NATIONAL BANK OF KAZAKHSTAN

Financial Stability Report of Kazakhstan 2021

Contents

List of Abbreviations and Acronyms

Agency	Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market
AQR	asset quality review
JSC	joint-stock company
TSS	targeted social support
STB	a second-tier bank
ASPR RK BNS	Bureau of National Statistics of the Agency of Strategic Planning and Reforms of the Republic of Kazakhstan
GDP	Gross domestic product
HQLA	High quality liquid assets
DL	Domestic liabilities
WHO	World Health Organization
GQS	Government and quasi-government sector
GSIF	“Government Social Insurance Fund” JSC
GS	government securities
MP	monetary policy
UAPF	“Unified Accumulative Pension Fund” JSC
EU	European Union
SCP	single cumulative payment
ECB	European Central Bank
ZSSBK/Zhilstroysberbank	“Housing Construction and Savings Bank of Kazakhstan” JSC
GFEA	gold and foreign exchange
GFER	gold and foreign exchange reserves
RML	residential mortgage loan
FDIs	Foreign direct investments
CPI	Consumer price index
LB	large business

IDA	Rate of banking investments in domestic assets
QGS	Quasi-government sector
KASE	Kazakhstan Stock Exchange
KDIF	“Kazakhstan Deposit Insurance Fund” JSC
KSF	“Kazakhstan Sustainability Fund” JSC
SB	Small business
IMF	International Monetary Fund
LEA	Local executive authority
MRRs	Minimum Reserve Requirements
SMB	Small and medium-sized business
IFRS	International Financial Reporting Standards
MLSP RK	Ministry of Labor and Social Protection of the Republic of Kazakhstan
MF RK	Ministry of Finance of the Republic of Kazakhstan
NBK/National Bank	National Bank of the Republic of Kazakhstan
NF RK	National Fund of the Republic of Kazakhstan
PD	Principal debt
ECLs	Expected credit losses
OPEC+	Organization of Petroleum Exporting Countries
FLBs	Federal loan bonds
PF	Pension fund
FDs	Financial derivatives
RK	Republic of Kazakhstan
MB	Medium-sized business
FCC	Freely convertible currency
CIS	Commonwealth of Independent States
NP	individual/natural persons
CSD	“Central Securities Depository” JSC

SP	State of emergency
LE	Legal entity/corporate entities
IAQR	Independent asset quality review
COVID-19	Coronavirus infection
CVA	Credit valuation adjustment
EVS-2016	European valuation standards
GBI-EM	Government Bond Index-Emerging Markets
HHI	Herfindahl-Hirschman index
IPW	Independent price verification
KPI	Key performance indicators
LCR	Lliquidity coverage ratio
LDR	Loan-to deposit ratio
LGD	Loss given default
LTV	Loan-to-value ratio
NDF	Non-deliverable forward
NPL/NPL 90+	Loans with overdue principal debt and/or accrued interest of more than 90 (non-performing loan)
NSFR	Net stable funding ratio
PD	Probability of default
RICS	Royal Institution of Chartered Surveyors
ROE	Return on equity
RWA	Risk weighted assets)
SARS	Severe acute respiratory syndrome
SREP	Supervisory review and evaluation process
$/bbl.	US dollars per barrel of oil
bp	basis point
pp	percentage point
YoY	year on year

QoQ	quarter on quarter
sq.m	square meter
thous.	thousand
mln	million
bln	billion
tln	trillion
ppl.	people

Overview

Global Context

During the reporting period, the global economy faced a fundamental change in the risk map for financial stability. The period of total uncertainty caused by the collision of the global economy with an absolutely unprecedented event of our time – the COVID-19 pandemic – has been replaced by a period of recovery in the economic activity. However, the year was marked by continued disruption of supply chains, record-high energy prices and a significant increase in inflationary pressure. In addition, uncertainty about the epidemiological risks and growth prospects for the global economy persisted because of the emergence of new COVID-19 strains.

The world financial system retained its ability to function sustainably, the actions of regulators allowed curbing liquidity problems in the markets, and the adequacy of bank capital buffers helped cope with the inevitable need of absorbing those losses that were not factored in earlier. At all levels, both local and global, the main issues on the world economic agenda included the reaching out of the path of recovery while containing the price pressure and counteracting the growth of inflation expectations. Regulators faced the trade-off between maintaining a short-term support for the economy and at the same time avoiding long-term risks to financial stability. Meantime, the risks associated with sustainability of a further development of the economy and the restoration of solvency of both the population and businesses began to come to the fore.

Global debt vulnerabilities are still significant. Support from the fiscal channel has become the main driver of recovery and limited the scale of disruptions caused by the pandemic. However, a significant shrinkage of fiscal space brings up the problem of maintaining fiscal sustainability and limits the ability to absorb future shocks. Both sovereign and corporate debt-to-GDP ratios have generally increased in developed and emerging market economies, exposing long-term vulnerabilities in certain sectors of the economy.

Economies with a quite developed infrastructure for redistributing market risks found it easier to absorb economic shocks, which gave them greater potential for subsequent recovery compared to economies where the financial market is less developed. Despite the fact that the degree of diversification of its economy also affects the development of the country's financial market, the multi-sector nature of the current crisis underlined the low resistance even of rather diversified economies.

The degree of market depth and the effectiveness of its functioning as the initial link in the transmission, the monetary channel's ability to effectively make the necessary adjustments in emergency situations was determined. Jurisdictions where the sufficiency of information and infrastructure development of the markets enabled the authorities to quickly assess and redistribute risks in the system quickly stabilized expectations, thereby reducing economic uncertainty. However, a lengthy period of easing financial conditions could lead to overvaluation of assets and increase the risks of their sudden revaluation.

The current period has demonstrated the vulnerability of many established models of long-term growth and stability, brought up a number of questions about the priority of developing mechanisms to ensure sustainability and real prospects for targeted niches in the economy. It also showed the need for a clear interaction between the monetary and fiscal channels: the first – as a tactical mechanism for rapid response and management, and the second – as a system of strategic goal setting in the process of implementing a balanced long-term economic policy.

Macroeconomic Policy

As the coronavirus spread was subsiding and the epidemiological measures were easing, the global trade turnover ramped up leading to an increase in consumption and business activity that had a positive effect on the prospects for the global economic growth.

Kazakhstan's economy is not an exception. The easing of anti-epidemiological restrictions, first of all, contributed to the growth in the economic activity of people, significantly increasing the level of aggregate demand, which had a positive impact on financial condition of households and small businesses. The significant rise in oil prices during 2021 explains the faster recovery of Kazakhstan's economy compared to the period after the financial crisis of 2008-2010 and the oil shock of 2014-2015. Thus, according to the 2021 performance, the real GDP growth made up 4.1%.

The easing of quarantine measures exerted a positive effect on the labor market indicators. After the growing unemployment during the quarantine restrictions of 2020, in 2021, its figures adjusted to 4.9%. Despite a decline in the overall unemployment and the share of underemployed compared to 2020, their rates are still above the pre-pandemic levels. Thanks to a significant amount of savings and increased real income, households as a whole retain the ability to withstand financial and economic shocks. However, the increased debt service costs and a significant buildup of inflationary pressures that lead to the growing household spending on food and basic necessities could adversely affect both the pace of economic growth support and the ability to service debt. In addition, there is still a significant dependence of households on government support measures, which puts them in a vulnerable position when they are cut.

During 2021, inflation was exceeding its target and accounted for 8.4% at the year-end. The monetary policy still has a limited effect on the aggregate demand. High credit risks in the non-tradable sector remain to be the barrier for expanding the demand through the credit channel and capacities of banks to absorb credit risk are limited.

A low depth and liquidity of the government securities market, the still insufficient stability and continuity of the public debt management policy does not enable it to fully assume the function of the main monetary policy transmission channel. Liquidity of the bond market of the Ministry of Finance of the Republic of Kazakhstan remains limited. Factors restraining the liquidity growth include: the concentration of about two thirds of the MF's tenge debt in the portfolios of captive investors; most investors tend to hold government securities to maturity; a high degree of debt fragmentation; an unbalanced repayment schedule scheme, and the absence of a methodical policy for public debt management. Low liquidity has a negative impact on the meaningfulness of the yield curve and its ability to effectively aggregate expectations of market participants regarding interest rates. This limits the role of the government securities market as the initial link in the interest rate channel of the monetary policy transmission mechanism.

Prices in the residential real estate market continued to rise. High growth rates in the quantity of transactions are stemming from the government support programs that stimulate the demand. These programs drive up prices in the real estate market and create pro-inflationary pressures, which in turn hinder the development of mortgage lending market. The complete termination of all programs may lead to a decline in prices in the residential real estate market, which may negatively affect financial stability through the cost of collateral.

In 2021, given the economic recovery and the growing receipts of tax revenues to the budget, the gap between the budget spending and non-oil revenues reduced. Nonetheless, such gap has been remaining high over the recent ten years due to the employment of resources from the National Fund and debt financing that put pressure on the country's net assets. Imbalance in public finances carries the risk of narrowing the fiscal space, which potentially reduces the economy's resilience to unforeseen shocks in the future, and may also lead to indirect consolidation of spending and, as a result, an increase in the debt burden on the budget. Thus, the top priority of fiscal policy in the medium term should be to improve the discipline and efficiency of budget spending as well as to increase non-oil budget revenues.

Real Sector, Lending Market and Credit Risks

In 2021, a significant increase in income and cash flows of the real sector was secured by solvent enterprises, but almost half of bank borrowers are enterprises with low or negative capital. The debt burden of enterprises over the past 6 years has been gradually decreasing, and the level of property, plant and equipment on the balance sheet of enterprises, on average, covers their bank debt. Enterprises with low or negative capital are more likely than others to concentrate large amounts of debt on their balance sheets in the structure of liabilities and make up the bulk of the so-called zombie companies, whose profits are barely enough to cover interest expenses.

In 2021, the easing of restrictive measures during the COVID-19 pandemic contributed to an accelerated GDP growth and invigorated lending activity, which is reflected in the growth of total lending volume in almost all types of lenders.

In 2021, new loans to retail customers and SMEs exceeded the reduction in the corporate loan portfolio caused by an ongoing effort of cleaning up the bank balance sheets from distressed loans and the exit of insolvent banks from the system. The main sectors of the economy that have been credited by banks are such sectors as services, trade, the manufacturing industry and construction.

A significant increase in provision of new consumer and mortgage loans was observed within the structure of the retail portfolio. Technological advances in banking instruments and a wide range of products have made the process of obtaining a loan easier and more affordable. The use of retirement savings and government lending programs aimed at improving housing conditions have significantly influenced the growth in demand for mortgage loans.

Along with the provision of loans by banks, in 2021 microfinance organizations were also actively participating in the lending market, which increased by 1.4 billion tenge with a 5.3% share in the total volume of credits to the economy. The demand for loans provided by microfinance organizations is explained by the simplified process of lending and relatively low solvency requirements compared to the requirements to banks.

The recovery of the economy as well as the winding-up of the least sound banks had a positive impact on the quality of both corporate and retail loan portfolios, where the level of non-performing loans at the end of 2021 improved markedly and amounted to a record low of 3.3%. Despite this, there are still risks of deterioration in the quality of corporate portfolio as indicated by alternative quality metrics for the corporate sector. At the same time, large microfinance organizations compete with organizations that provide financing in order to promote the sustainable development of the agro-industrial complex of the Republic of Kazakhstan, for small and medium-sized businesses operating in the countryside.

In 2021, the third package of anti-crisis measures to support SMEs from the most affected sectors of the economy during the COVID-19 pandemic was realized; it included deferral of loan servicing payments. SMEs showed less interest in this measure compared to the previous ones, while the small business segment appeared to be the most interested party in obtaining a loan deferral when considering three packages of anti-crisis measures. It should be noted that the provided regulatory easing in respect of the recognition of impairment in asset classification for loans that received a deferral during the implementation of anti-crisis measures led to deterioration in the quality of some of these loans.

Restoration of purchasing power of the population in the post-pandemic period and the widespread use of digital solutions for provision of banking services to the population continued to have a positive impact on the growth of the retail loan portfolio. The quality of retail portfolio improved almost across all segments. High volumes of mortgage and consumer loans, short-term consumer loans are the main factors contributing to good quality of the retail portfolio – at the year-end 2021 the level of non-performing loans was 3.6%. However, this is also the main risk for the retail portfolio, as the retail portfolio remains vulnerable to reduction in real income and the growing debt burden on the population.

Liquidity Risks and Funding Risks

Liquidity risks are at a low level, liquidity ratios of most banks have been way above the required levels. By end-2021, the volume of high quality liquid assets was decreasing as a result of demand for the tenge liquidity on the part of some large banks whereas the share of high quality liquid assets in foreign currency increased. At the year-end 2021, liquidity risk at the systemic level was insignificant.

On the funding side, risks associated with the maturity structure remain. The actual maturity of deposits continues to be low. The level of deposit dollarization has been declining but is still significant. The concentration of quasi-government companies in liabilities has decreased, while the impact of concentration risk is persisting. Interest rate risks remained in the moderate zone. The weighted average interest rates on attracted retail and corporate deposits have been at a stable level.

I. Macroeconomic Conditions

In 2021, the global economy has set to recover from the unprecedented shock of the coronavirus (COVID-19) pandemic. The easing of quarantine restrictions contributed to an increase in consumption and business activity, thus exerting a positive effect on the prospects for global economic growth, which had been at the level of 5.9%. Nonetheless, the year was marked by continued disruption of supply chains and record-high energy prices, leading to a significant buildup of inflationary pressure in both developed and emerging markets. The rise in electricity prices, the increase in the cost of energy-intensive industries and fertilizers spurred the inflation loop.

The tightening of monetary policy in developed economies and the increased sovereign debt and the budget deficit in the world happened to be the global challenges. Revaluation of the real estate market as well as the concentration of financial vulnerabilities in large Asian markets pose risks to global financial stability.

The easing of quarantine measures had a positive impact on labor market indicators. After an increased unemployment during quarantine restrictions in 2020, in 2021 its figures have adjusted to 4.9%. Despite that overall unemployment and the proportion of underemployed went down compared to 2020, these indicators still exceed the pre-pandemic levels.

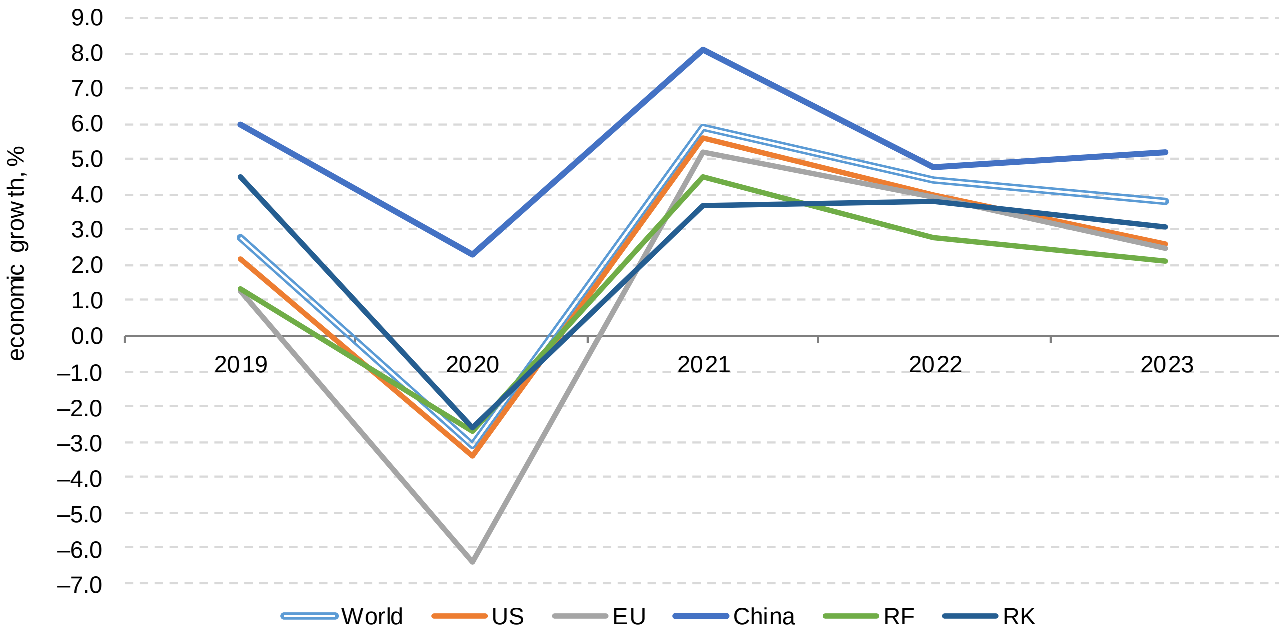
Overall, there are some vulnerabilities across households, but risks to financial stability are moderate in the short term; however, they are expected to increase in the long term. Thanks to a significant amount of savings and increased real income, households as a whole retain the ability to withstand financial and economic shocks. However, higher debt service costs and a significant increase in inflationary pressures, leading to a larger household spending on food and basic consumer goods, could adversely affect both the pace of support for the economic growth and the ability to service debt. Besides, there is still a significant dependence of households on government support measures, which puts them in a vulnerable position when they are cut.

