trading volumes of tenge liquidity in the organized repo market**




Source: KASE
Note: On daily data, in bn tenge

The limited supply of tenge on the repo market caused high volatility in the organized swaps market. During the acute shortage of tenge liquidity, banks with significant amount of FX liquidity actively exchanged it for tenge (Figure 2.3). To stabilize the market the National Bank provided short-term tenge liquidity in organized swap and repo markets acting as a seller until the 1st quarter of 2016, but the presence of the National Bank was nonpermanent.

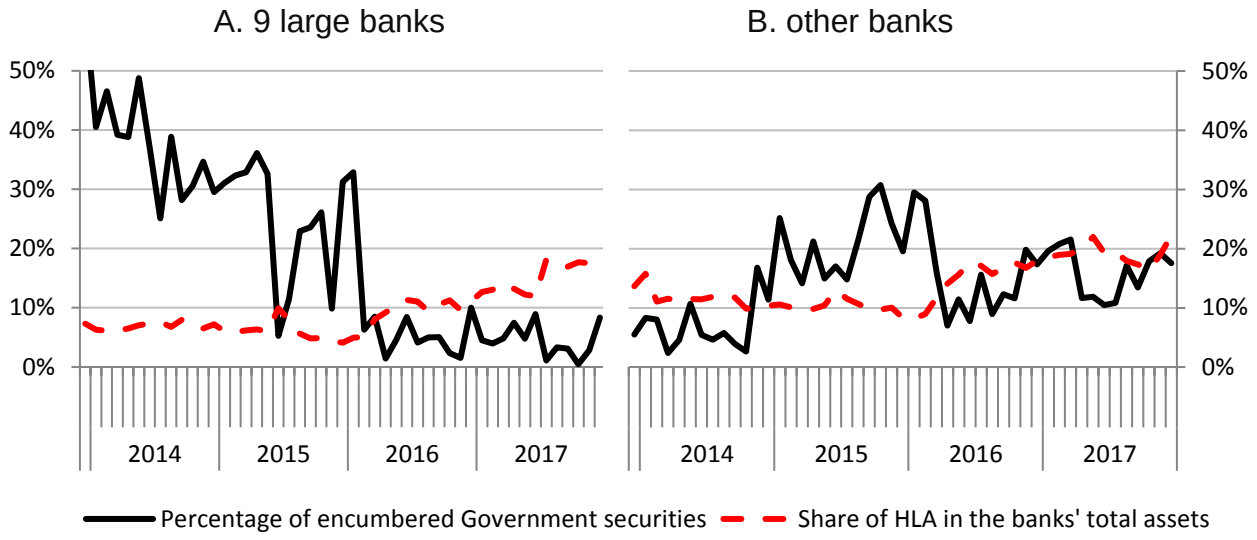
**Figure 2.3 Trading volumes of tenge liquidity in the organized market of swaps**




Source: KASE
Note: On daily data, in bn tenge

The most acute problem with tenge liquidity in 2014-2015 was manifested in large banks. In certain periods the percentage of HLAs in tenge in total assets of these banks fell to 4% (Figure 2.4). These banks used up to 50% of government securities as a collateral for repo market.

**Figure 2.4 Percentage of encumbered government securities**

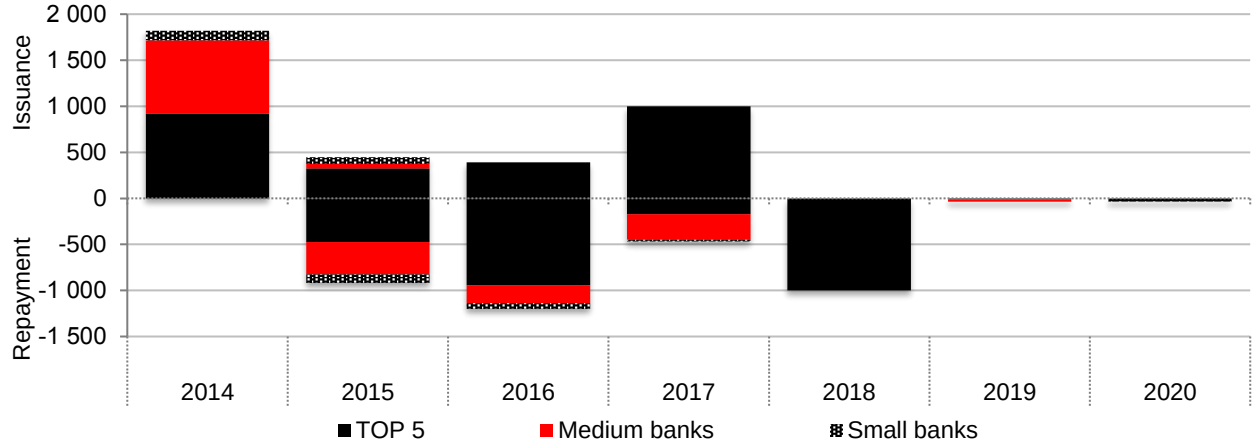



Source: reporting of banks

**Stabilization measures of the National Bank.**

In 2016, the National Bank established an interest rate corridor and began to provide and withdraw primary liquidity through open market operations and standing facilities at the boundaries of the corridor. Constant and predictable provision of the liquidity also helped to partially offset the liquidity risks in the banking sector. As a result of change in exchange rate policy and measures taken to de-dollarize and stabilize the financial sector, banks have overcome the tenge liquidity crisis.

**Figure 2.5 Issuance and repayment of cross-currency and interest rate swaps**




Source: National Bank
Note: Transactions between the National Bank and second-tier banks. The volume of repayments does not include the accrued interest, in bn tenge

In addition, in 2014, the National Bank provided long-term FX swaps to increase the supply of tenge liquidity. The introduction of the long-term FX swaps reduced the dependence of banks on the one-day swaps market and helped to stabilize banks' demand for liquidity without significant influence on the FX market. During 2014-2017 the volume of National Bank's long-term FX swaps amounted to KZT 3.7 tn. Medium and small banks

mostly entered into long-term FX swaps in 2014, while top 5 banks entered into long-term FX swaps during 4 years (Figure 2.5). In 2017, the growth of long-term FX swaps supply resulted from the systemic bank recovery arrangement to maintain its net FX position (Section 9.1).

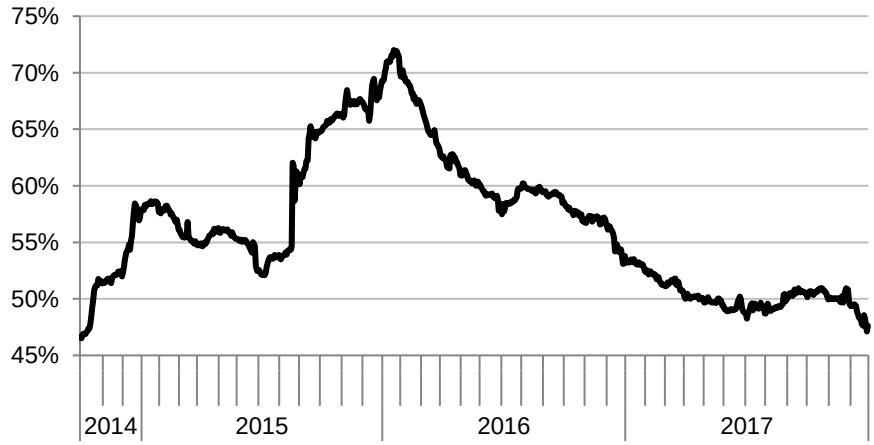
However, such intervention is acceptable only for a short time in the period of high structural liquidity shortage to reduce pressure on the banking system. At the same time, the National Bank providing such instruments on non-market terms competes with and squeezes out other market participants. This impedes independent development of the market and leads to increase of the dependence of Kazakhstan's economy on non-market instruments. In addition, the long-term FX swaps form a significant position of FX liabilities of the National Bank, which creates a conflict of interests between income generation and adherence to the floating exchange rate.

**Dollarization and exchange rate risk**

**To enhance confidence in tenge and strengthen adherence to the floating exchange rate regime are the key factors to reduce FX risks in the banking sector.**

Deposit dollarization fell to 48% by the end of 2017, while at the beginning of 2016 this number stood at 72%. Dollarization reached its maximum in the early 2016 mainly due to exchange rate re-evaluation of deposit portfolio in autumn 2015. Conversion of tenge deposits into FX deposits was taking place mainly from 2013 to 2014 and by the second half of 2015 had been already insignificant (Figure 6.4, Box 3).

**Figure 6.4 Dollarization of deposits decreased from 72% to 48% within 2 years**




Source: reporting of banks

Deposit dollarization began to decline in 2016 after free float made exchange rate expectations more symmetric. The policy was supported by a raise in deposit insurance coverage for tenge-denominated deposits from KZT 5 to 10 million and by gradual reduction in interest-rate caps for FX deposits from 4% in 2015 to 1% in 2017. The state also offered compensation on tenge-denominated deposits up to KZT 1 million as a social policy and to rally broader public support for the free float.

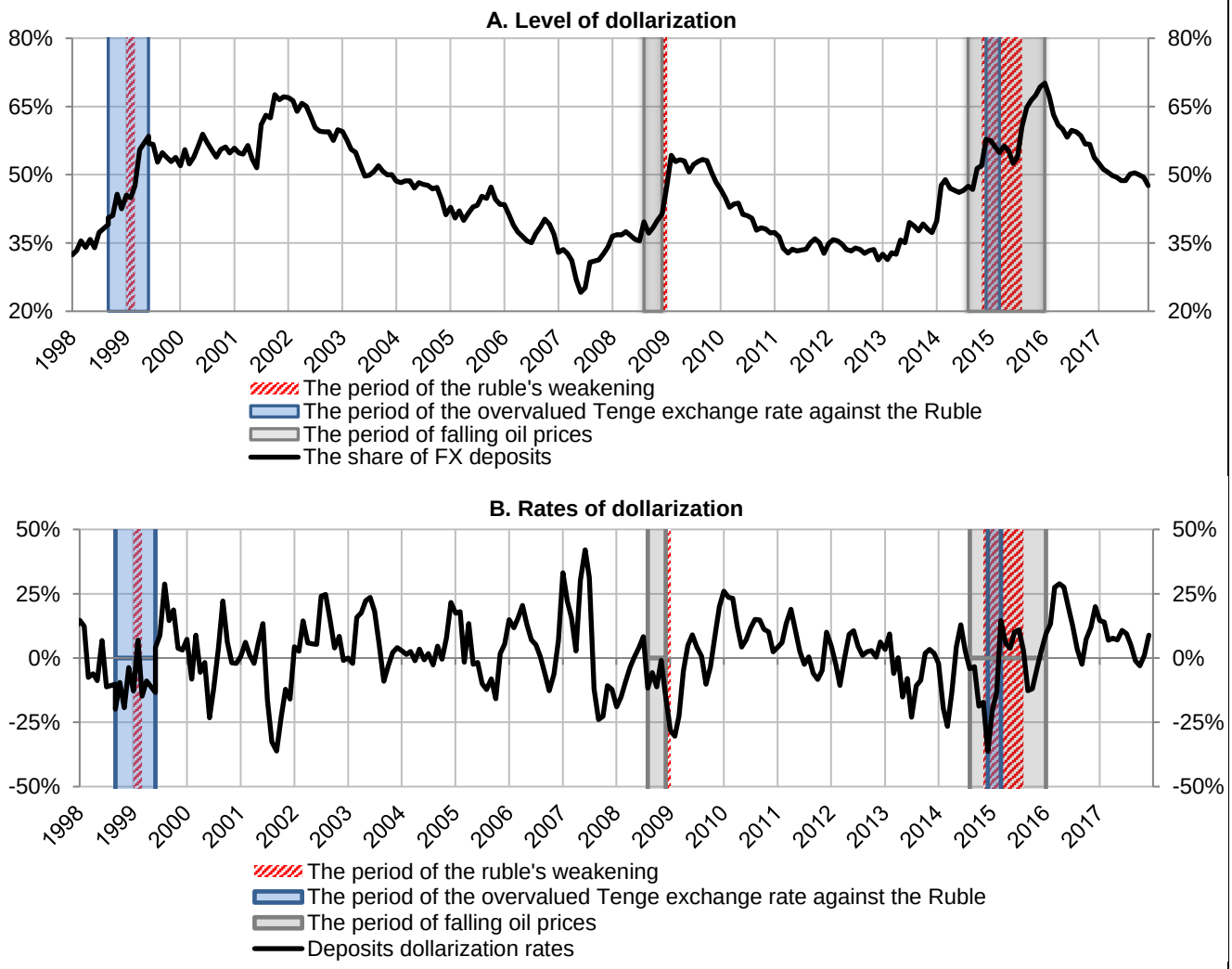
These measures restored confidence in the domestic currency, increased the attractiveness of tenge deposits, mitigated social tension, and resulted in gradual deposit conversion and decrease of FX deposits.