1.1 Macroeconomic Conditions

According to the IMF estimates, the global economic growth in 2021 (WEO, 2021Q1) was forecasted to be at **5.5%**, followed by its revision to **6%** in the second quarter (WEO, 2021Q2)[1]. In the second half of the year, the downward adjustment of the forecast for developing countries in Asia and its concurrent upward adjustment for the US and EU, where the measures of additional fiscal support were anticipated, retained the forecasts at 6% (WEO, 2021Q3). However, because of deteriorating epidemiological situation in connection with the spread of SARS-CoV-2 omicron variant, at the end of the year, in both categories of countries, less positive economic recovery rates were observed that resulted in an actual **5.9% growth of the global economy** *(Chart 1.1)* (WEO, 2021Q4).

[1] IMF, (2022). World Economic Outlook Update: Rising Caseloads, a Disrupted Recovery, and Higher Inflation

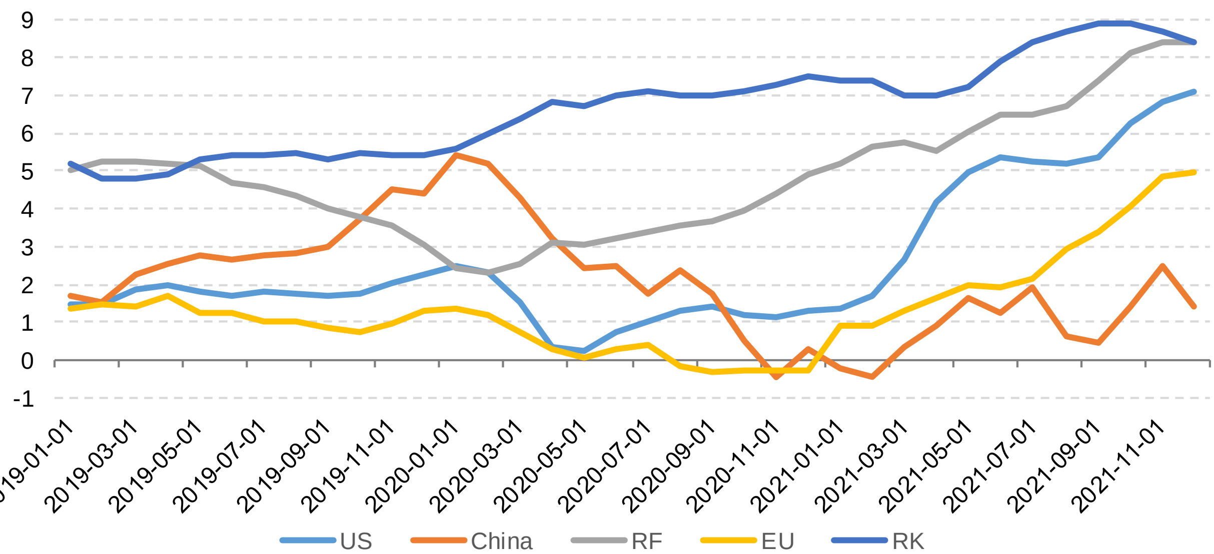
Chart 1.1 ***Global economy keeps recovering***



***Source**: IMF WEO, 2022Q1 World; US; EU; China; Russia; Kazakhstan*

Disruptions in the global supply chains and limited labor migration, growing energy prices, unsatisfied consumer demand and aggressive fiscal stimulus, in aggregate, led to record-high inflation rates in a number of countries *(Chart 1.2)*.

Chart 1.2 ***Consumer price index, by country***



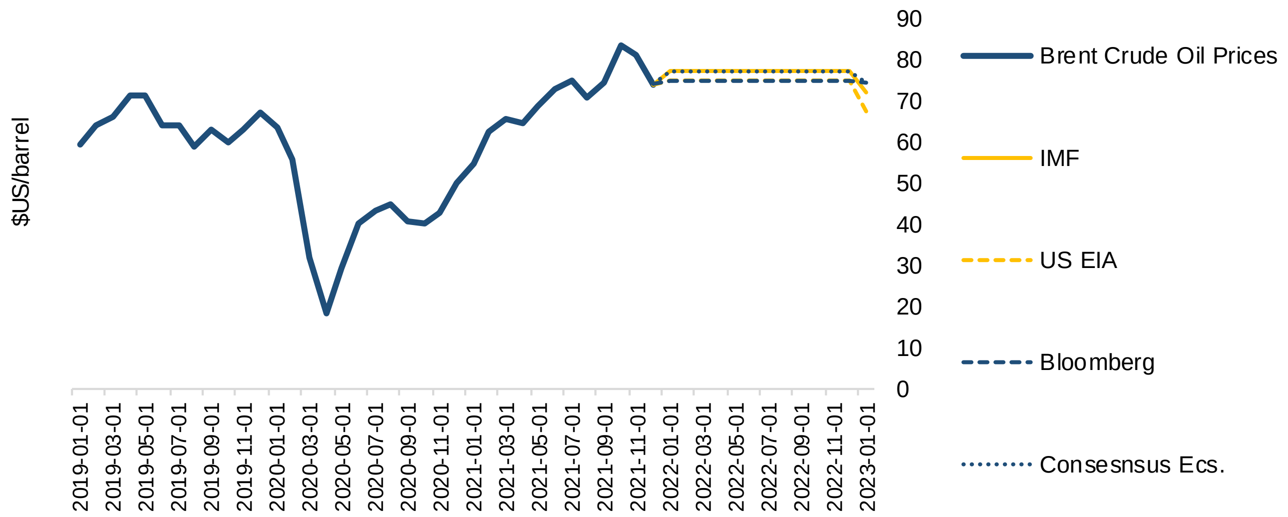
***Source**: FRED, 2022*

A key factor that has led to rising inflation in many regions is high energy prices, including crude **oil**, Kazakhstan's main export commodity. Based on the annual performance, there is a positive environment in the oil market for Kazakhstan. IEA estimates the **global oil demand to go up by 5.5 million barrels a day** in 2021, returning to the pre-crisis levels of 99.7 million barrels a day (IEA | World Energy Outlook 2021)[2]. However, such recovery of demand was not accompanied by capital investments and global exploration and production expenses remained at the level of 2019. Thus, Brent oil price at the beginning of the year was traded for **50-60** US dollars per barrel but given the recovery of markets and

[2] IEA, (2021). World Energy Outlook 2021.

the business activity, appreciated by **65%** in terms of price having reached the peak of **86 US dollars** by November 2021 *(Chart 1.3)*. This made a positive contribution to the dynamics of Kazakhstan's balance of payments – exports of goods under the BOP compilation methodology went up by **27.2%** to $60.2 billion, mainly due to the nominal increase in the exports of petroleum products.

Chart 1.3 ***Brent oil price went up significantly***



***Source**: Bloomberg, 2022*
***Note**: From 2022 on, projected prices (at Jan.1, 2022) are presented, according to computations of international organizations*

Spot prices at European gas hubs in the third quarter were more than **6 times higher** than prices in the same period in 2020 (European Commission, 2021)[3]. This resulted in that in November 2021 gas prices for households in the EU capitals increased by 50% in annual terms. Wholesale gas prices in Europe were significantly affected by supply cuts due to the redirection of liquefied natural gas (LNG) cargoes to East Asia, because of high markups in East Asian gas markets. The gas shortage, in turn, contributed to a significant increase in thermal coal prices. The U.S. coal prices **have pyramided by 400%** to $270 a ton in the third quarter, and the growing demand in China and India led to the reopening of previously closed coal mines.

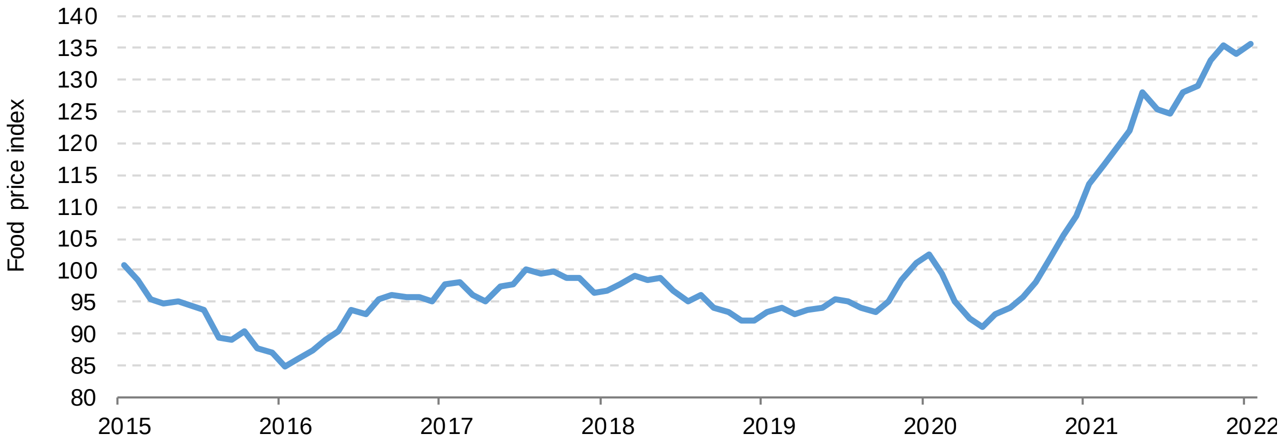
The prerequisites for these price spikes are both short-term factors such as abnormal climatic conditions, supply disruptions, and systemic causes – the lack of proper investment and energy market structure. First, subnormal winter temperatures led to the depletion of gas reserves in the storage facilities of the northern hemisphere, and their replenishment turned out to be insufficient by the beginning of the next heating season. Second, there have been interruptions in the operation of renewable energy sources related to weather anomalies – downtime of wind farms in the North Sea, problems with hydroelectric power plants in Brazil. Third, due to the intentions of switching to renewable energy, investments in the exploration and production of hydrocarbon energy carriers were steadily declining, however, investments in renewable energy did not keep up with the growth in demand. Moreover, it is impossible to increase the volume of electricity production from renewable energy sources in the shortest possible time.

The rise in the price of crude energy resources led to a rise in electricity prices and an increase in the cost of energy-intensive industries. Power outages have crippled manufacturing capacity around the world, especially in China, further exacerbating the problems of post-pandemic global supply chain. Growing production costs of energy-

[3] European Commission (2021). *Quarterly report on European gas markets.* Available at: https://energy.ec.europa.eu/system/files/2022-01Quarterly%20report%20on%20European%20gas%20markets%20Q3_2021_FINAL.pdf

intensive metals such as nickel, steel, and copper fuel the **inflation loop**. Due to the increase in the cost of production of copper and silicon, difficulties with the supply of chips for the automotive industry are persisting. In addition, rising gas prices increase the cost of production of mineral fertilizers, which in turn leads to their shortage in the world market and to a potentially negative impact on agricultural industries. Potential yield reduction, coupled with supply chain disruptions, could lead to further growth of shortages and of world food prices. Thus, the Food Price Index[4] (FAO, 2022) in 2021 has already reached its historical maximum *(Chart 1.4)*, having increased by a record-high **28.1%** over the year.

Chart 1.4 ***Food Price Index has demonstrated a record surge in 2021***



Source: *the UN Food and Agriculture Organization, 2022*

Global Challenges to Financial Stability

Monetary Policy Tightening in Developed Economies

Inflationary pressures urge many central banks to tighten their monetary policy rhetoric. However, there is a risk that a sudden tightening of policy in advanced economies could lead to a sharp tightening of financial conditions for developing countries, which, in particular, will have a negative impact on capital flows and intensify pressure in countries facing debt sustainability problems. In addition, in connection with high inflation, in many developed countries, the yield on government bonds in the national currency has increased. An increase in yields of the US Treasury bonds is driving up the cost of funding for many countries. A sharp rise in interest rates could also slow the pace of economic recovery and lead to a dramatic decline in asset value and stress for financial institutions, businesses and households. Specifically, this will negatively affect the availability and cost of capital for firms with a medium and low rating, which could increase the number of defaults.

The Increasing Volumes of Sovereign Debts and Budget Deficit Worldwide

Sovereign debts of most countries are at all-time highs. For example, in the Euro zone, the level of debt has rocketed since 2019 nearly to **100% of GDP** (ECB **|** Financial Stability Review 2021)[5]. The growth of government debt during the pandemic has contributed to the increase in fiscal deficits in many countries. However, the ongoing economic recovery has helped stabilize the debt-to-GDP ratio to some extent. However, the emergence of new strains of COVID-19 and uneven access to vaccines could put further pressure and require even more budget spending. Coupled with slower economic growth, this could lead to deterioration of debt sustainability, especially in countries with a higher debt level.

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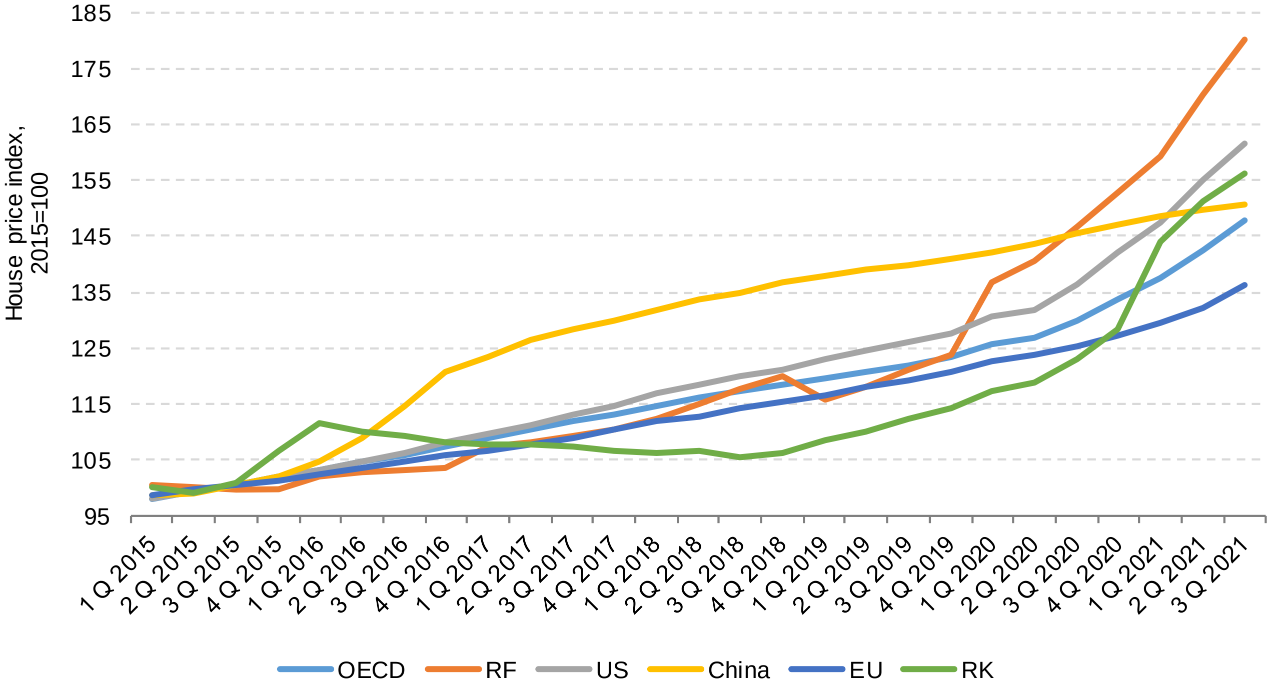
[4] Food and Agriculture Organization of the United Nations, (2022). FAO Food Price Index. Available at: https://www.fao.org/newsroom/detail/FAO-Food-Price-Index-december-2022/en

[5] ECB, (2021). Financial Stability Review 2021. Available at: https://www.ecb.europa.eu/pub/financial-stability/fsr/html/ecb.fsr202111~8b0aebc817.en.html#toc2

Risks of the Real Estate Market

An extended period of stimulus measures aimed at supporting the economy could lead to asset revaluation above the fundamentally justified values and make financial vulnerabilities more intense. This includes the risks of overheating in the housing market and households overburden by debt. Supported by low interest rates, easing standards of mortgage lending and strong demand, property prices have soared in many countries around the world *(Chart 1.5)*[6]. According to the Bank for International Settlements (BIS | Annual Economic Report, 2021)[7], since the onset of the pandemic, housing prices have risen above the fundamental drivers such as loan value and rental costs. Rent growth as a key component of housing costs has slowed in most countries. However, interest rates on mortgage loans and long-term bond yields – the respective interest rates for discounting housing services – have been declining until at least early 2021. This discrepancy between housing prices and their fundamental determinants may lead to significant adjustments that could turn out to be a shock to the financial system. Possible correction may negatively affect banks through impairment of collateral.