## Box 3. Index of deposit dollarization rate

Dollarization involves essential challenges for effective monetary policy implementation and sustainable development of the financial sector. Not only does a dollarized financial system reduce the effectiveness of monetary policy channels but it weakens the ability to manage macroeconomic processes. The main reasons of dollarization are high inflation and a credibility loss of local currency. Such conditions are usually caused by inconclusive fixed exchange rate policy.

To better understand depositors' preferences the National Bank developed an index that allows tracking daily rebalancing of currency composition in deposit portfolio adjusted for revaluation effect. Index of deposit dollarization rate is an approximate measure of a spread between pure flows of tenge and FX deposits adjusted for the effect of revaluation and interest paid. Dollarization rates in Figure 3.1 are annualized and averaged over the three previous months. Positive values of the index show the excess of flows of tenge deposits over FX. Thus, positive values of the index in percentage points indicate the process of deposit de-dollarization with a rate at which, if kept constant, annual dollarization will decrease by the same percent.

**Figure 3.1. Deposits in the banking system, at the beginning of the period**




Source: National Bank, reporting of banks, Bloomberg
Notes: Figure A) represents the dollarization levels measured as a share of FX denominated deposits.
Deposit dollarization rates in Figure B) represent an index of monthly rebalancing of currency composition in deposit portfolio and measured as a spread between inflows of tenge and FX deposits adjusted for revaluation effect and paid interest. The index is averaged over the previous 3 months and annualized.

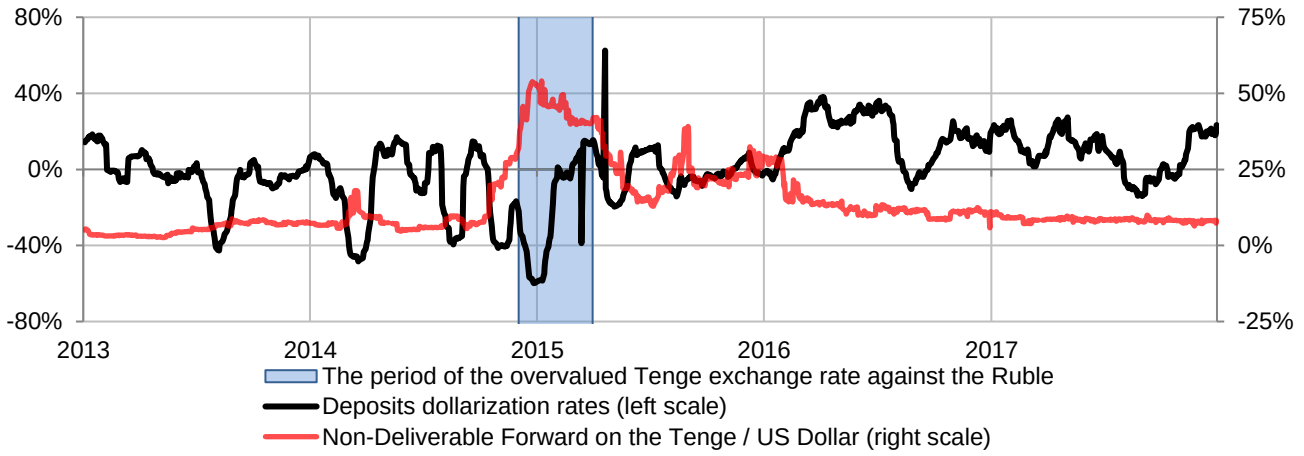
Data are monthly (01/1998-12/2017) and include term, conditional and demand deposits as well as card and current accounts. The colored areas in the figure refer to the periods of overvalued tenge to ruble (09/1998-05/1999; 12/2014-03/2015), weakening of ruble (01/1999-03/1999, 12/2014-01/2015 and 11/2014-08/2015), and a drop of oil prices (08/2008-12/2008, 08/2014-01/2016).

At the beginning of 2016 percentage of FX deposits reached 72%. The growth of FX deposits in the 4th quarter of 2015 was due to exchange rate revaluation, rather than conversion into FX deposits. This is evident from figures 3.1A and 3.1B according to which deposit dollarization rates during the 4th quarter of 2015 were persistently close to zero. At the same time a drop of oil prices and overvaluation of tenge exchange rate with respect to Russian ruble are good indicators of active dollarization periods (Figure 3.1B).

The relationship of dollarization in Kazakhstan with the market conditions is best observed between the real exchange rate and dollarization levels as well as between the value of exchange rate risk hedging and dollarization rates (Figure 3.1A and 3.1B). It is also possible to identify the relationship between exchange rate changes and dollarization rates index at a higher frequency (Figure 3.2).

However, the existence of such relationship does not imply its use in monetary policy. Exchange rate strengthening can force de-dollarization only for a short run, until real appreciation of tenge offsets dollarization level.

**Figure 3.2 Index of dollarization rates for individual term deposits**




Source: National Bank, banks' reporting, Bloomberg

Notes: Deposit dollarization rates represent an index of daily rebalancing of currency composition in deposit portfolio and measured as a spread between inflows of tenge and FX deposits adjusted for revaluation effect and paid interest. The index is averaged over the previous 30 days and annualized.

Data are daily (03/01/2013 - 29/12/2017). As of 29/12/2017 deposits of individuals account for 49% of total deposits in the banking system, and term deposits account for 89% of total deposits of individuals.

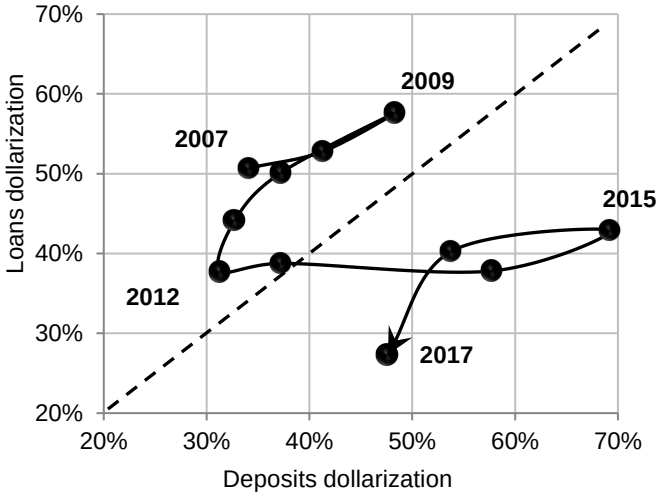
The colored areas in the figure refer to the period of overvalued tenge to ruble: 01/12/2014-31/03/2015.

**Dollarization of loans**

Credit portfolio dollarization amounted to 27% at the end of 2017, while in 2015 it was 43% (Figure 6.5). Despite the decrease of credit portfolio dollarization, the banking sector remains vulnerable to indirect FX risk.

**Figure 6.5 During 2014-2015 dollarization became one of the main funding problems**

end for period




Source: reporting of banks

To manage the short FX position, banks would lend in FX to pass the FX risks to borrowers who as a rule had no FX income. It appears that the reallocation of risks only amplified the total risk by substantially increasing exposure and only marginally reducing the probability. This was not obvious at the time because credit risks were more difficult to assess than market risks. A bank as a sophisticated market participant had access to hedging and so was better positioned to assess and manage FX risk on own balance sheet. As a regulator the National Bank aims at making banks seeks banks to employ systems of aggregate risk assessment and to make decisions taking into account all risks and factors including indirect FX risk acting through credit risk, the borrower's cash flow structure, funding conditions, market rate expectations and others. Differences in the risk level and its cost for each loan should be reflected not only in the interest rate, but also in loan loss provisions policy.

Therefore, to reduce indirect FX risks and to facilitate dedollarization of credit portfolio, the following measures were implemented effective from 2016:

- statutory restriction to provide FX mortgage loans to individuals without FX income;

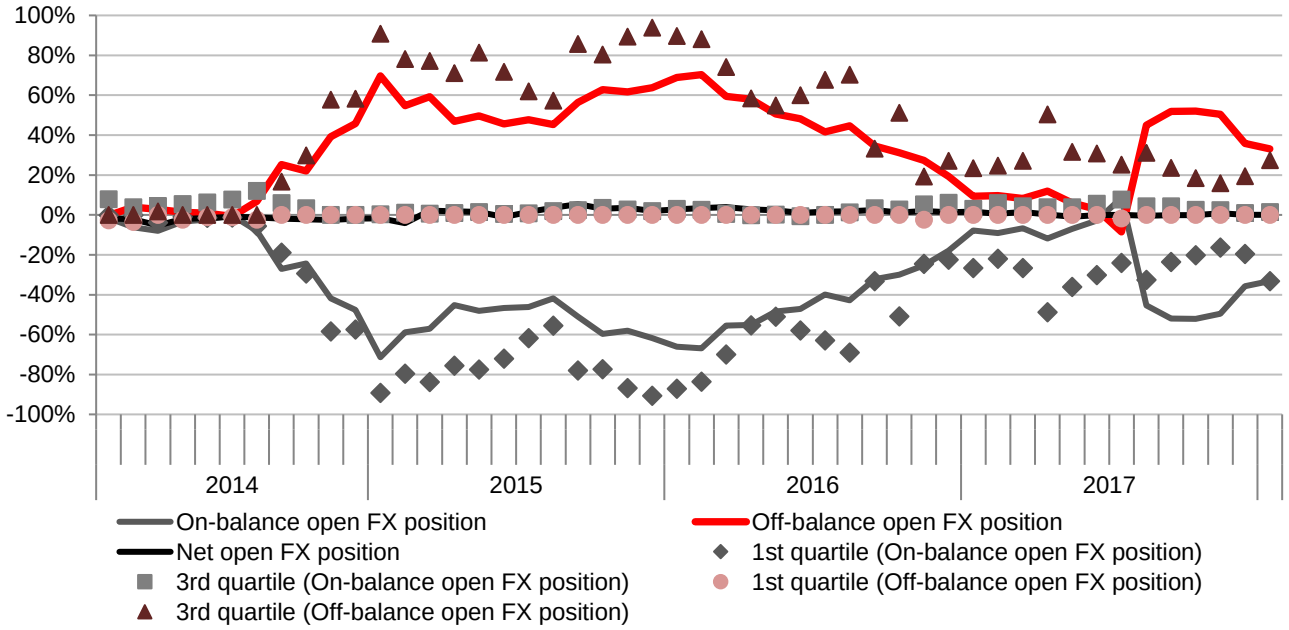
- tightening of prudential capital requirements with respect to FX loans to borrowers without FX income, including doubling risk-weight for capital requirement to 200%.

**The net direct exposure to FX risk in 2017 remains low, well within prudential requirements, with FX swaps with the National Bank helping banks maintain liquidity while keeping FX positions neutral.** Dollarization of liabilities continues to present a challenge to the management of FX position. The banks tend to monitor FX positions closely by keeping extra FX cash that comes with dollar liabilities. When deposits dollarized in 2013-2014, tenge-denominated liquidity eroded to dangerously low levels. With market FX forwards extremely illiquid and rates prohibitively high, rare bank used them for hedging before 2014 and no bank after. The National Bank responded by offering long term FX swaps (Figure 6.6). The swaps gave the banks short tenge to manage liquidity in the

present and long dollars to hedge against the expected FX risks in the near future (see Box 2, Figure 2.5).

**Figure 6.6 The ratio of open FX position to the capital of banks**

end of period




Source: reporting of banks

## Funding risks

**As concerns over currency credibility waned, the agenda of liquidity risks mitigation has shifted to problems of institutional nature. Here the main concerns were over high dependence on state and quasi-public funding, related and concentrated deposits, especially in FX, replacement of bonds and external funding with deposits, lack of stable funding features in deposits.**

### Dependence on public sector funding

After 2008 foreign and wholesale funding has been gradually replaced by domestic, largely retail funding. This trend was led by the public sector[8], which placed deposits and provided funds to subsidize the real sector lending. At end-2017, foreign funding accounted for 6% of banks' liabilities, down from 55% at end-2007. Over the same period, public sector funds ballooned eight fold to 35% of banks' liabilities (Figure 6.7).

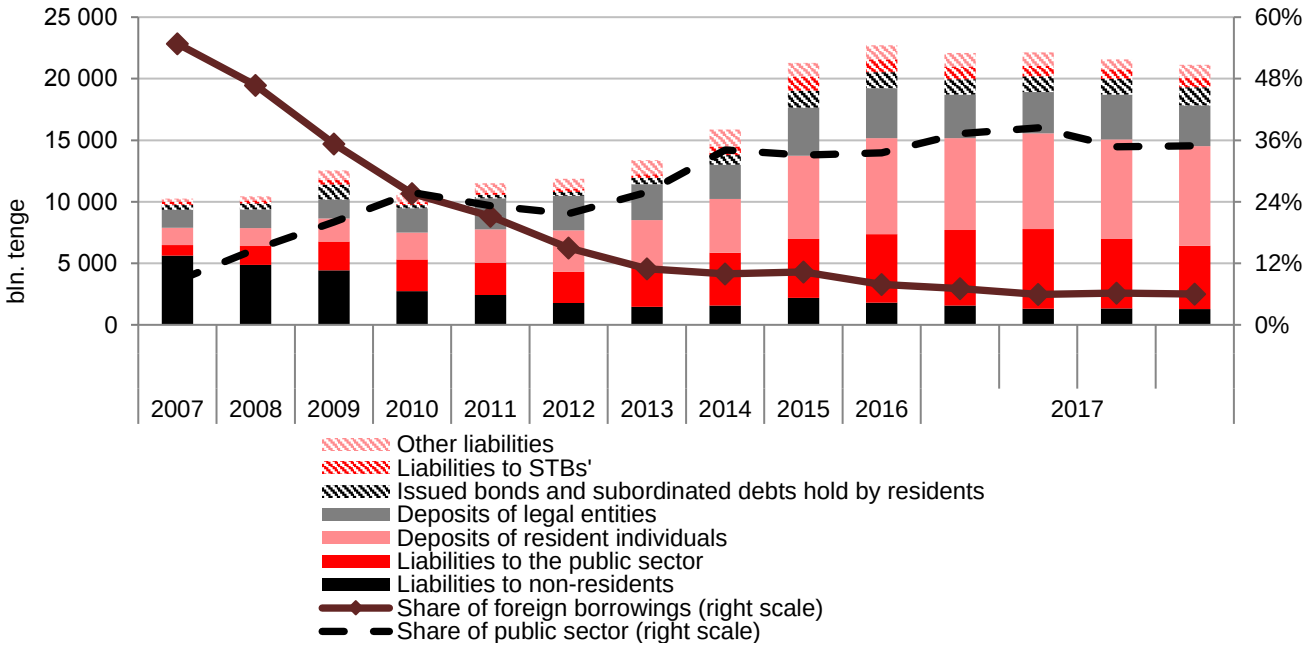
State support to the banking sector expanded after 2007-2008 crisis, when the government provided liquidity support to those banks facing difficulties with foreign debt repayment and access to external borrowings. This exposed the banks and the public sector to a number of funding and investments risks, adding to the preexisting fragilities and inefficiencies.

Concentration risk is the most obvious one. At end-2017 the share of public funding in certain banks significantly exceeded the average figures and amounted to 77%. These were mainly in deposits with early withdrawal rights, as was and remains standard market practice. High concentration on deposits with effectively on-demand withdrawal constrained

[8] Includes funds of state and quasi-government companies, public funds, pension assets accumulated in the UAPF

the ability of the banks to use the funds for lending without exposing themselves to massive liquidity risks.

**Figure 6.7 Funding structure**




Source: reporting of banks
Note: based on the estimates of the National Bank.
Public sector includes the banks liabilities to state authorities, quasi-government companies, public funds, the UAPF and the National Bank.

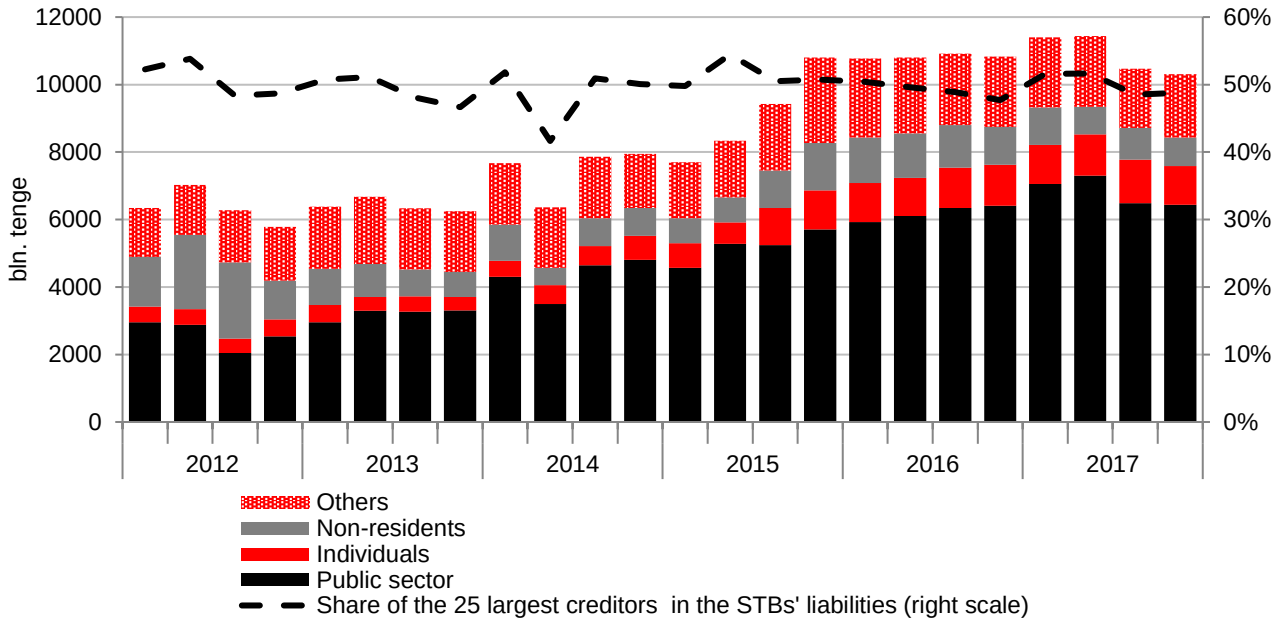
A less obvious and difficult to estimate risk relates to the process of public sector decision-making to allocate funds. It interferes with the National Bank mandate as a provider of emergency liquidity, as a prudential authority and as a resolution authority. Even as state funding mitigates liquidity risks of the banking sector in the short term, it weakens market discipline, crowds out market funding and impedes the development of risk management in the regulated banks. Indiscriminate state funding support gave unfair advantage to the less stable and badly managed banks, diluted the responsibility of their shareholders and the accountability of their management, helped bad reporting to go long undetected and allowed bad faith lending to continue unchecked. Provision of public sector funding to weak and potentially failing banks effectively amounts to a bailout before the decision of the resolution authority.

**To ensure long term stability of the banking sector and the effective operation of the emergency liquidity and resolution mechanisms, provision of indiscriminate and unconditional public funding needs to stop while the shareholders need to assume the losses before public sector participates in bank support schemes.**

### Risk of concentration and related funding

High funding concentration is closely related to the problem of dependence on the public sector. After retail deposits, banking sectors largest creditors are the state and quasi-government companies, majority of their claims are in the form of deposits. Concentration of large funding sources remains high (Figure 6.8). Twenty five largest creditors account for approximately half of liabilities of a weighted average bank. Of these, 71% are in the form of deposits and more than half in FX deposits.

**Figure 6.8 The 25 largest creditors by type of investors**
end of the period

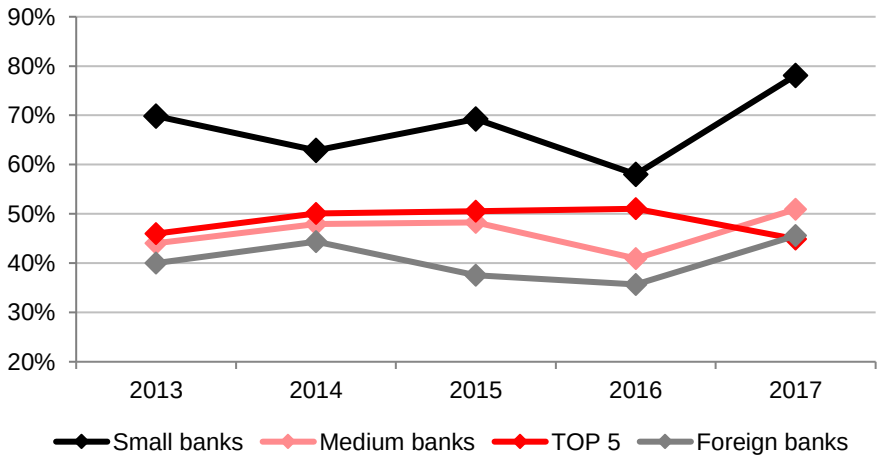



Source: reporting of banks
Note: The public sector includes deposits, held-in bonds and loans from the Government, SWF "Samruk-Kazyna" JSC, "Baiterek" JSC, "Kazagro" JSC, including their subsidiaries, associated companies, public funds, the UAPF JSC and the National Bank. The group "Others" includes financial organizations, KASE and entities not included in other groups.

Dependence on large deposits and high concentration indicate poor risk-management at regulated banks, especially the distribution of roles and responsibilities between business development and risk management. Current prudential regulation does not provide a flexible framework for assessment and measured response to unstable funding problems and the elastic system of incentives for banks to develop risk management. It requires motivated judgment and capacity building within the framework of risk-based supervision.

Small banks are the most exposed to the concentration risk with the percentage of funds of large creditors (depositors) reaching 78% of their liabilities as of the end of 2017 (Figure 6.9).