Chart 1.5 ***Housing prices in many OECD countries continue to rise***



Source: *OECD, 2022*

Increasing Corporate Sector Risks in China

Due to uneven recovery, financial vulnerabilities remain elevated in several sectors and countries. In developed and developing countries, the volume of corporate debt to GDP has increased significantly. Going forward, the number of corporate defaults may go up due to the backlog of outstanding bankruptcy cases and the phasing out of support measures. In China, the corporate sector debt is **27 trillion US dollars**, equivalent to 31% of the world's total debt, and the debt-to-GDP ratio of 159% is well above the global figure of 101%. The Chinese real estate market concentrates risks to financial stability, and their realization could have implications for developed markets, due to the increased volume of international bank loans. In 2021, the largest construction holding companies defaulted on bonds, which triggered a fall of the real estate developers' bond market in China. According to Moody's, in 2022, the Chinese real estate companies must pay more than **61 billion US dollars** in

[6] OECD (2022), Housing prices (indicator). doi: 10.1787/63008438-en
[7] BIS, (2021). Annual Economic Report 2021. Available at: https://www.bis.org/publ/arpdf/ar2021e.pdf

bonds. In addition, 2021 was marked by a series of defaults among companies operating in other industries, both private companies and large enterprises with government participation that have a significant impact on the market and investors. Given the size of China's financial system, as well as its extensive trade links, financial stress in China could strain global financial markets and pose risks to the global economic growth.

Box 1. The Effect of Risks of Energy Transition on Financial Stability

The uncertainty around the global climate change makes it difficult to accurately assess its impact on the economic activity. Climate shocks not only result in serious economic losses but also affect systemic indicators of financial stability. The climate crisis could lead to lower profitability of companies and depreciation of some categories of their assets, potentially leading to a deterioration in the ability of firms to service their debts and a higher rate of defaults, negatively affecting financial stability.

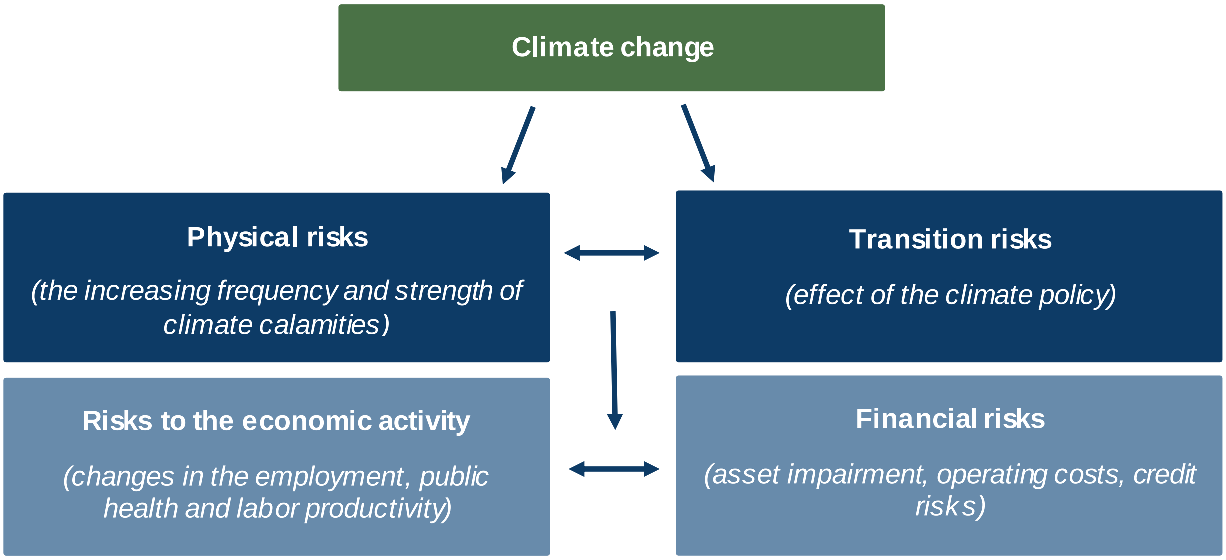
Risks from the climate change that affect financial stability as a rule are classified as physical and transition risks:

■ **Physical risks** that include economic costs associated with the increasing intensity and frequency of extreme weather phenomena, lead to deterioration of the labor productivity and people's health, and to depreciation of financial assets. Key physical risk factors in Kazakhstan include **water shortages** due to reduced precipitation and prolonged low water, as well as **excessive temperatures**. Losses from materialization of physical risks can be incurred by both small and medium-sized enterprises and large companies. In turn, this may lead to asset impairments, which will affect the balance sheets of financial institutions, reducing the inflow of loans into the real economy. An increase in physical risks can cause short-term **fluctuations in output and higher inflation**, which in turn amplifies long-term macroeconomic volatility.

■ **Transition risks** that are related to changes in the policy aimed at mitigating the climate change and adaptation to a low-carbon economy affect the market volatility and the value of financial assets and liabilities. Tightening environmental regulation through the adoption of a new environmental code dated January 2, 2021 No. 400-VI ZRK, an increase in the cost of greenhouse gas emission quotas in the Republic of Kazakhstan, as well as the introduction of a carbon border tax by the EU and other trading partners of Kazakhstan, are the main factors of transition risks. These measures may adversely affect profitability of largest companies in key sectors of the economy by **reducing proceeds, increasing capital and operating costs, and pushing up the cost of borrowed capital.** Together, these negative factors will lead to **a growth in the debt burden on the corporate sector in Kazakhstan**. Moreover, the introduction of carbon taxes will also result in rising prices of basic fuel resources, leading to higher inflation.

The relationship between these risk categories and their magnitude will depend on whether the transition to a low-carbon economy is gradual or intensive. Lack of timely action will lead to materialization and increased physical risks for the foreseeable future. At the same time, excessive and spontaneous transition will reduce long-term physical risks, but will increase short-term transition risks *(Diagram 1).*

Diagram 1. ***Relationship between risks***



According to the Global Carbon Atlas platform for 2020[8], Kazakhstan ranks **20th** among 221 countries **in terms of carbon dioxide emissions**, 10th – in terms of emissions per capita and **7th – as regards the carbon intensity of GDP**, where 80% of emissions fall on operations related to fossil fuel production and use. Considering this, under the Paris Agreement, Kazakhstan committed itself to **ensure a 15% reduction in CO_2 emissions by 2030** compared to 1990 figures – from 386.3 million tons to 328.4 million tons of CO_2 equivalent[9]. The goal is to reduce the share of fossil energy resources in the structure of primary fuel and energy resources by 3.4 times to 29% by 2060, and **to increase the share of renewable energy sources** from the current **3%** to **70%**. According to PwC Kazakhstan's computations (2021)[10], from 2013 to 2019, the average annual growth rate of commissioned renewable energy production facilities in Kazakhstan already accounts for **24%**. In addition, together with the World Bank, the Decarbonization Roadmap from 2023 to 2030 was designed that covers seven sectors of the economy: energy, agriculture, industry, utilities, coal industry, waste management and transport (Marteau, 2021)[11]. Commitment to this policy will allow Kazakhstan moving closer to attaining its goal of achieving **carbon neutrality by 2060**.

The analysis of transition risks is becoming one of the priority tasks for regulators around the world, and the National Bank of Kazakhstan will also begin to study the impact of these risks on Kazakhstan's economy and develop strategies for accounting for climate risks.

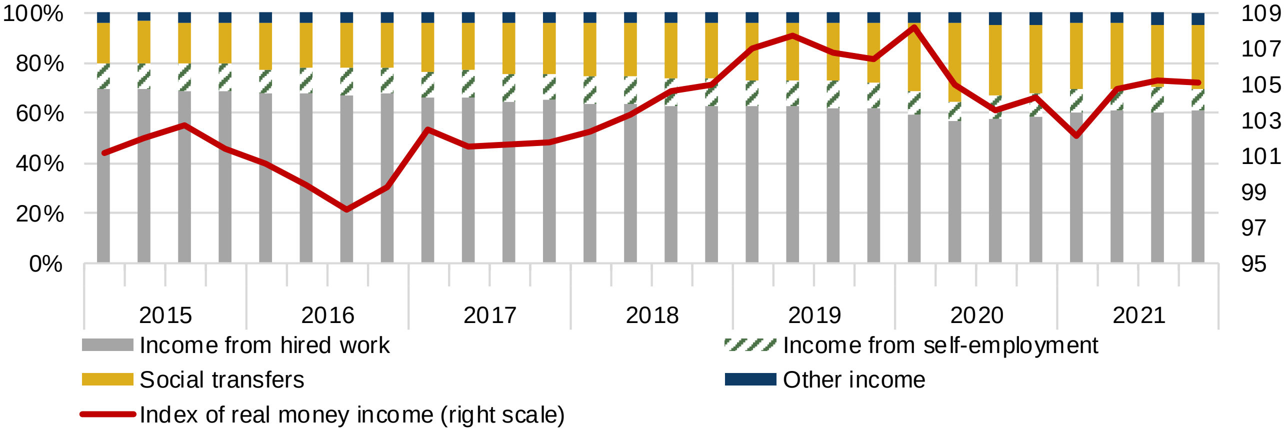
1.Households

In 2021, the growth rates of household real income were slowing down *(Chart 1.6)*. While the share of income from hired labor slightly increased, the share of social transfers in the income structure showed a minor reduction. Due to the improving epidemiological situation, for the first time since the onset of the pandemic, the index of real money income increased from 102.1 in the first quarter of 2021 to 104.7 in the second quarter. However, further deterioration of the epidemiological situation in the third and fourth quarters driven by the emergence of and the spread of *Delta strain and the omicron strain of Covid-19*

[8] Global Carbon Atlas, (2021). Available at: http://www.globalcarbonatlas.org/en/CO2-emissions
[9] Official information resource of Kazakhstan's Prime Minister, (2021) Kazakhstan will move to carbon neutrality by 2060. Available at: https://primeminister.kz/ru/news/reviews/do-2060-goda-kazahstan-pereydet-na-uglerodnuyu-neytralnost-1103515
[10] PwC, (2021). *The Renewable Energy Sources Market (RES) in Kazakhstan: Potential, Challenges, and Prospects.* Available at: https://www.pwc.com/kz/en/assets/pdf/esg-dashboard-final-5.pdf
[11] Marteau, Jean-Francois. (2021) *From Paris to Glasgow and beyond: Towards Kazakhstan's carbon neutrality by 2060.* World Bank Available at: https://blogs.worldbank.org/europeandcentralasia/paris-glasgow-and-beyond-towards-kazakhstans-carbon-neutrality-2060

caused a more moderate increase in the real income index to 105.2 and 105.1, respectively. The share of income from hired labor increased. Having demonstrated a significant growth in the first and second quarters by 2.36% and 7.68% compared to the corresponding periods of the preceding year, due to restrictions on operations of enterprises because of the epidemiological situation, the growth rate somewhat decelerated in the third and fourth quarters by 5.44% and 4.14% respectively. The share of social transfers, after a significant increase in 2020, when its value reached 28.5% of total income, decreased in 2021 to 25.8%, but still exceeds the pre-pandemic figures. Thus, in 2021, the average quarterly rate of reduction in the share of social transfers amounted to 2.07%. Such dynamics might be caused by contraction in benefits and other support measures as part of the aid to those people who experienced the loss of income due to the pandemic, in connection with the end of the pandemic and the resumption of business activity.

Chart 1.6 ***Real household income index is increasing***

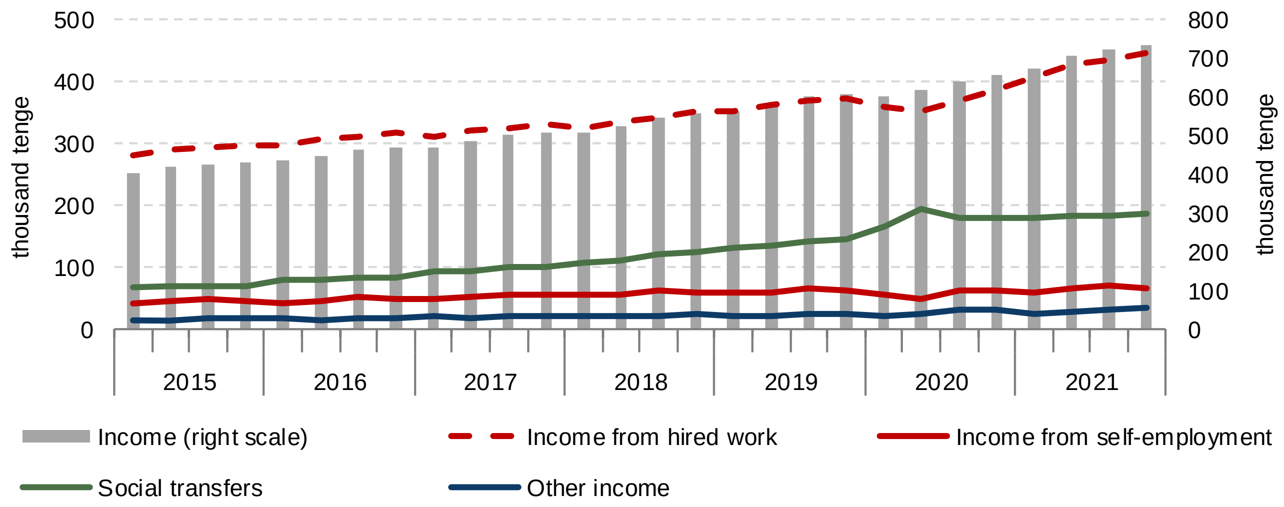


Source: *ASPR BNS RK*

Since the beginning of 2021, the nominal income from hired labor has demonstrated a 2.98% average quarterly growth *(Chart 1.7)*. Nominal social transfers are showing reduction compared to 2020, however, they still exceed the figures of pre-pandemic periods.

Chart 1.7 ***Nominal income from labor activity is growing and the share of social transfers is decreasing***

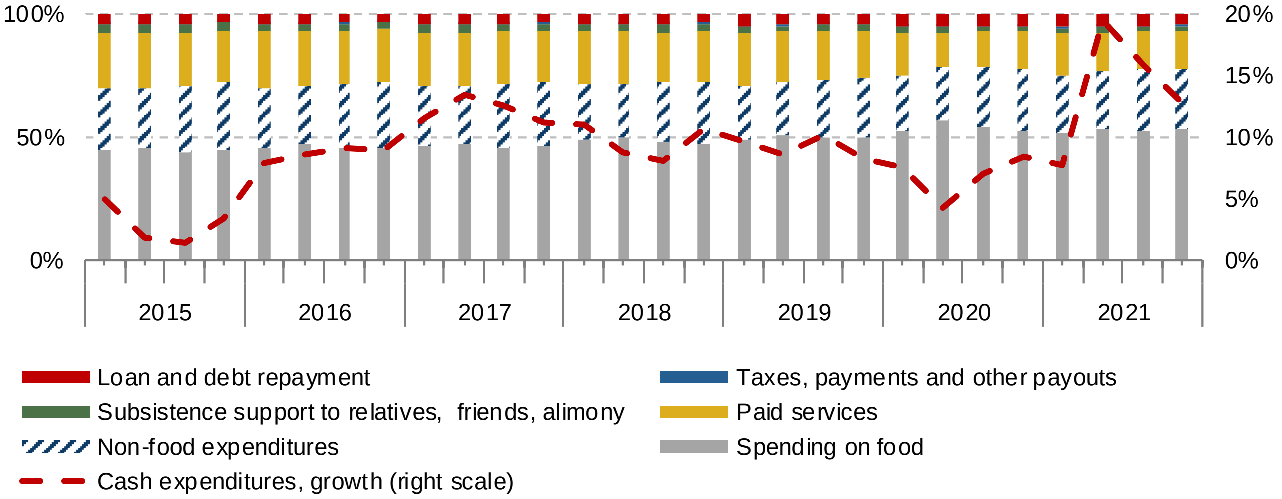
Household income in money terms



Source: *ASPR BNS RK*

Household spending accounts for more than 50% in Kazakhstan's structure of GDP by the end use method. In 2021, in connection with the recovering business activity, growth rates of household money spending increased by more than 105%, to **13.9%** on average over the year compared to **6.8%** in 2020 *(Chart 1.8)*. Such increase was driven by the growth in the household consumer spending. The shares of non-food expenses and paid services increased by 1.74% and 5.46%, respectively, compared to the last year, while the share of food expenses decreased by 2.17%, and taxes, payments and other payouts went down by 13.67%. However, when considering long-term trends in the income structure, the share of spending on food increased and the share of expenditures on paid services contracted. The growth in the share of food spending in the overall structure to figures above 50% during and after the pandemic is explained both by a decline in consumption in other categories such as the replacement of catering services with food spending, and by inflationary pressure, and is generally correlated with global trends (*see Macroeconomic Conditions*).

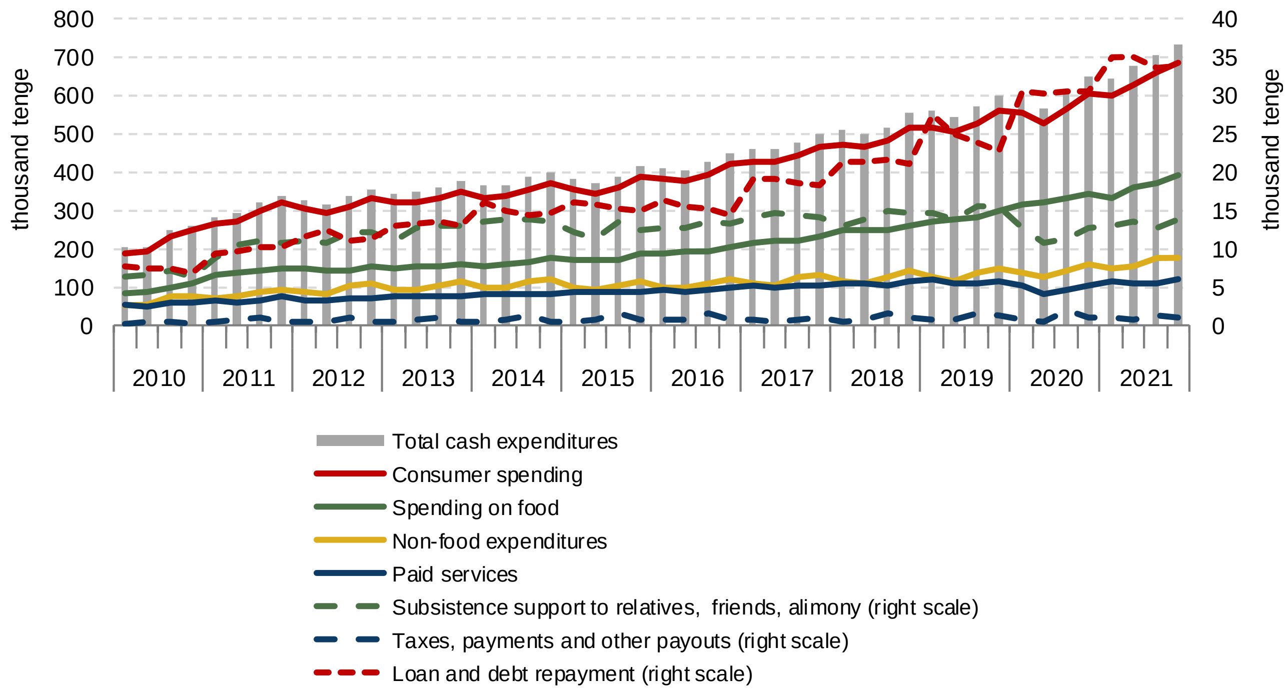
Chart 1.8 ***Household money spending is growing***



Source: *ASPR BNS RK*

Chart 1.9 ***Given the easing of quarantine restrictions, secondary household expenditures increased***

Household spending in money terms

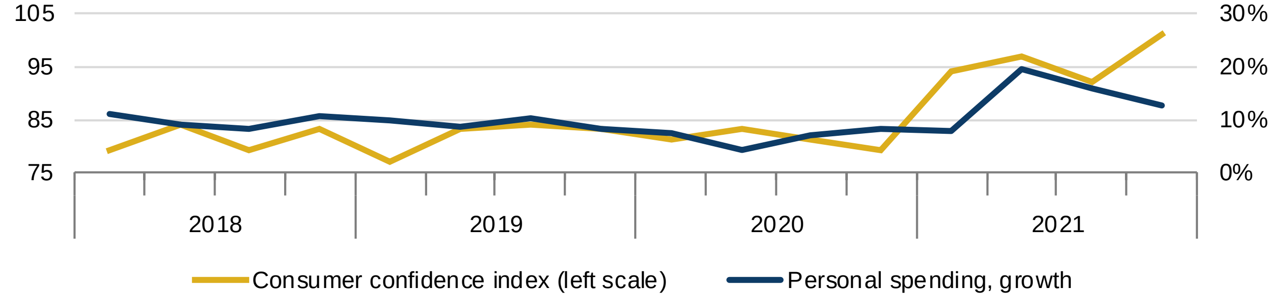


Source: *ASPR BNS RK*

In 2021, consumer spending has risen by 7.23% on average and was largely driven by the growing non-food expenditures and spending on paid services *(Chart 1.9)*. Non-food expenditures in the second and the third quarter went up by 24.95% and 20.95% respectively, compared to the same periods of 2020. The spending on paid services demonstrated the highest growth in the second and the third quarter, having increased by 36.18% and 27.6% compared to the corresponding quarters of 2020. Such dynamics can be explained both by the increased supply due to the lifting of quarantine restrictions, and by a general decrease in uncertainty and increase in consumer confidence. However, in the fourth quarter, the growth rate of non-food expenditures and spending on paid services decelerated because of the spread of new strains of Covid-19. In 2021, the nominal growth in food spending made up 5.7% a quarter on average.

Chart 1.10 ***Personal spending in 2021 was growing along with the consumer confidence index, however, its dynamics in the fourth quarter were divergent***

Consumer confidence index and growth of real personal spending

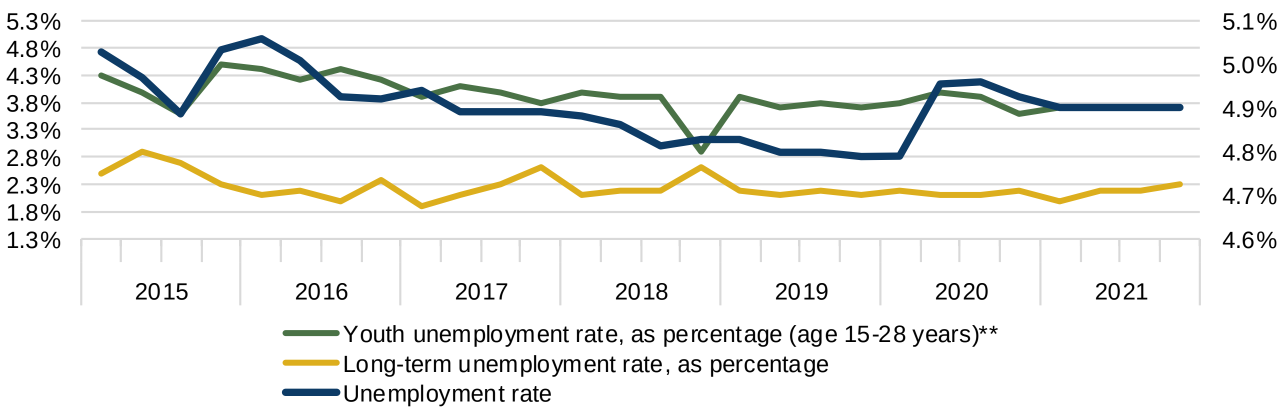


Source: *ASPR BNS RK, Tradingeconomics.com by reference to Nielsen, NBK's computations*

In 2021, the recovery of economic activity accompanied by the growing personal spending correlated with the rise in consumer confidence index *(Chart 1.10)*. There is an observation that an increase in the consumer confidence index in the current period results in higher household spending in the next period. Overall, 2021 sees a significant increase in consumer confidence. In the first and second quarter of 2021, consumers expected an improvement in the epidemiological situation; however, the emergence of a new omicron strain at the end of the third quarter precluded the realization of a positive scenario, reducing the real growth rates of personal spending. Nevertheless, by the end of the year, consumer confidence was back on course for recovery.

Chart 1.11 ***Owing to the recovering economy, overall and youth unemployment rate declined***

Unemployment rate, as a percentage

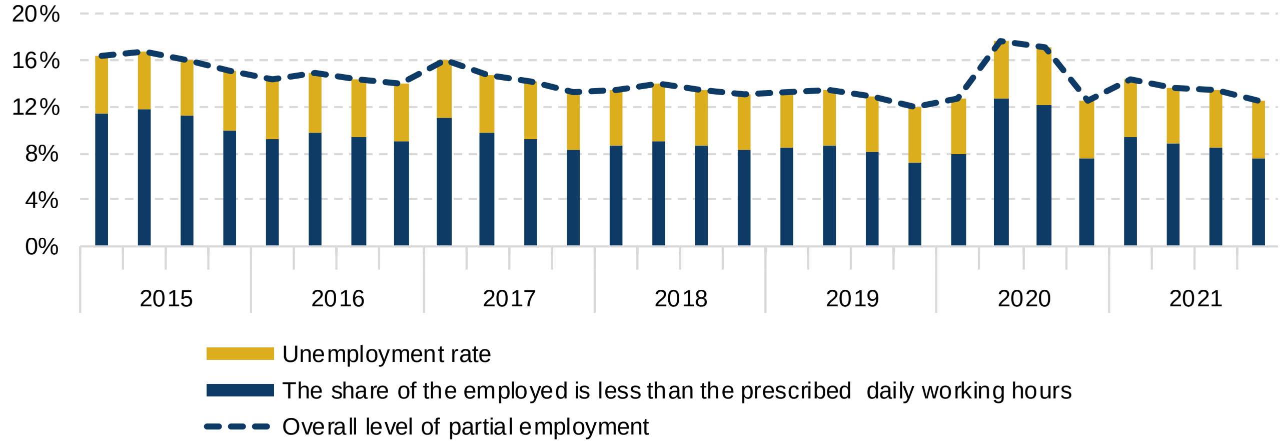


Source: *ASPR BNS RK*
Note: *long-term unemployment – the share of the numbers of unemployed population without a job during one year or more in the work-force size*

The labor market shows positive dynamics. After a 4.96% growth in unemployment during quarantine restrictions in 2020, its indicators moderately adjusted to 4.9% in 2021; however, this figure still significantly exceeds the downward trend observed in the pre-pandemic period *(Chart 1.11)*. At the same time, long-term unemployment with minor seasonal fluctuations remains in the range of 2.1-2.2%. The youth unemployment rate demonstrates a downward trend – from the beginning of 2016 to the present, its indicators have decreased by 0.7 percentage points. In the long term, such dynamics may contribute to a reduction in overall unemployment.

Chart 1.12 ***The share of under-employed is diminishing***

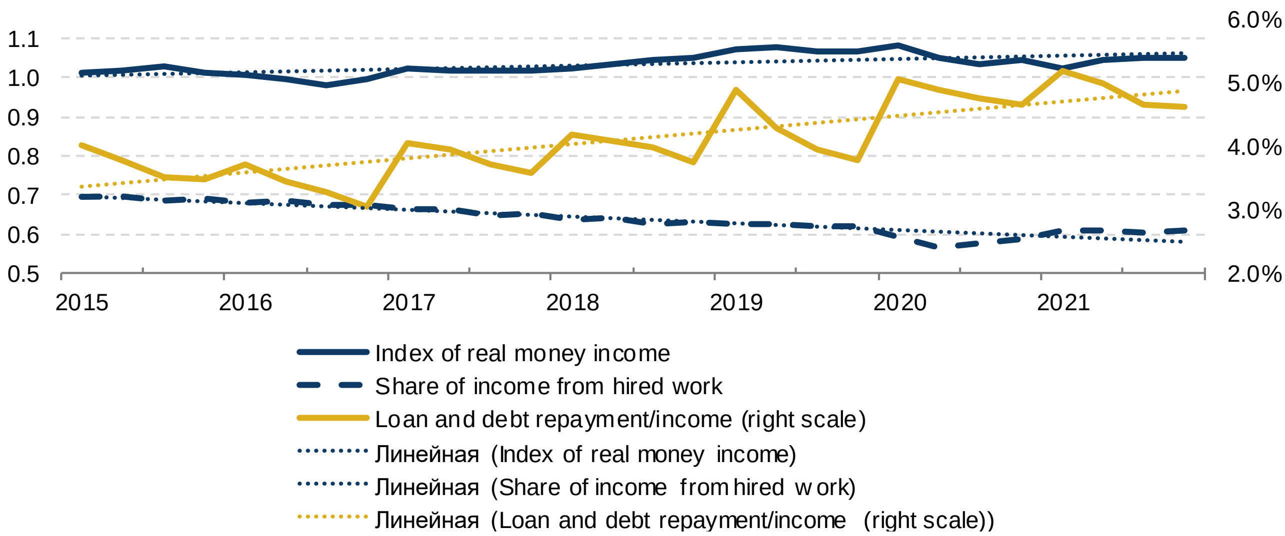
Unemployment rate including indirect unemployment



Source: *ASPR BNS RK, NBK's computations*
Note: *The share of people employed below the established daily working hours is calculated as the number of people who have worked from 0 to 40 hours a week*

Besides, as for the people who worked less than the established daily working hours, overall unemployment rate in 2021 decreased by 1.52% to 13.44% on average, although it is still higher than before the pandemic *(Chart 1.12)*. This indicator demonstrates that, for a number of reasons, the potential of labor resources is not fully utilized, which reduces productivity and can potentially lead to a slower economic growth. Income from employment is the main source of income for households, and a significant reduction in such income will lead to a decrease in the solvency of the population, which will negatively affect the ability of the population to service obligations and may entail significant risks to financial stability.

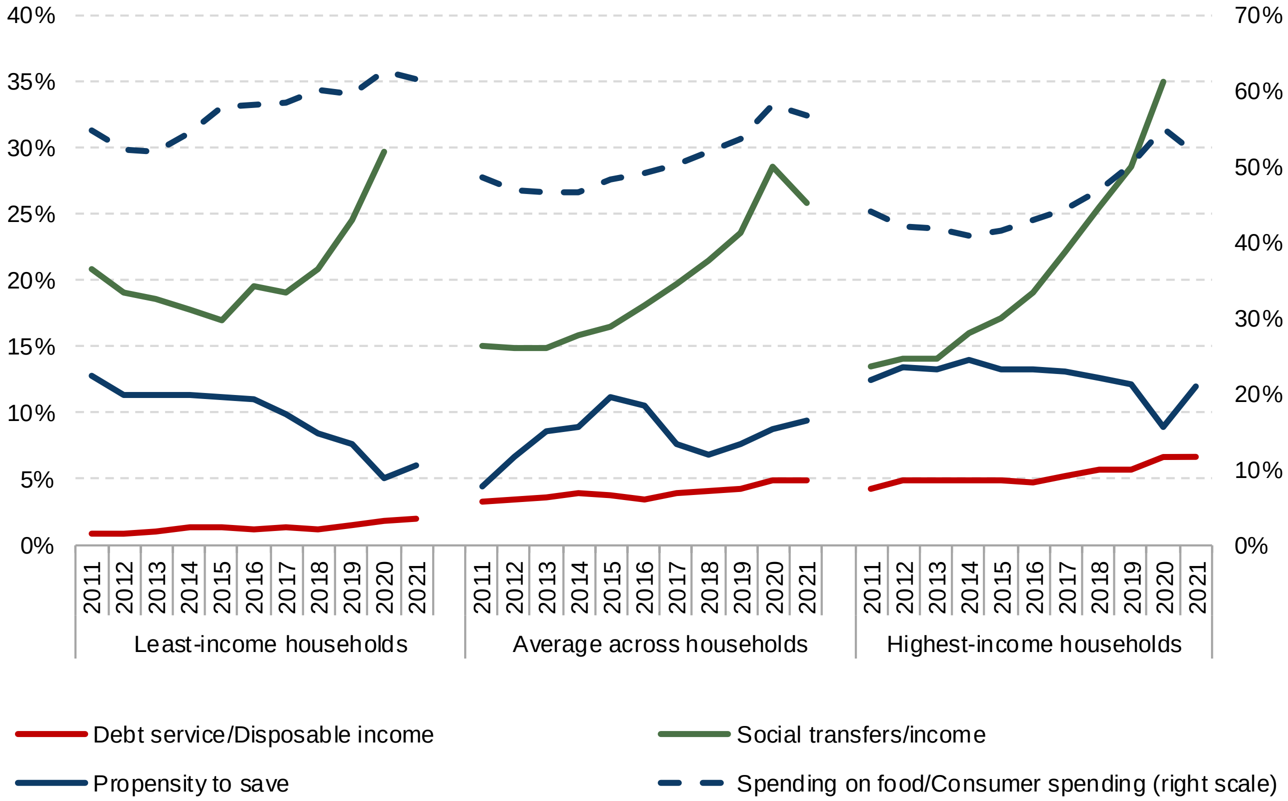
Chart 1.13 ***Household debt burden continues to grow***



Source: *ASPR BNS RK*

The household debt burden is growing, debt-to-income ratio in 2021 demonstrated a 0.48% (0.02 pp) growth compared to that of 2020 *(Chart 1.13)*. These indicators are more significant in the long run: thus, over the prior five years, this ratio increased by 26.91% (1.03 pp). Considering that the real income of the population does not grow to the same extent as the personal spending, in order to maintain the level of consumption, the gap is financed by lending and it tends to increase.