**Figure 6.9 The share of 25 largest creditors in banks' liabilities**
end of period




Source: reporting of banks

For small banks, high concentration largely reflects related funding. A number of small banks hold term deposits of the organizations that are apparently affiliated with the shareholders. Foreign banks are less dependent on related parties and have relatively low exposure to concentrated funding.

**Currently risks of funding from related parties are moderate. At the same time, the rise in the interrelatedness can establish channels for contagion and systemic risks. Therefore, the supervision needs to improve its capacity to identify related parties. Prudential requirements need to create an environment that penalizes concentration in a way that is commensurate with the risks it presents to the bank and the system.**

**Risk of deposit run**

At end-2017, deposits of individuals-residents of Kazakhstan accounted for 38% of the sector's liabilities. The risk of a bank run is mitigated by the classic mechanisms of deposit insurance and emergency liquidity provision. Both systems stand ready and operational. Deposit guarantees cover only individual deposits and eliminate the main rationale for deposit flight. The guarantee covers, fully or partially, 99.9% of accounts in tenge, and more than 95% of FX deposit accounts[9].

In addition, the National Bank, as a lender of last resort, is capable to provide liquidity to a solvent bank facing the deposit run. The lender of last resort mechanism is being improved to enhance accurate diagnostics of the validity and efficiency in consideration of banks' emergency liquidity requests. At the same time, banks can raise funds at predictable rates through standing facilities of the National Bank against the pledge of government bonds and FX currency.

**The risks of deposit run currently are highly correlated with the solvency of the bank, which usually takes the form of a slow outflow of deposits.**

**Maturity and pricing in the deposit market**

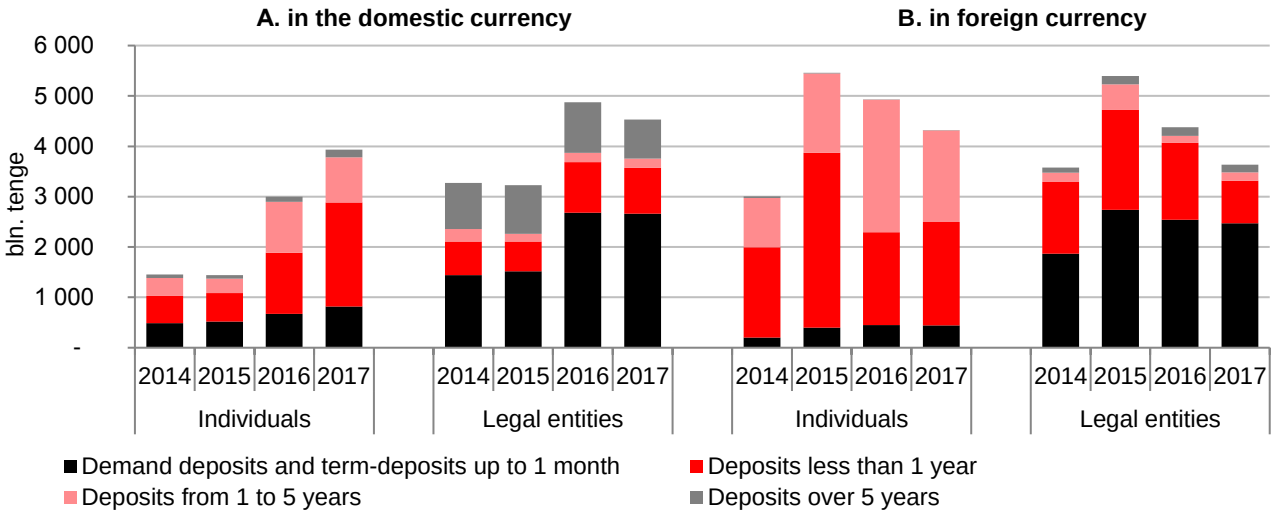
**Currently, most banks offer term deposits that allow early withdrawal without any penalties. Term deposits only in name, they dominate the market and are the main source of funding for banks. The average actual duration of funds is invariably shorter than the contractual one. According to international practice, early withdrawals are discouraged by penalties, to principal or interest. With no terms deposits, the yields curve based on deposit interest rates does not reflect the true term structure of the deposit interest rates. The National Bank plans to introduce measures to facilitate the development of true term deposits.**

As banks shifted from external to domestic sources of financing after the global financial crisis, deposits were considered a stable long-term source of funding. This misconception was grounded in the statistics based on nominal maturity of the deposit. According to contractual maturities, retail clients prefer medium and long-term deposits (Figure 6.10). However, in the absence of early withdrawal penalties, they are effectively demand deposits. Such products dominate in the deposit market.

[9] KDIF

**Figure 6.10 Structure of customer deposits by maturity**

end of period

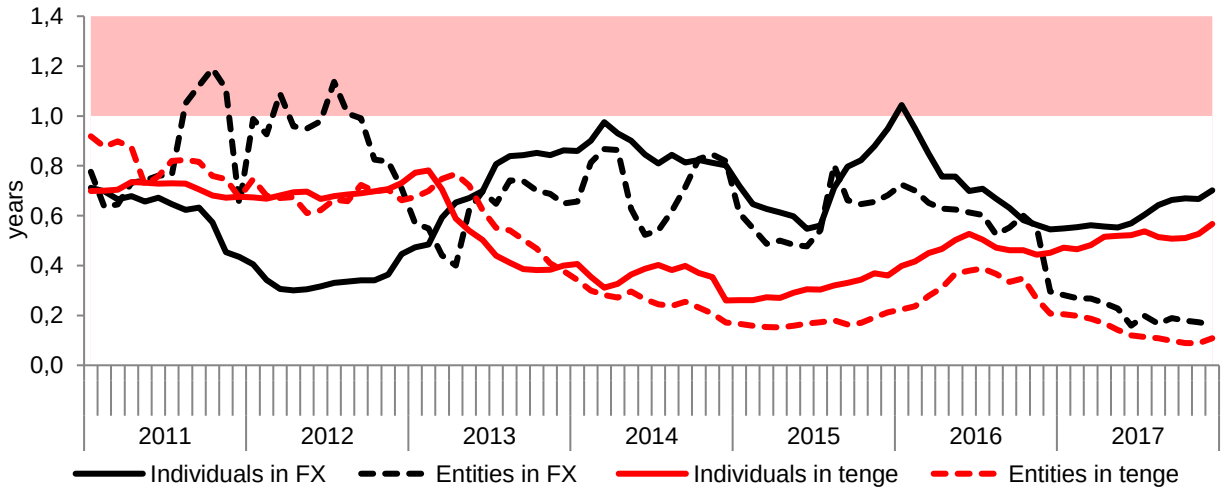



Source: reporting of banks
Note: Deposits of individuals and legal entities with accrued interest, positive/negative adjustments and premiums/discounts on deposits.

In 2017, the average life of retail tenge-denominated deposits with a nominal maturity between 1 and 5 years was about 6 months, down from 8-9 months in 2013. The trend in the actual duration of deposits is observed from 2015 and is common to tenge and FX accounts, corporate and retail. Currently, for corporate deposits the average duration of deposit with contractual term-to-maturity from 1 to 5 years, is only 1-2 months for both, tenge accounts and FX (Figure 6.11).

**Figure 6.11 Actual maturity of term deposits is shorter than contractual**

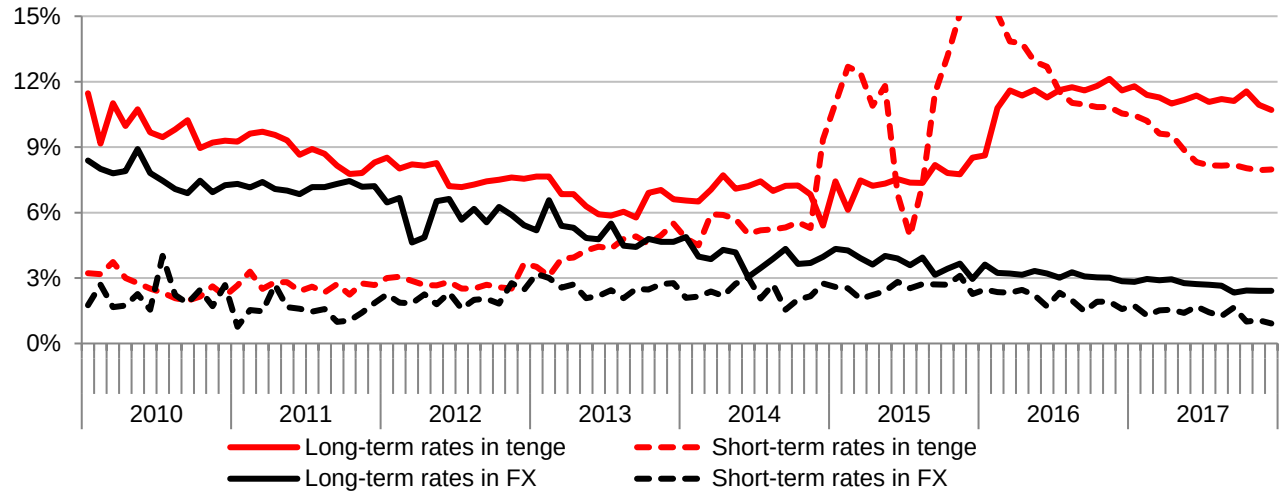
The average deposit maturity with a nominal period of 1 to 5 years



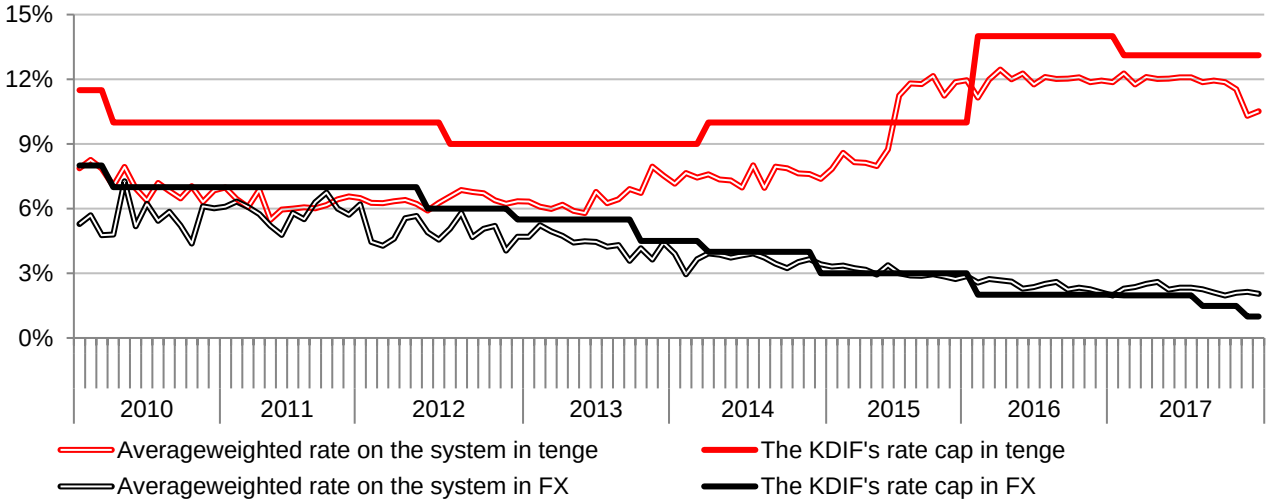

Source: reporting of banks
Note: The average life expectancy is determined as the inverse of the turnover (based on the average of funds deposited and funds withdrawn as a percentage of the starting balance.