Chart 1.14 ***The share of social transfers in personal income is growing***



Source: *NBK's computation based on data from the ASPR BNS RK*
Note: *Social transfers include retirement benefits, scholarships, allowances and the TSA. The lowest income households are Decile 1 households. The highest income households are Decile 10 households. The propensity to save (α) is calculated as:* $=\mathbf{1}-\frac{\beta}{\gamma}$ *, where: β is household consumer spending, γ-household disposable income, i.e. income less taxes, fines, mandatory payments and subsistence support to relatives*

In 2021, the share of spending on food in consumer spending across all categories of households decreased *(Chart 1.14)*. The propensity to save among the lowest and highest income households also increased significantly, thus increasing the resilience of these households. However, on average, the propensity to save across households slightly decreased, which can be explained by the realization of pent-up demand after the end of the pandemic, as well as a decrease in the motivation to save in case of unforeseen expenses due to an increase in the consumer confidence index. Such dynamics in the long run limit the possibilities for further increase in consumption. In addition, the highest propensity to save is observed among households with the highest income that tend to have a lower marginal propensity to consume. While the importance of public support schemes is generally declining, social transfers still play a significant role in stabilizing income, consumption, and debt-servicing capacity. Thus, the share of social transfers in the personal income showed a decline across households on average, but in the population with the lowest and highest income, there is an acceleration in volume and growth. In the case of the highest income households, this indicates a growth in retirement benefit payments, and in relation to households from the first Decile, both the effect of pension indexation and an increase in allowances and TSA is possible. The share of debt servicing costs to disposable income has been stable since the previous year, while the largest share of costs is typical for the highest income households, which is associated with their greater ability to receive and service loan proceeds.

Overall, there are some vulnerabilities across households, but risks to financial stability are moderate in the short term, albeit they are expected to increase in the long term. Thanks to a significant amount of savings and an increase in real income, households as a whole retain the ability to withstand financial and economic shocks. However, rising debt service costs and a significant increase in inflationary pressures leading to a larger household spending on food and basic consumer goods could adversely affect both the pace of support to the economic growth and the ability to service debt. Moreover, there is still a heavy reliance of households on government support measures, which puts them in a vulnerable position when they are cut.

1.3 Monetary Policy, Foreign Exchange Market and Money Market

Kazakhstan's financial market continues to function in the environment of liquidity surplus, and the NBK acts as a net buyer of liquidity. At the same time, in November-December 2021, when the tenge exchange rate was under pressure, the NBK's position on liquidity withdrawal operations decreased significantly. During this period, the demand from market participants for the tenge instruments of liquidity withdrawal – notes and deposit auctions – decreased; the demand for borrowed tenge liquidity in the repo market increased, along with the demand for the US dollar purchases in the foreign exchange market. In general, in 2021, the price of oil went up by 52.2%, but despite a significant increase in oil prices, the national currency depreciated by 2.7% only.

Resulting from the growth of retail lending, in 2021 the money supply ramped up significantly (5.2 trillion tenge).

During 2021, inflation was above the target and amounted to 8.4% at the end of the year. The highest inflation has been observed among food prices.

As a result of rising inflation, the NBK has not always been able to maintain a significant positive differential between the operating interest rate and inflation. Thus, in August 2021, the real interest rate dropped to its minimum since 2017.

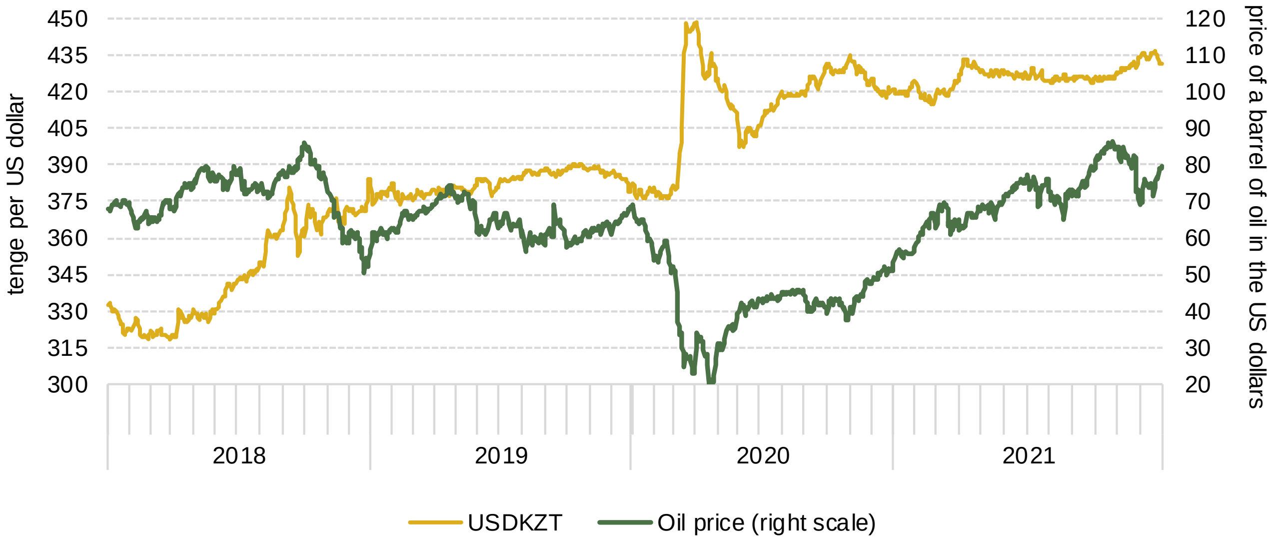
In order to reduce inflation and maintain a positive real rate of interest, the NBK raised the base rate several times in the second half of the year; as a result, the spread between the TONIA rate and inflation gradually increased and exceeded 2% at the end of the year, with the real neutral equilibrium interest rate estimated at 3-4%.

Exchange Rate Policy of the National Currency and the Foreign Exchange Market

Oil prices continue to be the main factor in determining the current account balance. Therefore, the price of oil plays a key role in pricing of the tenge. At the same time, it is important to note that despite the export-oriented economy of Kazakhstan, the formation of the tenge exchange rate in a free floating environment depends on a combination of various factors. As a result, the impact of oil prices on the exchange rate of the tenge against the dollar may be asymmetric. Thus, the price of oil grew during 2021, while a significant appreciation of the tenge exchange rate was not observed during this period. The growth in demand for foreign currency given recovery of the economic activity and the increased imports helped limiting appreciation of the tenge. In addition, pressure on the national currency as well as on the currencies of emerging markets, signaled the imminent tightening of the US Federal Reserve policy. In general, over the year, the tenge exchange rate weakened by 2.7%, while the price of oil rose by 52.2% (from $51 to $78 per barrel of oil).

At the end of the year, the mood of investors was influenced by the spread of a new strain of coronavirus - Omicron, concerns about a hasty curtailment of the soft monetary policy of the world's leading central banks. As a result, at the end of 2021, the outflow of investors from emerging markets increased. This was reflected in the Kazakhstani market by a reduced demand for the tenge instruments and an increasing pressure on the tenge. Despite considerable pressure, depreciation of the tenge was insignificant, with the tenge weakening by 1.1% in November-December.

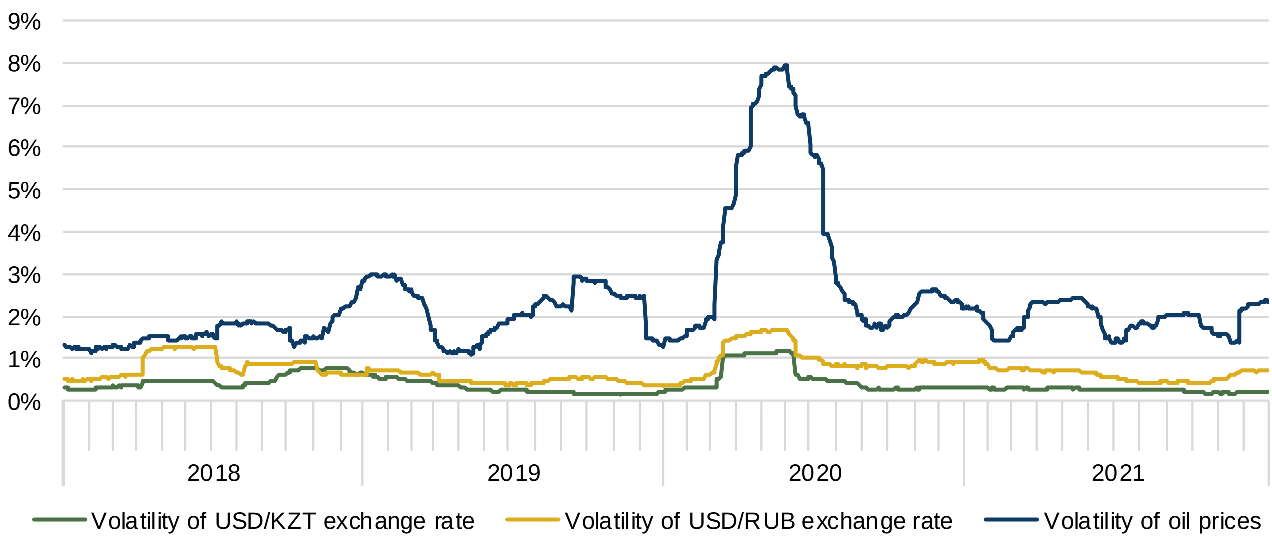
Chart 1.15 ***The tenge exchange rate and the price of oil***



Source: *NBK, Bloomberg*

In 2021, oil prices were quite volatile; however, volatility of the tenge exchange rate against the dollar was low and was slightly above the volatility observed in the times of fixed exchange rate. Thus, the average volatility of oil prices in 2021 was about 1.93%, whereas the average volatility of the tenge exchange rate during 2021 accounted for 0.25% or was eight times less than the volatility of oil prices. Considerably high volatility of commodity markets is a typical feature of this asset class. Volatility of the ruble against the dollar exceeded volatility of the tenge due to exposure to certain specific factors (sanction risks, the fiscal rule, the scale of financial markets, etc.).

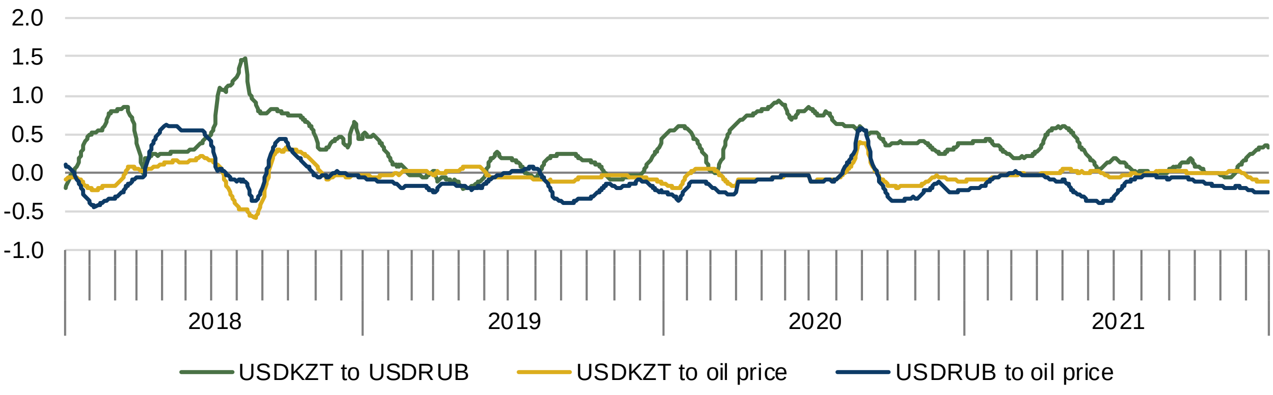
Chart 1.16 ***Volatility of the tenge exchange rate, of oil price and of the ruble exchange rate***



Source: *Bloomberg, NBK's computations*

The elasticity of the tenge exchange rate to oil prices was low during 2021, however, in December, with a decrease in oil prices, negative elasticity began to increase. The elasticity of the tenge against the ruble began to decline in May 2021 and slightly increased in December amid the exit of investors from emerging markets and the increased sanctions rhetoric against Russia.

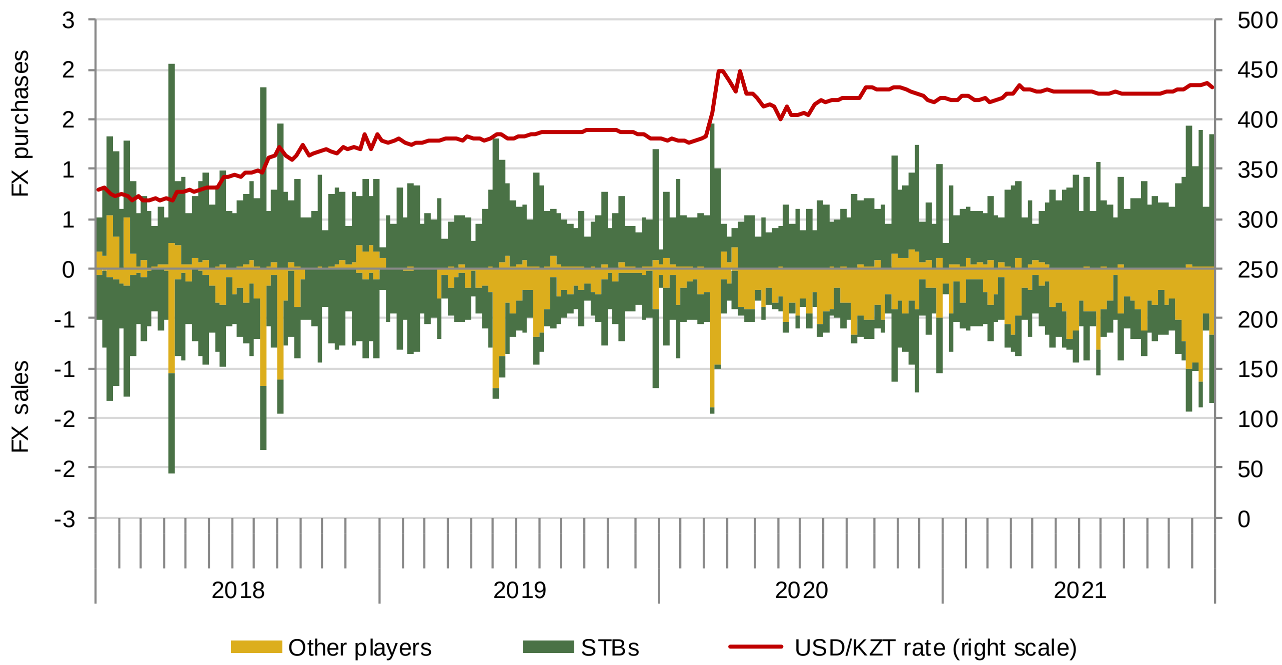
Chart 1.17 ***Elasticity of the tenge exchange rate to the price of oil and the exchange rate of the ruble***



Source: *Bloomberg, NBK's computations*

Trading volumes for the tenge-dollar currency pair increased by 20% in 2021 compared to the previous year and amounted to 35.4 billion US dollars in 2021. The average daily volume of transactions increased from 120 in 2020 to 144 million US dollars in 2021. The largest trading volume for the tenge-dollar currency pair was at the end of the year, during the period of greatest pressure on the tenge exchange rate. Thus, the trading volume in November 2021 amounted to 3.8 billion dollars, in December – to 4.4 billion dollars, despite the fact that the average monthly trading volume for the previous 10 months was about 2.7 billion US dollars. The sale of foreign currency at the expense of NF RK transfers was carried out throughout the year, thus ensuring a significant volume of foreign currency supply.