**Figure 6.12 Average interest rates may exceed the maximum rate cap due to the top-ups of previously opened deposits**

A. all deposits by maturities




B. individuals' deposits by currencies




Source: KDIF, reporting of banks, National Bank's estimation

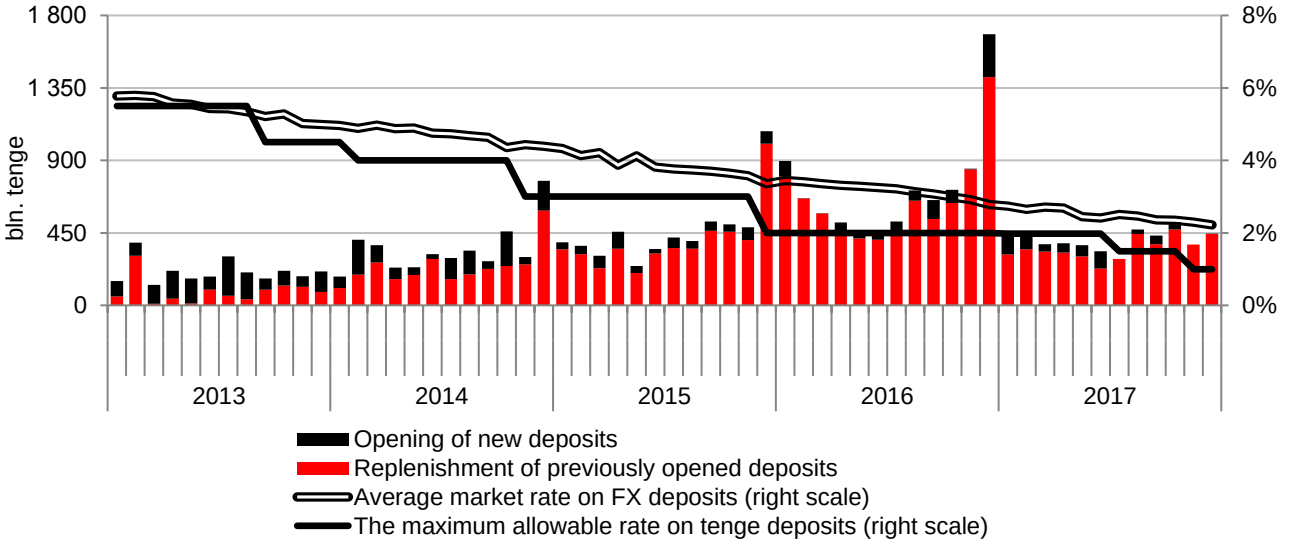
Currently, the KDIF sets a single interest-rate cap on individuals' deposits regardless their terms (14% for deposits in tenge, 1% for FX deposits as of the end of 2017). However, differentiation of interest-rate caps by the KDIF depending on the deposits maturity and early withdrawal penalties will facilitate to full-fledged market of term deposits, create deposits yield curve and increase the stability of deposits as a funding source.

**Interest rate risk on fixed rate demand deposits**

In a highly competitive environment, banks offer to depositors a right to contribute to fixed term deposits at will on fixed rate. When the rates are declining, additions to the previously opened accounts become the main way banks receive new funds. As a result, the weighted average interest rates on FX deposits exceed the interest-rate cap set by the KDIF (Figure 6.13). This increases interest-rate risks of the banking sector and average cost of funding, as well as reduces the effectiveness of the interest-rate caps of the KDIF.

**At the same time, introduction of rigid bans on additions would be unadvisable. Under risk based supervision, the most appropriate response is to ensure adequate accounting for the interest rate risk by banks and the differentiation between the standard deposits when setting interest rate caps.**

**Figure 6.13 As interest rates decline, deposits expand mainly by additions to the previously opened accounts**




Source: KDIF, reporting of banks, National Bank's estimation

The absence of deposits with floating rate is an additional factor that limits banks' ability to managing interest rate risk. This is due to the ambiguous definition and the uncertainty of its interpretation in the Civil Code that bans 'unilateral reduction of interest rates' on bank deposits'. Floating rates deposits can be interpreted by judges as violating this condition. Therefore, to develop floating rate deposits it is necessary to eliminate legal risks by making amendments to the civil law on the types of rates on deposits. This will allow banks to reduce interest risks and finance loans with a variable rate.

# VII. Concentration in the banking sector

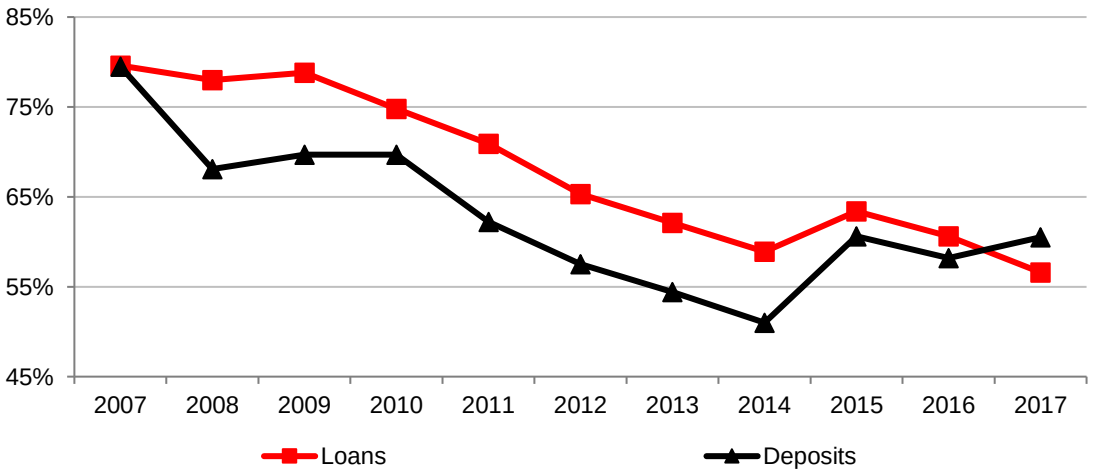
**In 2015, there was an increase in concentration in the banking sector due a major merger. Consolidation of the sector is expected to continue. Currently, all indicators of sector's concentration are in the middle of the range of international distribution.**

Numerous theoretical and empirical studies[10] show that concentration is not an unambiguous determinant of financial stability. The share of the five largest banks in European countries varies from 30% to 95%: in Germany, Luxembourg and Austria it is 30-35%, in Italy about 40%, in France – 48%, the average for the Euro area, in Slovenia and Spain – 60%, in Belgium, Cyprus, Portugal, Slovakia, Finland – 65-75%, in Malta, the Netherlands - 80-85%, in Lithuania, Estonia and Greece – above 85%[11].

Empirical studies and theoretical models suggest a multitude of factors and channels are at work, linking concentration, financial stability and other factors. The channels that contribute to the efficiency, stability and sustainability of the system (Beck et al., 2006; Evrensel, 2008) are also at work when it comes to the transmission and amplification of systemic risks. Consolidation can give a boost the profitability and, as a result, make individual banks and the system better at organic recapitalization. However, sustainability depends on improving the efficiency of the sector as a whole, including the effectiveness of governmental measures in crisis management, creating a regulatory environment conducive to sustainable development sector.

Kazakhstan banking sector is noted for the speed and amplitude of the changes that it goes through. Degree of concentration is one of the most dynamic. The share of assets of the five largest banks in the period from 2000 to 2017 varied from 52% to 79%. In 2007-2008, the concentration index was at the top of the international distribution, and in 2017 - in the middle of the middle part (Figure 7.1).

**7.1 Share of the five largest banks**




Source: National Bank

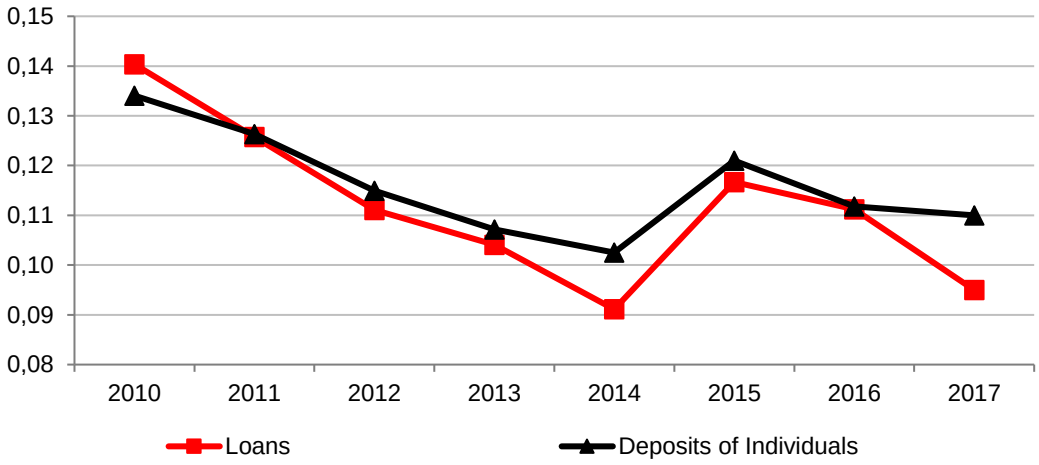
In the pre-crisis years, the share of the top five in the assets of the system grew rapidly due to the ability of these banks to borrow funds abroad. In 2008-2014, the share of the top five also declined promptly because of the rapid growth of smaller banks, unburdened by a portfolio of problem loans. The merger of JSC Kazkommertsbank and JSC BTA Bank, which by 2015 has long been out of the big five, temporarily increased its share.

[10] Source: IMF, National Bureau of Economic Research
[11] Source: ECB, IMF 07.2017

In 2017, the share of the five in the loan portfolio fell again after the withdrawal of the problem assets of the joint JSC KKB outside the banking system as part of the sector's recovery program. The concentration on deposits increased due to the transfer of deposits of legal entities from doubtful banks to reliable largest banks amid a general significant decline in corporate deposits.

Of the top five in 2008, only one bank remains in the list in 2017 and the rest are no more.

**Figure 7.2 The Herfindahl-Hirschman Index**




Source: National Bank
Note: the index is the sum of the squares of the market shares of all banks. The following interpretation of the index values is generally accepted: below 0.10 - low concentration, from 0.10 to 0.18 - medium level, above 0.18 - high

The Herfindahl-Hirschman Index (Figure 7.2) shows a similar picture, both in terms of concentration (middle to low) and its dynamics (decrease in concentration after 2008, interrupted by transactions between BTA Bank and KKB Bank).

Consolidation is usually achieved through mergers and acquisitions. Judging by the spread of concentration index in developed countries, there is an area for effective degree of consolidation. However, in order to ensure the priorities of financial stability and efficiency, each merger and acquisition transaction need to go through a thorough analysis of public costs and benefits, including the analysis of synergies, economies and diseconomies of scale at the corporate level. To achieve an effective balance of consolidation, it is necessary to exercise supervisory control over the consolidation process, including encouraging mergers that contribute to efficiency gains, as well as analyzing proposals for merger deals to identify mergers in which efficiency gains are insufficient to justify consolidation and other negative economies of scale effects, leading to the accumulation of fragility of the system. Applications for merger should be carefully checked for adequacy of regulatory and economic capital, adequacy of financial and regulatory reporting, and realism of the business model of the merged bank.

It is also necessary to ensure that consolidation does not result in a bank ’too big to fail’, a bank that is so large that the damage to the economy from its failure significantly exceeds the fiscal cost of its bailout.

It goes without saying that the regulator should prevent, whenever possible, the merger of weak banks, which could result in a large, potentially systemically important bank that will soon require state support. In this direction, regulatory control of consolidation deals should be complemented by step to improve the efficiency and effectiveness of mechanisms for identification and resolution of insolvent banks. An orderly and prompt

resolution of insolvent banks gradually leads ineffective companies out of the market, and weakens the problem of ’too big to fail’ bank.