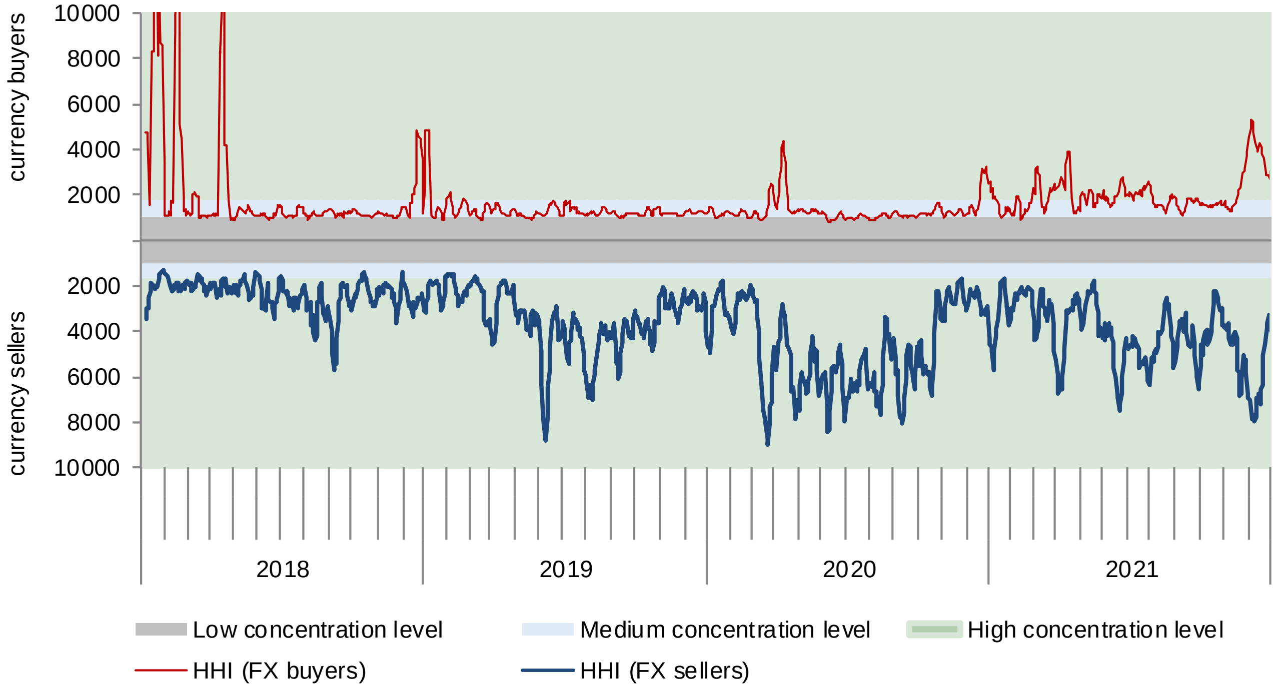
Chart 1.18 ***Volumes of foreign exchange market (million US dollars)***



Source: *KASE*

The concentration of foreign exchange sellers in the tenge-dollar market was high throughout the year and increased even more at the end of the year, indicating that the bulk of dollar sales fell on several market participants. The concentration of foreign exchange buyers, excluding certain periods of increase during the year, was average, but increased significantly in November and December 2021.

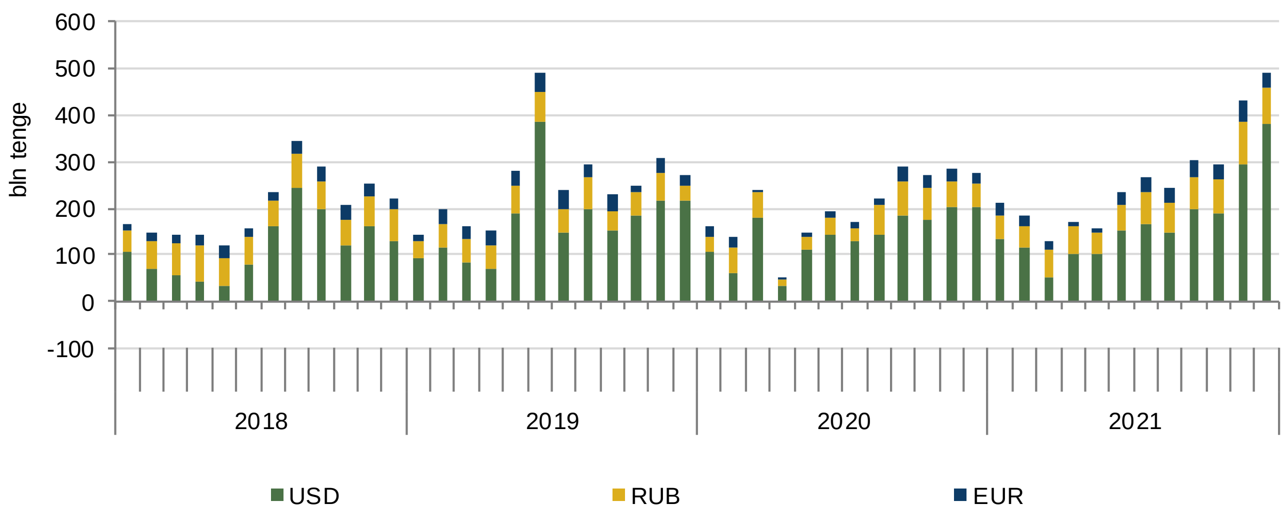
Chart 1.19 ***Concentration of the foreign exchange market***



Source: *KASE, NBK's computations*
Note: *HHI – Herfindahl-Hirschman Index, which is computed as the sum of squares of the volume shares of each participant from the total volume of transactions in the market; Concentration was calculated as a moving average of HHI for 5 consecutive days*

The purchase of foreign cash by the population at exchange offices also increased in November-December 2021. In November, the net purchase of US dollars at exchange offices increased by 55% compared to the previous month and amounted to 295 billion tenge, and in December – 378 billion tenge. In comparison, the average monthly net USD purchases during the first 10 months in 2021 were around 136 billion tenge.

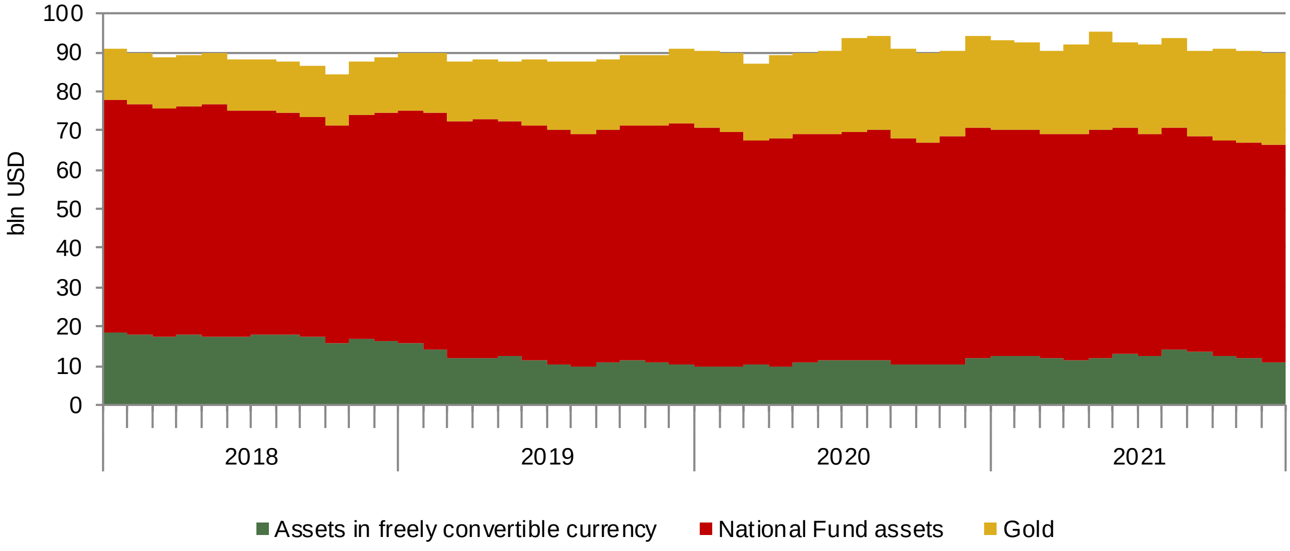
Chart 1.20 ***Net purchases (-) / sales (+) of foreign exchange by exchange offices***



Source: *NBK*

In 2021, international reserves decreased, the main reduction occurred because of a decrease in assets in freely convertible currency (“FCC”). Thus, in 2021 assets in FCC went down by 1.2 billion US dollars and at the end of 2021 amounted to 10.8 billion US dollars. Assets of the NF RK also decreased in 2021 by 3.4 billion US dollars and at the end of 2021 amounted to 55.3 billion US dollars. Despite the decline in 2021, the level of international reserves is still high, which is an evidence of the country’s solvency. Thus, at the end of 2021, gross reserves amounted to 34.4 billion US dollars.

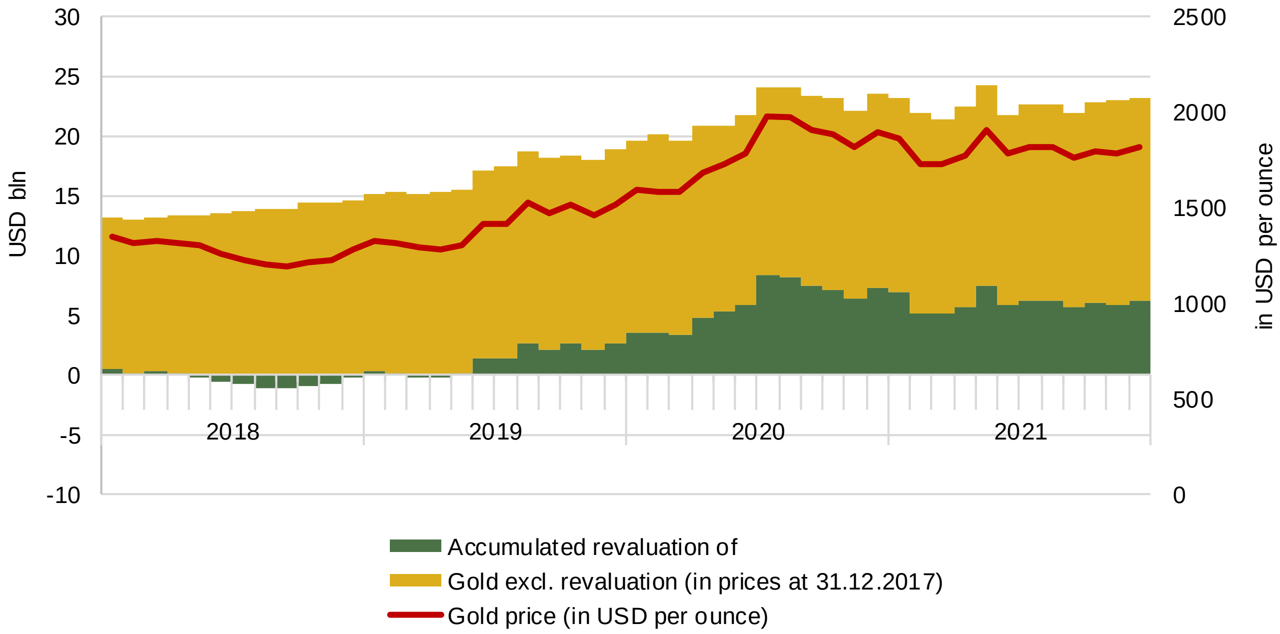
Chart 1.21 ***International reserves and the National Fund assets***



Source: *NBK*

The $36 million reduction of gold in the gold and foreign exchange reserves portfolio in 2021 was caused by revaluation, the price of gold during 2021 declined by 4%. At the same time, the physical reserves of gold in 2021 increased, the NBK continued to use the pre-emptive right to purchase in the domestic market. Besides, in 2021, the NBK was actively involved in the transfer of allocated gold to metal accounts, which represent a more liquid asset. Part of the gold was sold in the external market.

Chart 1.22 ***NBK’s gold reserves***

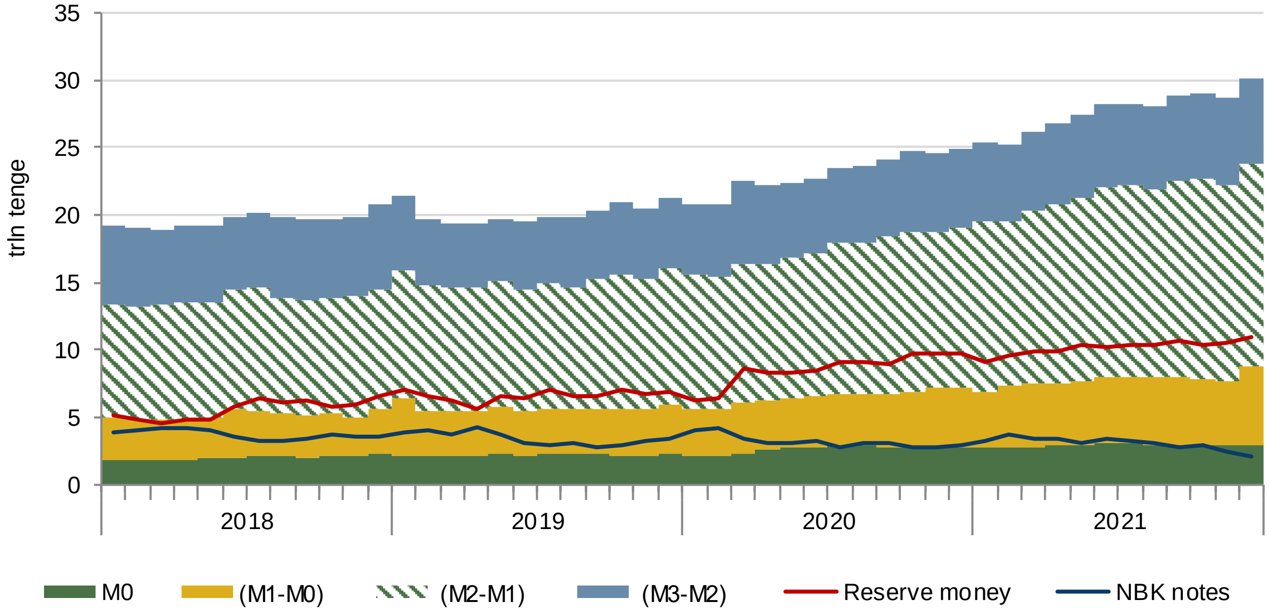


Source: *NBK*

Monetary Aggregates, the NBK's Operations and the Money Market

A significant buildup in the money supply was driven by acceleration of the retail loan portfolio growth rates. A growth in the money supply of 5.2 trillion tenge in 2021 exceeded in absolute terms the historical maximum of money supply growth since 2015 (by 4.3 trillion tenge). Thus, in 2021, the money supply increased by 21% and at the end of 2021 amounted to 30 trillion tenge. At the same time, only 23% of the growth in the money supply was driven by the growth of the reserve money; in 2021, the reserve money expanded by 12% or by 1.2 trillion tenge. In comparison, the contribution by the growth in the reserve money to the ramp up of the money supply in 2020 was equal to 80%. The main contribution to the increase in the money supply was made by the growth of retail loan portfolio; in 2021, the loan portfolio grew by 42.7% or by 3.8 trillion tenge. The corporate loan portfolio did not build up so significantly, its growth in 2021 amounted to 661.8 billion tenge (or 9.3%). The NBK's gold purchases also contributed to the increase in the money supply.