High market share could make banks more profitable and thus to increase their ability to rebuild capital. A competition that is too intense, and is steered in the wrong direction by poor corporate governance and misguided regulation, can weaken returns on equity, lower the value of franchise and increase the willingness to risk it all. Competition is also procyclical: in booms banks compete for borrowers, in busts – for funds. Competition rewards the riskiest bank as a lending leader in boom and as a price leader in the deposit market in liquidity crunch. It promotes weaker lending standards, transmits the risks of the riskiest banks to the entire system, making them systemic. The National Bank is aware of these risks and acknowledges them in the design and implementation of regulatory mechanisms, regulation of underwriting standards, assessment of informational systems, reporting and in regulations of the funding market.

Economy of scale allows large banks to use more advanced risk management systems and be more diversified. Fewer banks are easier to supervise well. But concentration also carries risks. Fewer banks are better at coordinating their positions and advancing against the best interest of the public. The public costs of resolving too big to fail banks are high precisely because the trade-off between bailing them out and liquidating shifts deeply in favor of a bail out. Accordingly, the resolve to bail in, let alone liquidate, is ceteris paribus, much weaker. Expectations of applying the "too big to fail" approach to the system bank create calmness of creditors, weaken the market discipline and increase the risks of insolvency.

Both concentration and competition can enhance and weaken the effectiveness and sustainability of individual institutions and the system. Only effective prudential regulation and independent and proactive supervision can make the trade-off between concentration and competition less moot, less unhealthy and antagonistic and more win-win.

# VIII. Addressing institutional and structural gaps

## 8.1 Institutional and structural gaps

**In 2017 the National Bank supervision policies continued to shift from crisis management to a more systematic response based on the analysis of institutional and legal constraints and the current funding structure of banks. The former included a clean-up and the sale of a systemic Kazkommertsbank (KKB) and program of support to several large banks. The latter consist of the legislative initiatives to strengthen the supervisory and regulatory mandate in identification and resolution of insolvent banks.**

Poor asset quality and reliance on public sector funding – the two problems that came to dominate the financial stability discourse in recent years – were rooted in the institutional arrangements with long and checkered history. Efforts to address asset quality issues head on did not result in material improvements until the underlying issues of decision-making power were addressed. These institutional problems were exacerbated by dollarization of bank liabilities and poorly diversified SME sector, a consequence of high dependence on oil exports and the imperfect credibility of the fixed exchange rate.

In 2013 the regulator allowed banks to use IFRS-based loan impairment methodology, which relied on managements' opinion much more than the supervisory methodology that it replaced. As a result, the gap between the actual and the reported asset quality widened further.

It was against these structural and institutional weaknesses that the macroeconomic shocks of 2015 struck a blow at the fragile and opaque banks. As oil prices dropped, property values declined, currency weakened, the weaker banks began to experience acute liquidity problems.

In 2016 the National Bank initiated a review of the supervisory and regulatory practices with the aim of identifying the regulatory gaps and remedying them. Top in the list were the issues of poor quality of assets, the related problem of poor quality of financial and regulatory reporting, and what needed to be done to assess NPL and LLP more objectively.

During 2016-2017 the National Bank inspectors became increasingly diligent in questioning the assumptions underlying loan quality reports and, effectively, developed own approach to LLP assessment that was consistent with the IFRS and which the auditors were unable to disagree with. As a result, substantial discrepancies emerged between the losses as assessed by banks under managerial discretion and the losses per the National Bank findings.

In order to avoid recognizing the losses in financial reports, banks facing massive deterioration of loan quality used all discretion afforded to management under IFRS 39. Their methods included tenor extension, other forms of loan restructuring, inadequate security. Bad security, for example, could be in the form of overstated property, off-take agreements, procurement contracts and other promises of cash flows contingent on the success of the project, collateral with limited recourse, guarantees issued by insolvent or untraceable guarantors. Loan restructuring allowed banks to treat de facto non-performing loans as standard. At some banks loans secured by bad collateral accounted for as much as 80% of the total. These practices allowed the bank, which were effectively undercapitalized or insolvent, to maintain the appearance of adequate capitalization.

**Related party lending and the presumption of affiliation**

Related party lending was the main cause of poor asset quality. Although the regulations were in place, they proved ineffective without supervisory discretion in establishing the relatedness. The notion of related party loan was derivative of a statutory definition of a related party, which was a rigid list of legally verifiable ownership/control or blood/marriage relationships with a bank, its management or major shareholder. The definition was rules-based and so could easily be gamed. In fact, as international experience demonstrated, any rule-based definition of related party would be just as ineffective and would make related party loans difficult to identify and easy to deny.

Related party lending emerged as Kazakhstan's most serious lending malpractice that allowed shareholders to finance personal projects with public funds. At some banks, related party lending was used to finance capital injections, allowing banks to raise leverage at will. In later stages of balance sheet deterioration, related party lending became a preferred way of asset stripping. In all cases, undetected related party lending resulted in an overstatement of the equity capital in the amount of the loans.

The practice became widespread due to such institutional weaknesses as low responsibility of bank's management, auditors and appraisers for the quality of financial reporting, increased subjectivity of banks in the process of provisioning under IFRS, lack of supervisory judgment. Even as the awareness grew, the solution proved elusive within the limited supervisory mandate.

The National Bank drafted amendments to the banking laws (to be signed into law in 2018 and to take effect in 2019) which are expected to lift this statutory constraint. The amendments embrace the principle of presumptive affiliation whereby the regulator has the discretion to identify related party loan based on economic indicators and to treat the loan as such until convinced otherwise by the evidence presented by the bank. According to the principle, the regulator has the right to recognize a loan as related party loan based on the observable terms of the loans and assessed creditworthiness of the borrower, and to draw conclusion about the economic merit of the transaction, rather than attempting to establish the easily concealed relatedness. The principle replaces the rule-based definition of a related party with a standards-based regulation and thus shifts the burden of proof from the regulator and to the management.

**Resolution mandate was effectively limited**

Another shortfall in the regulatory mandate was in the practical ability to identify an insolvent bank and to resolve it. In large part, it followed from the limited supervisory mandate: without the right to identify NPL and impose provisions, the regulator could not justify a revocation of the license. In part, it was due to the drawbacks in bank resolution legislation (section 8.2), which made the application of resolution tools difficult, slow and costly. And partly the mandate was limited by the ability of the banks to challenge the decision of the regulator in the court of law, with potentially serious consequences for the staff. The end result was that the practical ability of the regulator to resolve an insolvent bank without systemic disruption has been extremely limited.

And even if these challenges could be resolved, application of bail-ins could not be justified solely on the grounds of protecting taxpayer's money. After the crisis of 2007-2008, banks in Kazakhstan shrank significantly. Since then, bank lending has been largely supported by deposits of public and quasi-state companies, directed lending, interest rate and loan restructuring subsidies. Within five years public sector replaced foreign creditors as a major source of funding for increasingly fragile banks. By then bail-ins could no longer shield the public sector from bank losses because the public sector was already exposed. Effectively, public funds bailed out the failing banks before they were known to be failing.

This meant that in the least cost resolution, the public sector would acknowledge the losses one way or another: in a bail-in as state-owned creditors, in a bail-out – as fiscal authority.

Delaying the action and masking bank failures as in prior years was not an option either because it would keep the discredited management, elevate further the already high systemic risks, expose the public sector to further losses and perpetuate the value destructive practices.

Given these institutional constraints and the existing funding structure, the National Bank identified policy priorities and responded by taking the steps that could be broadly characterized as follows:

1) state-funded bailout of a systemic KKB by way of repurchasing its bad assets in exchange for cash and government debt and the subsequent recapitalization of the cleaned-up bank by a strategic investor;

2) a program of financial support for several large banks that included upfront provision of convertible capital by the state and equity injection over the years by shareholders;

3) amendments to statutory and regulatory banking laws aimed at strengthening the supervisory and resolution mandate of the National Bank, including risk-based supervision, to be developed and applied in line with the best international practices.

The first two were decisive in managing the crisis. The third was needed to establish the framework for effective supervision going forward.

## 8.2 Measures to strengthen supervision and bank resolution regime

**During 2015-2017 the National Bank has reviewed the supervisory and regulatory policies in light of the problems that afflicted banking system: the number of undercapitalized banks, poor quality of reporting and the role of independent auditors and appraisers. The review revealed institutional and statutory constraints that the supervision faced in assessing the veracity of financial and regulatory reporting, in acting based on that assessment, in identifying undercapitalized banks and in resolving them in an orderly manner.**

### Constraints on effective supervision

The supervisory process had elements of discretion, but in practice was formal, with regulatory action taken only in the case of explicit breech of prudential requirements. However, these requirements were easy to evade given the lack of regulatory control over the integrity of financial data and lack of regulatory judgment. For example, related party banking regulations were based on the statutory (Company Law) definition of a related party, which was based on the existence of specific legally verifiable relationships of ownership or control. This rendered related party regulations ineffectual because a bank could lend to a person that was controlled informally, in a way that was difficult to observe and prove in court.

Similar problems would arise with the assessment of the loan quality, its collateral, in identification of transactions that could worsen the financial state of the bank. In the international practice bank regulators are vested with the powers to apply a motivated judgment in identification of individual loans, risky and fraudulent transactions. Without clear legal mandate to exercise discretion in the assessment of every aspect of banking activities, the supervisory powers of the National Bank were greatly diminished. It led to proliferation of related party lending, decline in the quality of financial reporting, abnormal rates of non-performance, all of which resulted in massive destruction of value for creditors, public sector and in terms of resource misallocations for the rest of the economy.

**Barriers to effective bank resolution**

Legal foundations of bank resolution in Kazakhstan were revised after the 2008. The reform introduced various tools for recovery and resolution of insolvent banks including transfer of assets and liabilities (P&A), establishment of a stabilization bank and, in the case of capital deficit, compulsory sale of common shares for a consideration determined by the regulator. However, debt restructuring required creditor consent; the shareholders had the right to appeal the decision of the regulator and the courts could overturn it. These drawbacks significantly limit the ability of the National Bank to resolve a bank quick and orderly.

In particular:

1) The National Bank did not have a legal right to bail-in creditors without their consent. The current legislation allows only voluntary restructuring of liabilities conditional on the consent of at least 75% of creditors. The restructuring of cross-border debt is fraught with additional risks, including sovereign risks that will necessarily arise in a bail-in of Eurobonds that are regulated by English law and are unlikely to accept the decision of the National Bank as legitimate.

2) Decisions of the National Bank on resolution of an insolvent bank may be challenged by shareholders and creditors in the court of law. This also does not correspond to the best international practice. According to the principles of effective resolution (FSB, 2012), the decisions of an authorized body should not be subject to reversal in court and remedies should be limited only to monetary compensation. The principle is critical to the efficiency of the resolution regime because without it the shareholders could bog down the process by appeals and inflict further losses to the creditors.

3) The process of identification a failing bank, the indicators of insolvency, the resolution measures are not stipulated in the statutory law. This leads to delays in taking decisive measures, weakens the responsibility and motivation of the shareholders for recapitalization, and exposes the National Bank to reputational and legal risks.

4) International principles, which protect the rights of the creditors, including 'no creditor worse off' principle (FSB, 2012), have not been adopted. Mandatory resolutions such as bail-in, P&A, stabilization bank are necessary measures to resolve an insolvent bank with the least disruption for the system and the minimum loss of value. Since 'no worse off' principle is based on liquidation values, the rights and the interests of the creditors should also be treated according to the hierarchy of claims in the liquidation scenario.

5) Some resolution tools under current legislation require the consent of the creditors. For example, transfer of assets and liabilities to a stabilization bank could be blocked by a single holdout creditor, unless repaid in full.

6) The current law does recognize repayment of debt or withdrawal of deposits from a failing or failed bank as a preferential or fraudulent transfer or a cause of action for creditors. Nor does it give the National Bank the right to declare such transactions null and void. These gaps in the law and in the regulatory mandate limit the ability of the National Bank and the creditors to claw back the assets withdrawn due to fraudulent transfers.

**Recommended reforms in supervision and regulation**

Institutional and legal gaps in the regulatory mandate weaken the ability of the supervision to stop value-destructive practices and minimize the social costs of their fallout when they cause a bank to fail. The gaps in the resolution mandate raise the costs of resolving the failed banks by making the process unnecessarily protracted, by exposing the decision-makers to civil liability, by allowing courts to reverse the regulatory decision. To

address these gaps, in 2017 the National Bank drafted amendments to the banking laws based on the recommendations of international bodies (FSB, BCBS, IMF). They aim to provide the following:

**1) Risk-based supervision with scope for motivated judgment.** These amendments will limit the risks of the financial organization and prevent the development of crisis in the banking sector. Motivated supervisory judgment will be applied to the assessment of asset quality and risk management systems, identification of related party transactions. The supervision will be given a wider scope for cause for action, more meaningful instruments to compel recapitalization. Some amendments are aimed at raising the responsibility of the independent auditors and appraisers for misrepresenting and concealing financial information.

**2) Coherent bank resolution regime.** The first step of bank resolution is the identification of a bank in need of resolution. The draft law distinguishes between unstable banks and insolvent banks. An unstable bank, while not subject to immediate resolution, is to be placed into special supervisory regime. The regulator will have the discretion to exercise motivated judgment to place a bank into either category. In particular, the regulator could adjudge a bank to be unstable even if it does not breach capital requirements, but may breach them as a result of certain transactions. Under the special regime, an unstable bank will be given a set of time to remedy the shortfall. The maximum period of time for recapitalization and enhancing solvency will be determined by law and the regulator will not be able to extend it. The intent was to make the threat of supervisory action more credible, prevent delays and motivate compliance.

Effective resolution requires that the losses, in excess of those absorbed by equity, be shared by major creditors. The draft law gives the resolution authority the right to restructure debentures and imposes losses on them. Mandatory restructuring (bail-in) includes conversion of insolvent bank's liabilities into equity, partial write-off, change of the maturity and interest rates. This will minimize state costs on the bank resolution.

The amendments acknowledge the international principles of efficient bank resolution. In particular, the courts will no longer be able to reverse the decision of the regulator in matters of supervision or resolution. The courts will only be able to award the damages which will be assessed relative to the liquidation scenario, which effectively implements the 'no creditor worse off' principle. The draft law revises the hierarchy of creditors in the liquidation and requires that no creditor should be subject to losses until the shareholders capital is fully written off. The resolution authority will no longer need to seek consent of the creditors, allowing for faster and more efficient resolutions.

**3) Clawbacks of preferential or fraudulent transfers.** Amendments in this aspect of the law will recognize preferential or fraudulent transfers as a cause of action for the creditors and will give the regulator the rights to identify and null and void such transactions by courts. This will provide the legal basis for the regulator and the creditors to recover some of the losses.

Adoption of these amendments is expected in 2018 and is critical for sustainable operation of the banking sector.

## 8.3 Activities of the Council for Financial Stability and Development of the Financial Market

In 2017 the Council met three times to discuss the policies aimed at financial sector development and more efficient regulation. Given structural imbalances accumulated in the banking sector, the meetings' agenda was focused on current issues regarding regulation of second-tier banks, improvement of their sustainability and resilience. In particular, the following topics were discussed at the meetings:

the Program on financial sustainability enhancement of the banking sector under which state funding was provided to large banks conditional on the capitalization by shareholders. The implementation of the program will be accompanied by the reform of the regulatory and supervisory system for banking activities, with the transition to risk-based supervision;

development of an effective resolution regime of insolvent banks in accordance with the recommendations of international organizations. The regime facilitates to legal and economic conditions for the effective recovery and resolution of problem banks by minimizing public costs and systemic risks;

measures to strengthen anti-money laundering and combating the financing of terrorism aimed at solving issues related to the risks of engaging banks and their clients into queer transactions (deals);

problems of agricultural holdings and their impact on the banking sector, including determination of the actual amount of debt, adequacy of banks' capital for loss absorption and barriers to debt restructuring;

introduction of the IFRS 9 "Financial Instruments" to improve the stability of the banking system, the ability of banks to absorb future losses and risk management system.

In 2015-2016, seven meetings of the Council were held to solve problems of Kazakhstan's financial sector and to propose perspective directions of its development. To enhance the stability of the banking sector taking into account the existing challenges Council members:

approved approaches to countercyclical regulation and restriction of systemic risks of the banking sector (maintaining of minimum capital adequacy ratio and capital buffers, abolishment of the maximum consumer loan growth rate ratio (k10), increase in risk-weighting for unsecured loans granted to individuals, introduction of an individual approach to each bank on compliance with the maximum cap on non-performing loans, reduction of risk-weights for certain types of loans, risk limits on concentration of deposits of individuals);

adopted the Concept of countercyclical prudential regulation of the financial sector of the Republic of Kazakhstan aiming to ensure continuous and uninterrupted provision of banking services, to reduce the impact of certain negative factors in the financial sector and the economy in general;

considered issues of increasing the effectiveness of prudential regulation of banks aiming to improve prudential standards methodology and the system of early response measures;

discussed issues of further functioning of Problem Loans Fund, including increase in its capacities by funds of the National Fund.

In order to develop the insurance sector regulation, the following issues were raised at the Council meetings:

enhancement of actuarial activity and activity of insurance intermediaries (insurance agents and brokers) aimed to improve their professional level, status and responsibility;

improvement of life insurance products and compulsory insurance;

introduction of imputed insurance, according to which the conditions are determined by parties' agreement, taking into account the specifics of client's activities and interests;

creation of a reference database of insurance contracts containing reliable and complete information for insurers, policyholders and regulator;

improvement of the activities of Insurance Payments Guarantee Fund;

expansion of the insurance ombudsman’s activities for pre-trial settlement of disputes for all classes of compulsory and voluntary insurance;

raising the requirements for foreign reinsurers and increasing the potential for using the national co-insurance and reinsurance market;

other measures aimed at improvement and promotion of the insurance market (changes in insurance products taxation, introduction of online insurance, introduction of the europrotocol in order to simplify the procedure for the citizens to register an accident report without calling traffic police, Kazakhstan's entry into the international auto insurance system "Green Card" which allows car owners to insure in their country civil liability abroad).

Particularly attention was paid to the development of securities market. Thus, Council members and financial market participants considered and adopted decisions on the following issues:

transition to the risk-based supervision of securities market participants, which removes a number of restrictions and requirements for transactions with financial assets in the market (such as restrictions on transactions based on affiliation, minimum rating, etc.);

establishment of an alternative exchange platform at the Kazakhstan Stock Exchange without supervision over manipulation transactions, with minimum requirements, low tariffs and other conditions to facilitate capital raising and its placement on the stock market;

introduction of investment banking by expanding the functions of brokers with custodial activities, trust management and some banking operations;

measures aimed at stock market promotion (subsidizing coupon interest on bonds under the state programs, special conditions for the selection of issuers, establishment of Alt Pre-IPO that invests into the capital of SMEs for subsequent listing on the stock exchange, application of tax incentive measures for IPO companies on the domestic market).

Also, as a part of the decision-making process on the financial market problems Council members and financial market participants discussed:

problems of integration of Kazakhstan’s financial market into the Eurasian Economic Union, including legislation harmonization for the countries;

development of the International Financial Center Astana;

improvement of the legislation in the field of payments and payment infrastructure, including introduction of modern payment mechanisms and innovative solutions in line with world trends;

regulatory approaches to non-resident financial organizations arising from the accession of Kazakhstan to the World Trade Organization;

the National Bank's proposal on the developing of financial sector’s HR potential, including establishment of the Training Center of the National Bank on the basis of the existing Academy RFCA.

# IX. Measures to enhance financial soundness of the banking sector

## 9.1 Recovery of Kazkommertsbank

**Recovery of the systemic bank was an important step in ensuring stability of the entire banking system. Under this process Kazkommertsbank (KKB) recognized all losses detected by the National Bank, completely wrote-off equity capital and received government support through purchase of its problem loans. The bank was subsequently acquired by a strategic investor, Halyk Bank, and recapitalized. Without state support serious exposure of this bank could have led to systemic contagion with risks for the entire economy.**

**KKB purchase of BTA Bank in 2015.** In a series of transactions during 2014-2015 KKB acquired majority of BTA Bank common shares, had it surrender a banking license, assumed some of BTA Bank assets and liabilities, transferred to BTA Bank some of its problem assets and balanced the exchange by making BTA Bank its largest borrower, controlled by the same shareholder. The transaction, carried out in the name of financial stability, did not improve the two banks' non-performing loans other than in financial reporting.

In particular, there was no due diligence of the transferred assets, which might have resulted in recognition of the losses on non-performing assets. All claims against BTA Bank were assumed by KKB. These exceeded the book value of the net transferred assets by some KZT 1.6 tn, mostly dollar denominated (by then 2.4 tn as a result of revaluation of FX loan portfolio). The exchange was netted by a series of credit lines, structured as long-term bullet loans, mostly dollar denominated. Subsequently, BTA Bank had difficulties servicing them, but at the time KKB treated them as standard on the grounds of no delinquency and set aside little reserv*es* against the losses.

**Resolution of KKB in 2017.** Bank inspections in 2017 revealed the scale of KKB's unrecognized losses to be comparable to or exceeding the rest of the banks'. This posed a systemic risk for the financial sector and the economy. The solution was impossible without the participation of the state, given the scale of the losses, systemic importance and the fact that creditors were predominantly from public sector.

In 2017 a loan to BTA Bank amounted to about 50% of KKB's loan portfolio. As is, the bank had no positive value for a strategic investor, even if the equity were wiped out. To clean the bank and raise its value into non-negative territory, the state-owned asset management company (Problem Loans Fund) bought the claims against BTA Bank at face value (by then KZT 2.4 tn) to be settled by BTA Bank with its assets. Given the size of the target, Halyk Bank was the only viable candidate as a strategic investor capable of recapitalizing the cleaned bank.

With these in mind, the Government of the Republic of Kazakhstan as represented by the Ministry of Finance, the National Bank, Samruk-Kazyna, Problem Loans Fund, Halyk Bank of Kazakhstan, BTA Bank, KKB and its shareholder reached agreement and signed a Memorandum of Understanding in March 2017 and on June 2, 2017, the Framework Agreement, clarifying the details.

To assess the fair value of assets of KKB, due diligence by two independent auditors, hired by the National Bank and Halyk Bank was conducted. Based on its results, KKB set aside additional LLP and adjusted its net asset value by about KZT 550 bn, wiping out KKB common stock, first to bear the losses. KKB used the proceeds from the sale of claims against BTA Bank to:

- repay debt to the National Bank (KZT 625 billion), which was accumulated in several tranches of liquidity assistance starting December 2016;

- buy KZT 1 tn of special issue long term Ministry of Finance bonds.

To manage the short dollar position that opened after the sale of dollar-denominated credit lines and shortage of liquidity, KKB took a dollar-tenge swap KZT 1 tn with the National Bank for a one year term, to be renewed. After that, strategic investor purchased KKB for 1 tenge and recapitalized it to comply with capital adequacy requirements.