Chart 1.23 ***Monetary indicators***

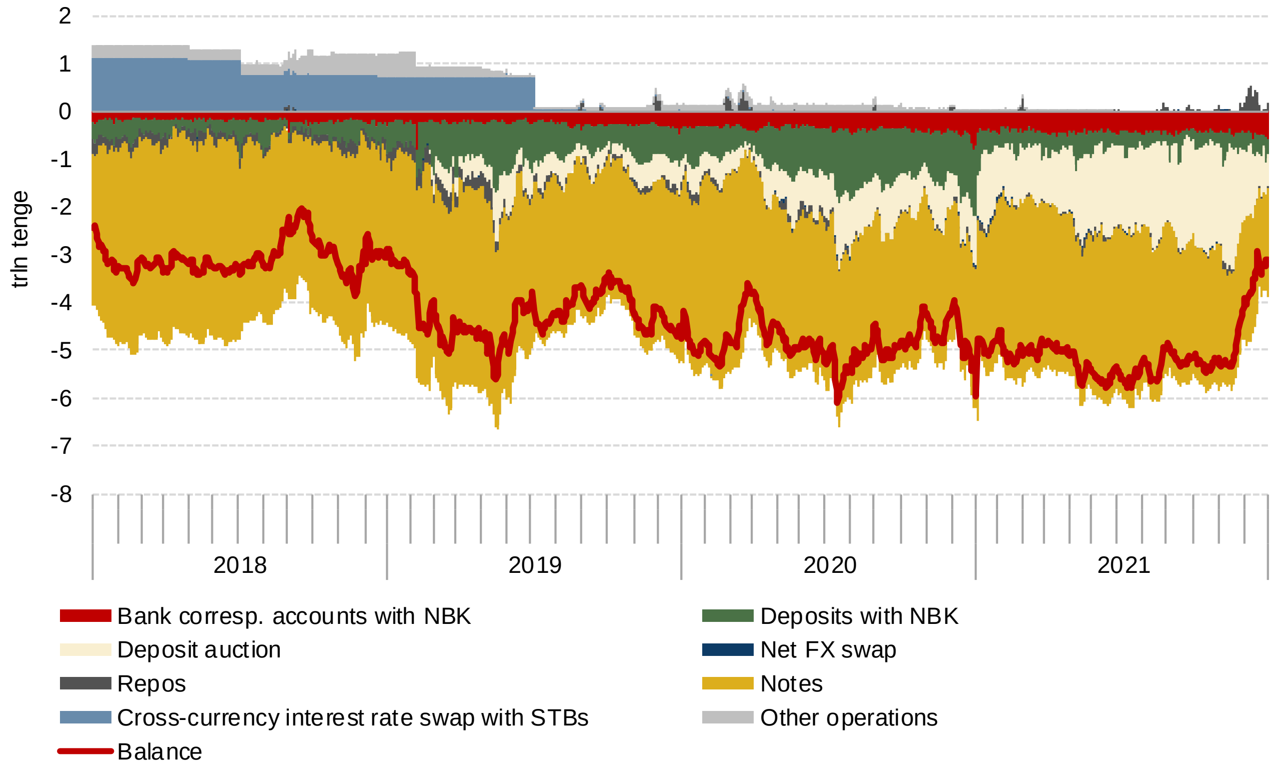


Source: *NBK*

At the end of 2021, excess liquidity was decreasing. In 2021, Kazakhstan's financial system continued to function in the environment of liquidity surplus, and the NBK continued to act as a net liquidity buyer, with the balance on the NBK operations amounting to -4.8 trillion tenge at the beginning of 2021. The NBK notes have remained as the main instrument of liquidity withdrawal, in 2021 the share of notes on average accounted for 61% of liquidity withdrawals. At the same time, in the course of the year, the share of deposit auctions increased significantly and in some periods was reaching 48% of the NBK's withdrawals. The share of notes during such periods was declining to 44-45%.

In November-December 2021, excess liquidity declined, in two months the volume of NBK's liquidity withdrawals went down from 5.3 to 3.9 trillion tenge, and the balance on the NBK's operations decreased from -5.2 to -3.4 trillion tenge. In general, since the beginning of the year, the volume of liquidity withdrawals has decreased by 0.9 trillion tenge. The NBK's position on liquidity withdrawal was reduced under the impact of a number of factors – this is a reduction in the position on notes of STBs and non-residents, the conversion of a part of the STB's liquidity into foreign currency, the increased need of STBs in the tenge liquidity as a result of curtailment of government concessional lending programs, the repurchase of shares and GDRs, dividend payments, and the repayment of bonds and loans by large banks.

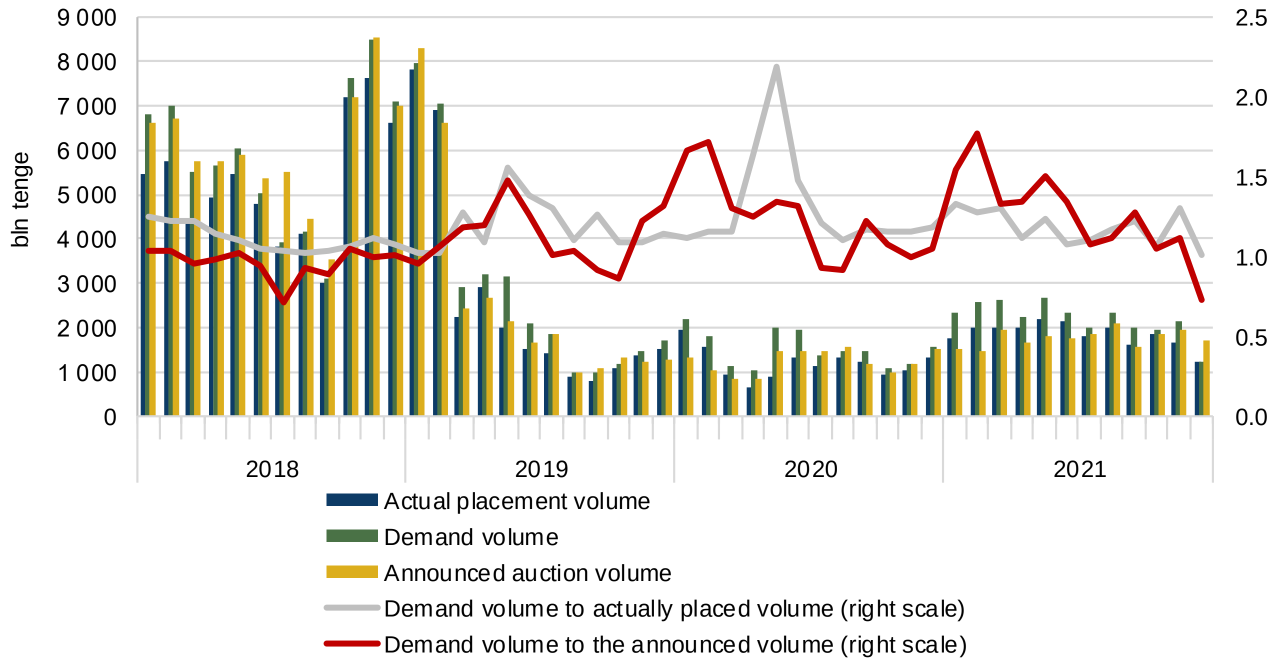
Chart 1.24 ***Exposure on the NBK's operations***



Source: *NBK*

In 2021, market participants retained high demand for notes with the exception of December 2021. In general, in the course of the year, the demand for notes from market participants exceeded the announced volume of auctions. The NBK did not fully satisfy the demand for notes except for December. In December, during the period of liquidity reduction in the market, the demand for notes was lower than the announced volume and was almost completely satisfied by the NBK.

Chart 1.25 ***Announced volume, demand and the actual placement volume of the NBK notes***

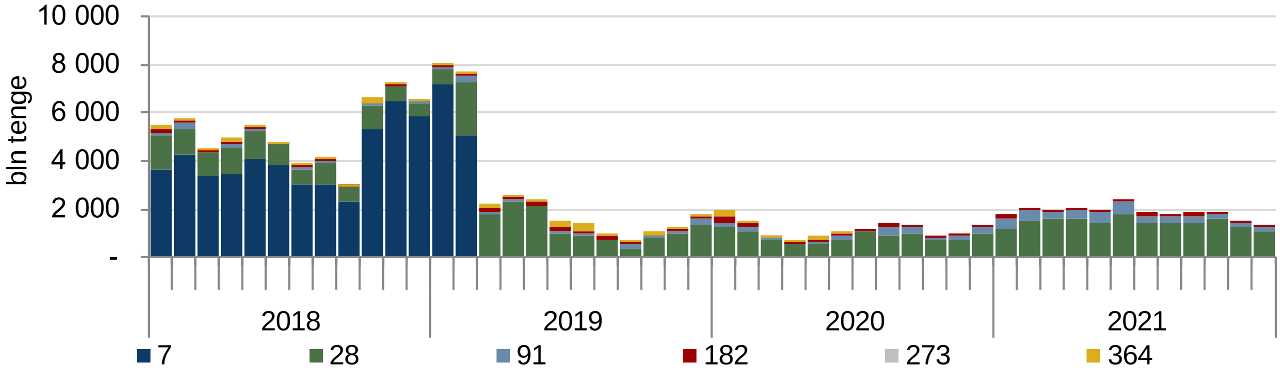


Source: *NBK*

Note: *Actual placement volume is shown at the actual cost*

In 2021, the NBK placed notes with three maturities only – 28 days, 3 months and 6 months. Recap that in 2020, the NBK suspended the placement of one-year notes and limited the issuance of 6-month notes starting from October 2020 to 100 billion tenge per month. In 2021, the NBK continued to place notes with shorter maturities, the largest volume of placements was for 28-day notes – 77% of the total volume of note auctions per year. In general, the volume of conducted auctions grew by 56%[12], which was also due to shorter terms of instruments for mopping up excess liquidity and, therefore, a faster turnover rate of the note portfolio.

Chart 1.26 ***Initial note offering by maturity***

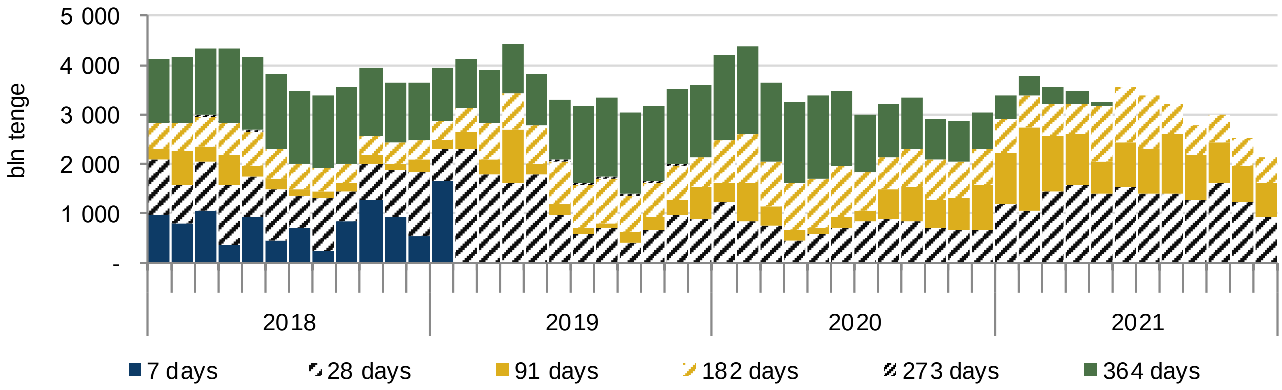


Source: *CSD*

Starting from March 2021, the volume of notes in circulation has been decreasing throughout the year, this was due to the growing share of deposit auction within liquidity withdrawal instruments. Reduction of notes in circulation in November-December was explained by a lower position on withdrawal instruments. In 2021 as a whole, the volume of notes in circulation went down from 3.1 to 2.1 trillion tenge[13].

In May 2021, the last available note issues with one-year maturity were redeemed. Thus, notes issued with three maturities: 28 days, 3 months and 6 months remained in circulation. Notes with maturity of 28 days accounted for the largest share in the structure of notes in circulation in 2021, during the year their share was about 43% on average, and the share of notes with maturity of 3 and 6 months was 30 and 23%, respectively. The predominance of shorter-term notes in the portfolio of participants should help increase the transmission of monetary policy rates. As the speed of the note portfolio redemption increases, the existing market rates will to a greater extent affect the cost of liquidity in the market.

Chart 1.27 ***NBK notes in circulation by maturities***



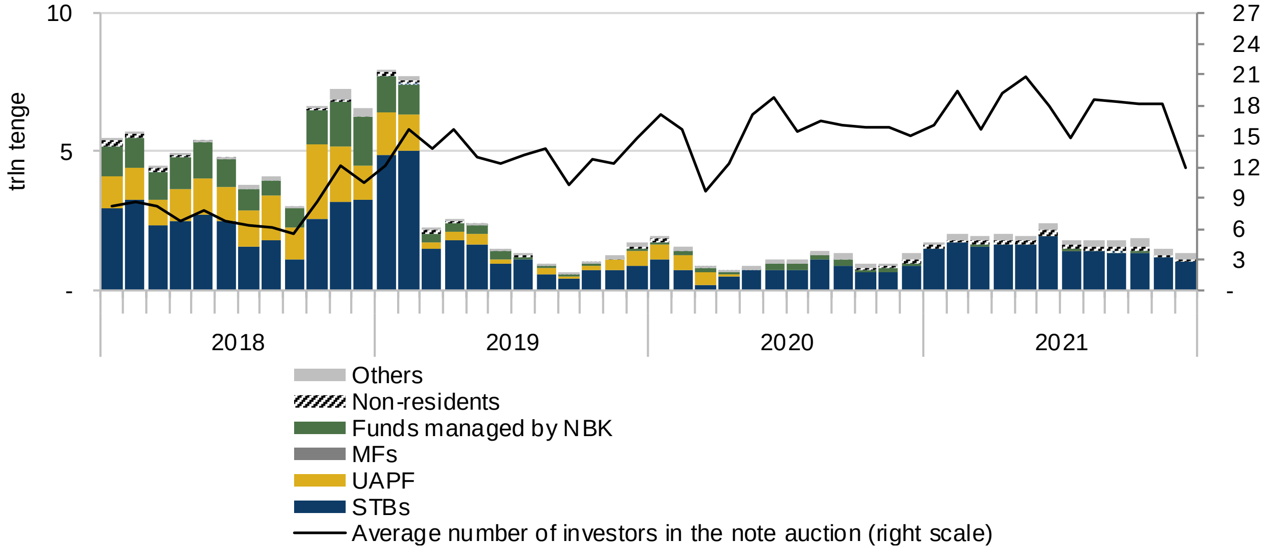
Source: *CSD*

[12] When accounting for auction volumes at par value

[13] According to the Central Depository, at par value

There is an increased interest in the notes market on the part of voluntary participants. In 2021, the second-tier banks still acted as the main buyer in the primary market, however, their share decreased during the year from 88% to 78%. Starting from May 2020, the UAPF significantly reduced its participation in the primary market of the NBK notes; throughout 2021, the UAPF participated in auctions only from June to September, and its share in these months did not exceed 0.02%. For reference, in 2018, the UAPF's share reached 40% for several consecutive months. The share of funds managed by the NBK also decreased significantly and in most months did not exceed 1%; in 2020, the average monthly share of funds was about 11%, and in 2018, it made up 21%. At the same time, the share of non-residents and a group of other participants increased in 2021. The average monthly share of non-residents in 2021 was about 7%, and the share of other participants, including broker-dealers, their clients, the pension fund's own assets, was about 12%.

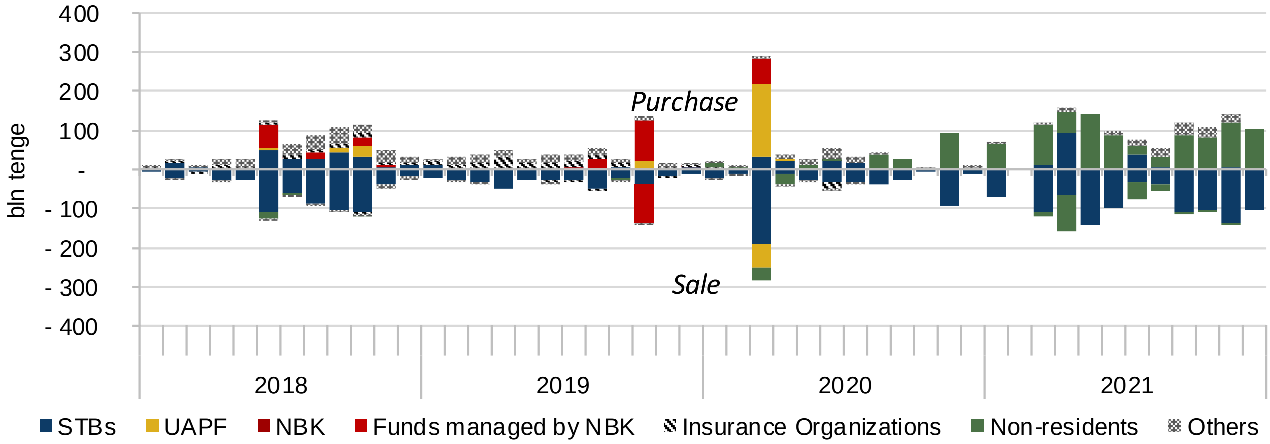
Chart 1.28 ***Primary offering of NBK notes, by participants***



Source: *CSD*

The growing activity in the secondary market of the NBK notes was driven by the increased demand from non-residents. In 2021, non-residents were the main buyers of notes, in most months non-residents accounted for more than 70% of the purchase volume, and in some months, non-residents accounted for 100% of the purchase volume. In general, there was a several-fold increase of volumes in the secondary market; however, the secondary market is still a fraction of the primary market. Thus, in 2021, the volume of transactions with notes was 19 times smaller than that in the primary market.