In the end, KKB improved its asset quality, was properly capitalized and stocked with liquidity to do continue operations. The transaction was critical for the stability of the financial system, the economy and the welfare.

When making the decision to clean KKB balance sheet and sell it to a new investor a number of factors needed to and were taken into account. These included the funding structure dominated by public sector and institutional constraints that elevated the risk and the impact of potential spillovers to the rest of the banking system and the economy.

First, KKB was funded predominantly by the public sector: state-owned companies, the Pension Fund (KZT 1.5 tn). Individuals' deposits (KZT 1 tn) that remained would be largely covered by deposit insurance provided by KDIF, a public sector company. In liquidation, the losses beyond those absorbed by the equity would have to be inflicted on the creditors. Liquidation, least cost resolution or bail out, the public sector would suffer essentially the same financial losses.

Second, the non-residents accounted for a fairly small proportion (around KZT 400 bn), but would need to be treated pari passu with each other, and possibly with senior domestic creditors. Subjecting holders of Eurobonds to a bail-in, especially those bonds inherited from BTA in 2015, would risk legal action against the sovereign, partly because of the haircut history of BTA bonds, and partly because the resolution authority of the National Bank would not be recognized as such by the courts that would adjudicate the legal action by the bailed-in creditors.

Third, the institutional and legal limitations effectively denied to the resolution authority the option of least cost (coercive) resolution. Within the legal environment at the time, domestic creditors and the shareholders could appeal the decision of the regulator to impose provisions, to revoke the license, to dissolve the bank or to impose haircuts with on creditors consent (See Chapter 8 for details). This could bog down the process for months, and expose the staff to the risks of civil liability.

Finally, KKB was a systemic bank. It processed a prominent share of payments and held an equally large share of deposits. A protracted liquidation or a bail-in was likely to trigger payment failures, bank runs, resulting in a loss of confidence and associated collateral damage to the financial system and the economy, which could easily close the gap in direct financial costs with the chosen arrangement.

International experience shows that liquidation of a systemic financial institution is often fraught with high probability high impact systemic risks. As recommended by international experts (see Box 4), state participation is justified only to counter a threat to financial stability and should be done in a way that mitigates moral hazard and ensures fair allocation of losses.

Other recovery mechanisms were more costly and more risky. Direct capitalization by the state risked debt acceleration by way of nationalization or change of control covenants on Eurobonds and bilateral loans. This was the option that would require much more substantial liquidity support than actually provided.

The recovery of KKB involved state support in the amount necessary for the equalizing the size of the bank's assets and liabilities (that is, bringing the bank's capital to

zero). Further capitalization to ensure the stability of the bank and its fulfillment of capital requirements was carried out by the strategic investor.

In turn, the mandatory restructuring of the bank's obligations (bail-in), applied in international practice, was constrained by the current legislation. It did not give the National Bank the authority to apply bail-in. Restructuring of bank liabilities under the current legislation had to voluntary, with consent of at least 75% of creditors. Even greater obstacles were presented by international liabilities.

## Box 4. International experience and principles of state support in resolution of insolvent banks

**Use of public funds in the resolution of insolvent banks.** An effective resolution of insolvent banks should not rely on government support or create expectations of such support. The use of public funds in resolution proved extremely unpopular in many countries. At the same time, systemic banking crises cause macroeconomic and fiscal consequences that negatively affect many sectors of the economy and lead to significant public costs for restoring the financial sector stability. Therefore, international standards-setters on the effective resolution regime, such as FSB, BCBS[12] admit that the use of public funds may be necessary if an insolvent bank is systemically important and its exit from the market will have severe systemic consequences.

State support to insolvent banks should be used in exceptional situations, such as a serious systemic crisis, with a political decision and approval of fiscal authorities. Such systemic risks include the risk of termination or disruption of credit and payment services provided to a large number of customers. Additionally, in the international practice, state support of banks in the form of capital injections is allowed based on the results of the stress test and/or asset quality review carried out by the regulator (for example, in the EU countries[13]).

Any provision of state support should include conditions that minimize the moral hazard, including:

- state support may be provided only if all the private sources have been exhausted or they do not allow achieving the goal of an effective and prompt resolution without threat of systemic risks. This requires the introduction of mechanisms distributing losses among current shareholders and creditors in the legislation;

- state support should be preceded by an assessment of resolution options and their application taking into account the legislative restrictions and economic feasibility;

- government should retain the opportunity to return funds allocated during the resolution of an insolvent bank.

These principles and recommendations are also reflected in the legislation of a number of advanced countries.

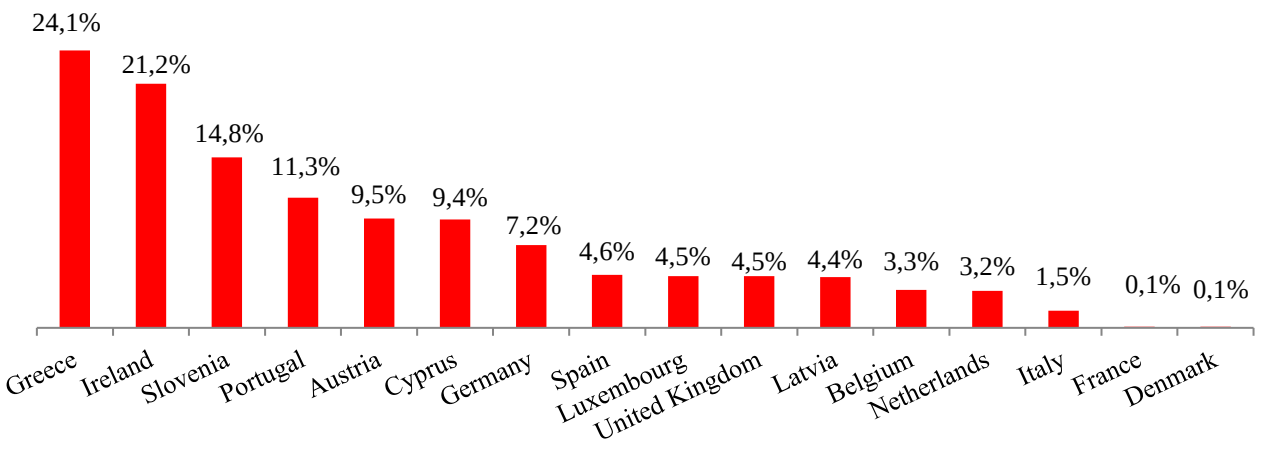
State expenditures in response to banking crises reach significant volumes. The EU countries experience shows that the average value of fiscal costs associated with direct government intervention during the crisis from 2007 to 2017 amounted to about 8% of GDP; about quarter of the crises were accompanied by direct fiscal costs of over 10% of GDP

[12] FSB (2014), "Key Attributes of Effective Resolution Regimes for Financial Institutions" (Key attribute 6, see Appendix 1); BCBS (2015), "Guidelines for identifying and dealing with weak banks" (Section 7.4, see Appendix 2); IMF (2016), "Republic of Kazakhstan: Technical assistance report – Asset Quality Review and Crisis Management Planning" (item 30, see Appendix 30);

[13] Article 18 of the EU Directive.

(Figure 4.1). In addition to direct costs, the total public costs of banking crises should include indirect costs related to economic recession and an increased cost of funding in foreign markets.

**Figure 4.1 Direct state interventions in Europe (2007-2017)**




Source: Giuseppe Boccuzzi, Fondo Interbancario di Tutela dei Depositi, 8th Conference on bank resolution, crisis management and deposit insurance (2018), valuation based on public sources.
Note: As a percentage of GDP in 2016.

The fiscal authorities take this step to avoid more serious consequences for the economy, since future losses may exceed the required fiscal costs for crisis resolution. These losses will be required to eliminate the consequences of deposit run and fulfill external creditors' claims, which will lead to a reduction of banks liquidity and decrease ability to meet prudential requirements and to provide a sufficient level of credit to the economy and population. The revival of economic growth under such conditions becomes unattainable and the probability of economic recession increases.

State support is mostly provided through capital injections, guarantees and loans granted to the bank by the state, as well as through the purchasing of problem loans. The ways and mechanisms of support are determined by the authorities of each country individually.

**Interaction of fiscal authority and central bank (regulator) in resolution and ensuring financial stability**

Ensuring financial stability and overcoming crises are possible only with effective interaction between fiscal authority and central bank. Central bank cannot overcome crises on its own. In particular, this is due to the role of fiscal policy in managing of demand, inflation and the real exchange rate through a policy of public spending and ways to finance a budget deficit or invest a budget surplus.

According to the international best practice and recommendations of international organizations (FSB, BCBS, IMF), fiscal authorities play a major role in making decisions on state support in resolving problem banks based on the regulator's conclusion. The absorption of losses in excess of the shareholders' capital and senior creditors' claims should be carried out at the fiscal expense, rather than the central bank, for the following reasons:

first, the costs of bank resolution are related to the essentially state spending and financing. These costs are not related to the monetary policy. Moreover, the use of the central bank's funds to resolve problem banks can create a conflict of interest with the effectiveness of the monetary policy. In addition, in case of negative balance sheet of the

central bank, losses are covered from the state budget. Accordingly, the fiscal authorities should be decision-making center and the source of funding. At the same time, bail-out decision should take into account fiscal priorities and expenses should be included in the state budget in advance;

second, the use of the resources of the regulator causes a conflict of interest, since the regulator should not be directly or indirectly a shareholder of regulated entities. The role of the regulator is to implement regulation and supervision.

## 9.2 The Program on financial sustainability enhancement

**Based on the assessment of the potentially under provisioned loans and in order to ensure the soundness of the banks, the National Bank designed and implemented a program on conditional support to a number of banks[14]. Named the Program of financial sustainability enhancement, it provided financial support to large banks deemed social significant, conditional on capital injection by shareholders. The Program allowed to increase absorption capacity of the participating banks, motivated the shareholders to recapitalize the banks and improved their lending potential.**

In 2017, the National Bank introduced a unified methodology for assessing regulatory loan loss provisions. According to this approach banks' regulatory capital will be reduced by the difference between the regulatory loan loss provisions and the provisions under IFRS. The new methodology provides mandate to the National Bank for loan loss recognition and for assessment of loan portfolio quality on an ongoing basis under supervisory process. This requires significant additional injections into the capital of banks by shareholders.

With regulatory deductions imposed, regulatory capital was expected to reflect the real state of the bank more accurately and to improve quality of regulatory reporting. Regulatory provisions would significantly lower the capital. They would therefore be imposed in equal annual installments over five years until 2022.

Simultaneously, the National Bank launched the Program of financial sustainability enhancement to acknowledge the previously unrecognized non-performing loans and to make banks capable of lending. The financial support in the form of subordinated debt was provided to large banks with social significance, conditional on participation of shareholders in recapitalization.

The total amount of financial support in the form of 15 year subordinated convertible bonds was KZT 650 bn. These were to be included in the second tier capital and in the regulatory capital. The bonds were be acquired by a subsidiary of the National Bank that was also an operator of the Program. Conversion into common shares would be triggered by a failure to meet capital adequacy requirements as defined above, or in the case a discovery of an actual or attempted fraudulent asset withdrawal. Bank equity would absorb the losses before the conversion. The funds received under the Program were to be used to acquire specially issued government securities, which could be sold or collateralized without any restriction.

The Program raised participating banks' absorption capacity, regulatory capital, improved their resilience, gave shareholders additional incentives to inject equity capital and placed banks in a better position to lend productively to the real economy.

[14] The National Bank Board of Governor's decree No. 129 as of June 30, 2017