Chart 1.29 ***The secondary market for the NBK notes***

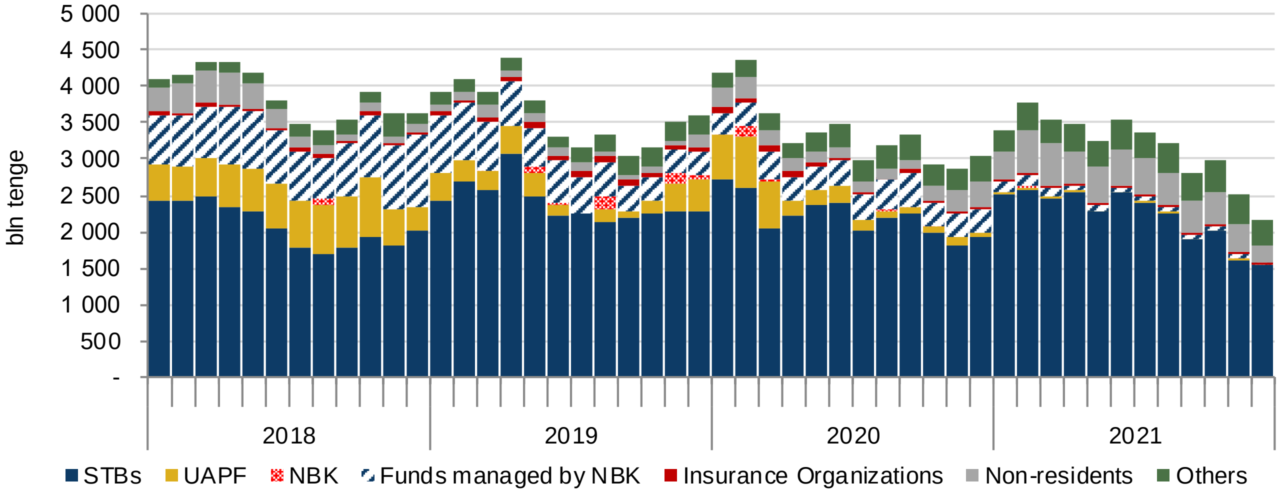


Source: *CSD*

The share of non-residents began to noticeably increase in 2020, and continued to grow in 2021. At the end of 2020, the share of non-residents was 11%, and in the course of the year, it reached 17%. However, given that the interest in the tenge instruments was declining in December 2021, it decreased to 10% at the end of the year. The main holders of notes are still STBs; in 2021, their share averaged 70%. The share of the "other" group continued to grow in 2021, it increased from 8% to 16% during 2021.

Generally, in November-December, due to reduced liquidity in the tenge, the position on placed notes declined by 842.8 billion tenge, of which reduction in notes held by STBs amounted to 480.3 billion tenge, and in notes held by non-residents – to 234.9 billion tenge.

Chart 1.30 ***NBK notes in circulation by holders***

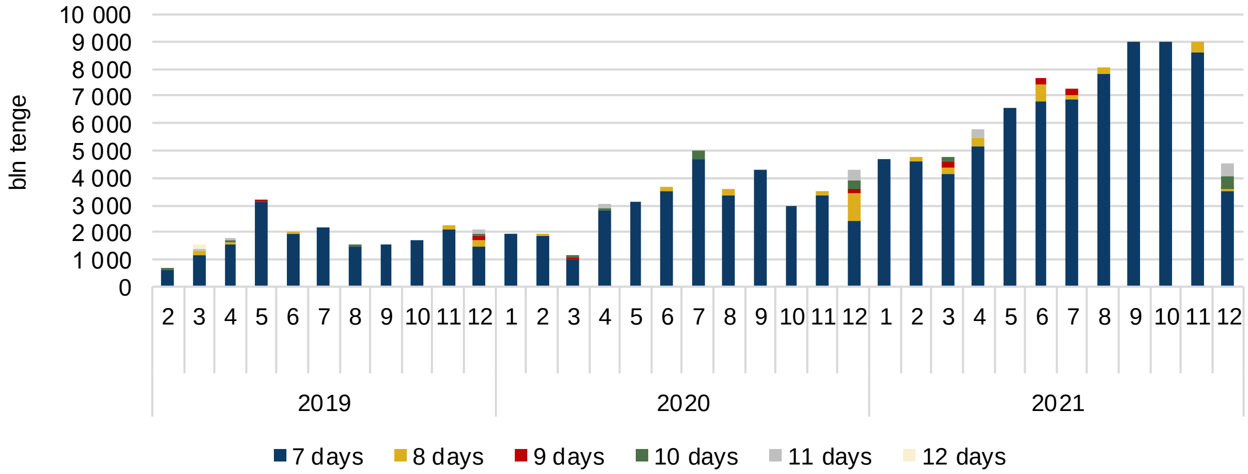


Source: *CSD*

During 2021, the NBK was gradually increasing the share of deposit auctions in liquidity withdrawal instruments while satisfying the demand for deposit auctions from the market participants. At the end of 2020, the auction position was 1.1 trillion tenge and during the year, it was going up to 2.6 trillion tenge. However, at the end of the year, due to reduction in the tenge liquidity, a deposit auction position went down to 1.1 trillion tenge.

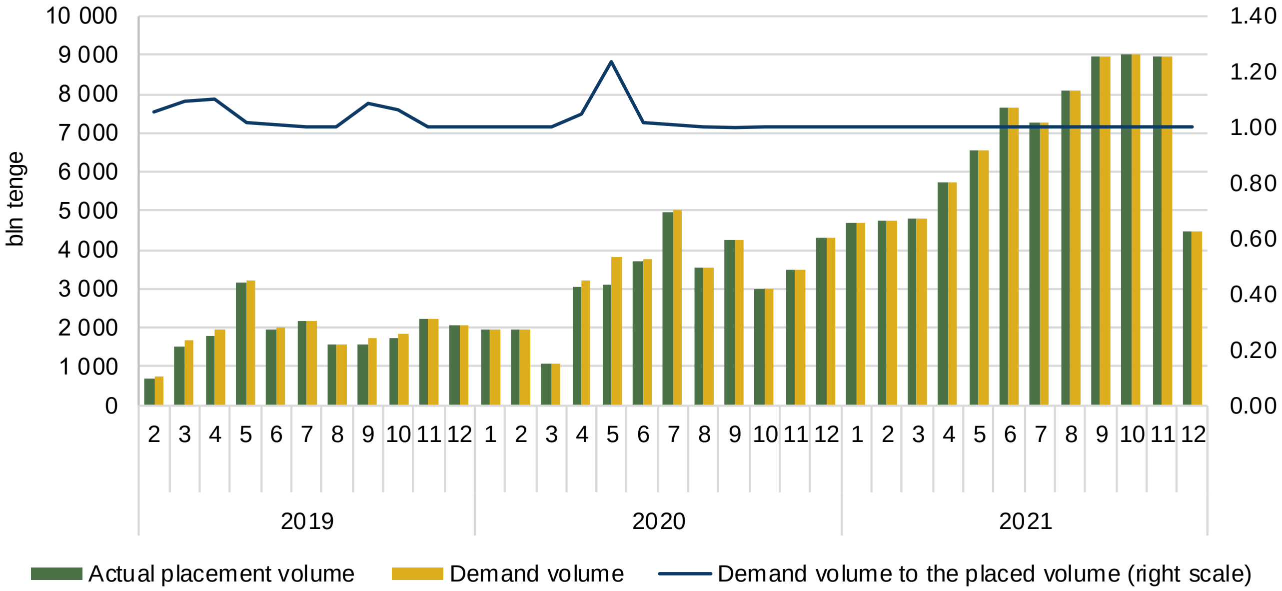
In general, deposit auctions represent a more effective instrument of withdrawal than notes, since they cannot be used before the expiration date without a loss of interest, unlike notes, which can be used as collateral to obtain liquidity in a repo. However, this feature of deposits also makes it difficult for market participants to manage liquidity, so the maximum term for deposit auctions is 12 days, and for most deposit auctions, the term is 7 days.

Chart 1.31 ***Deposit auctions by maturity***



Source: *NBK*

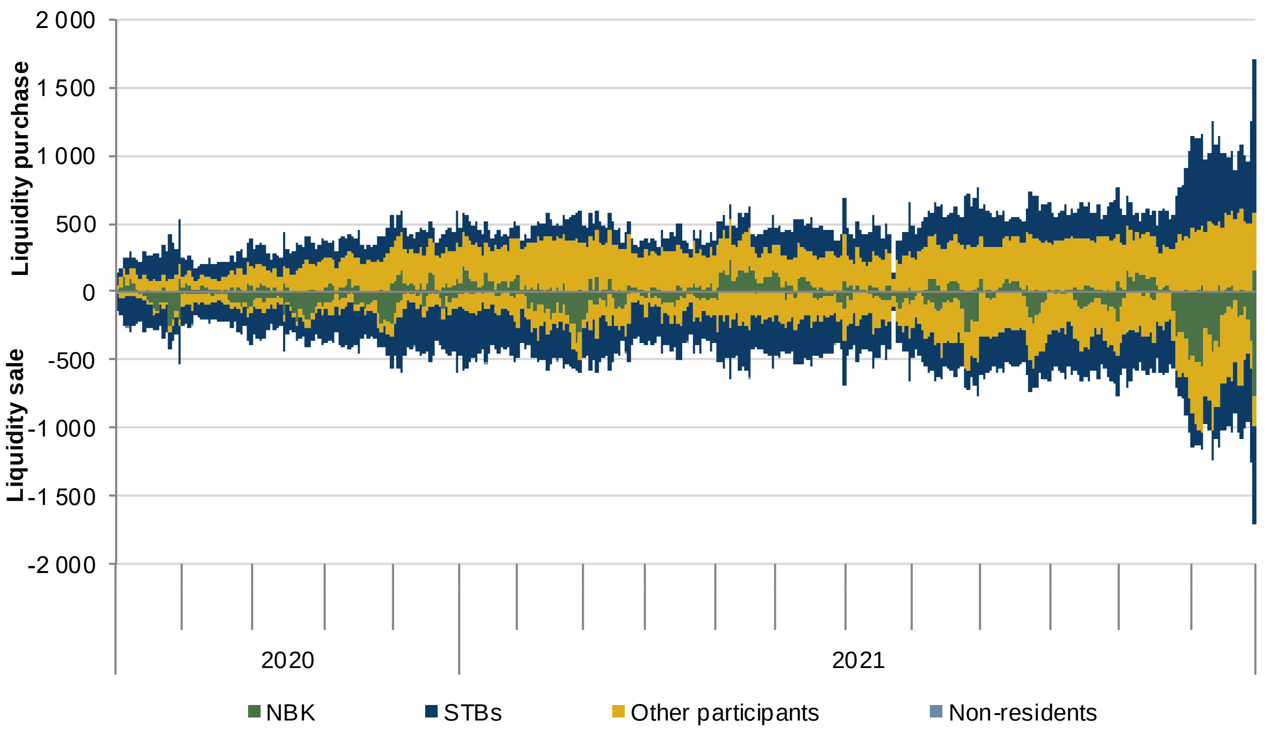
Chart 1.32 ***The demand and actual volume at deposit auctions***



Source: *NBK*

In November-December 2021, because of the increased pressure on the exchange rate, the volume of transactions in the auto repo market went up significantly. The volume of transactions in December 2021 was twice the average monthly volume for the first 10 months in 2021. During this period, the NBK was providing liquidity, with 28% of the total liquidity provided in the auto repo market in December 2021 being furnished by the NBK.

Chart 1.33 ***Volumes of the repo market, billion tenge***

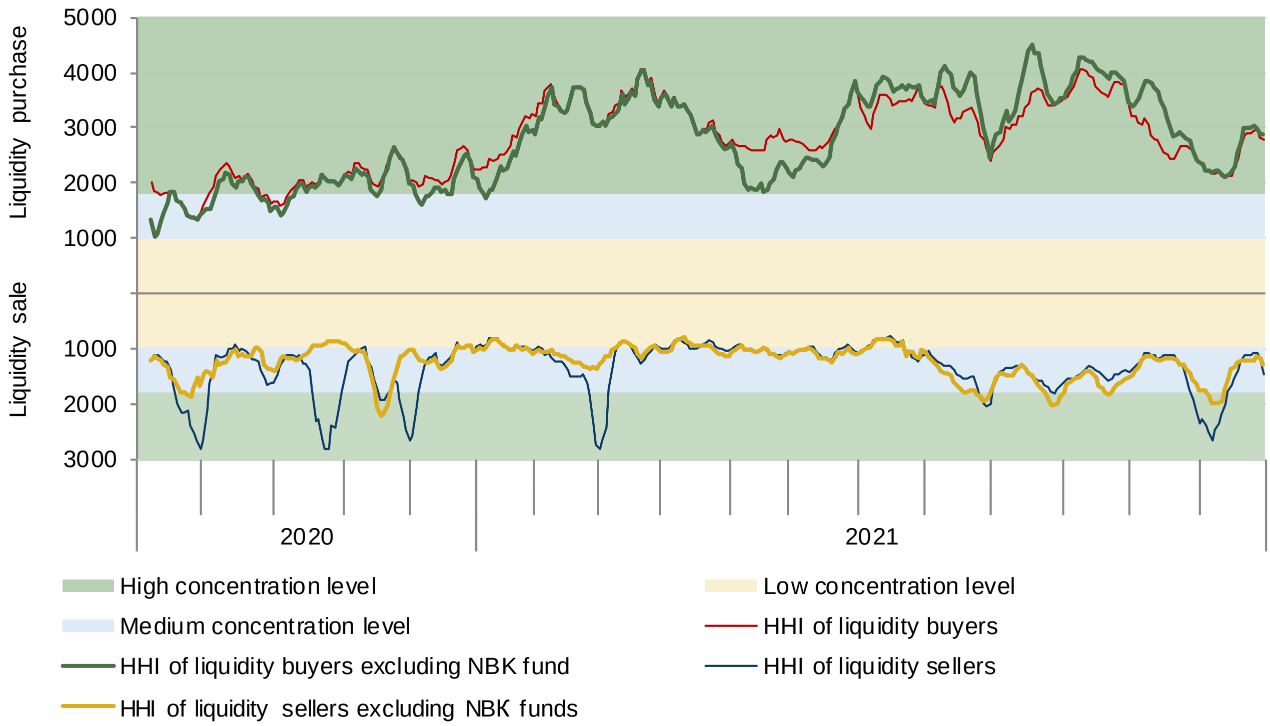


Source: *KASE*

Note: *The Chart shows auto repo operations, which employ equities and bonds, including GSs, as collateral. Before 2021, the Financial Stability Report included only auto repos with government securities and did not include auto repos with equities and bonds of non-government sector issuers.*

A higher concentration of buyers of liquidity compared to the concentration of sellers indicates that the bulk of liquidity purchases falls on several market participants. The number of participants borrowing liquidity increased in November-December, thus reducing the concentration. The concentration of liquidity sellers at the end of the year increased due to the National Bank's participation.

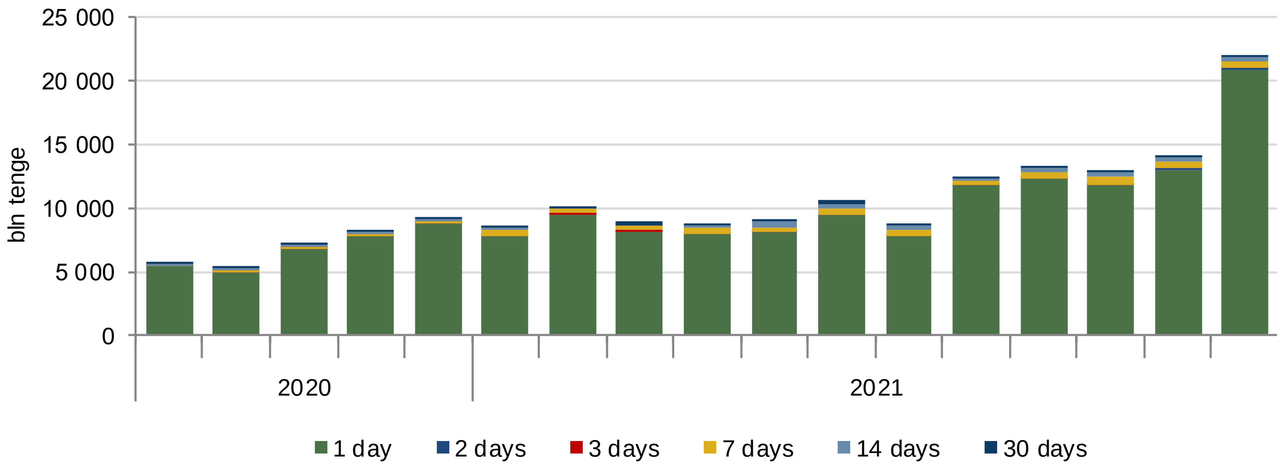
Chart 1.34 ***Concentration of the repo market***



Source: *KASE, NBK's computations*
Note: *HHI – Herfindahl-Hirschman Index, which is computed as the sum of squares of the volume shares of each participant from the total volume of transactions in the market; Concentration was calculated as a moving average of HHI for 5 consecutive days*

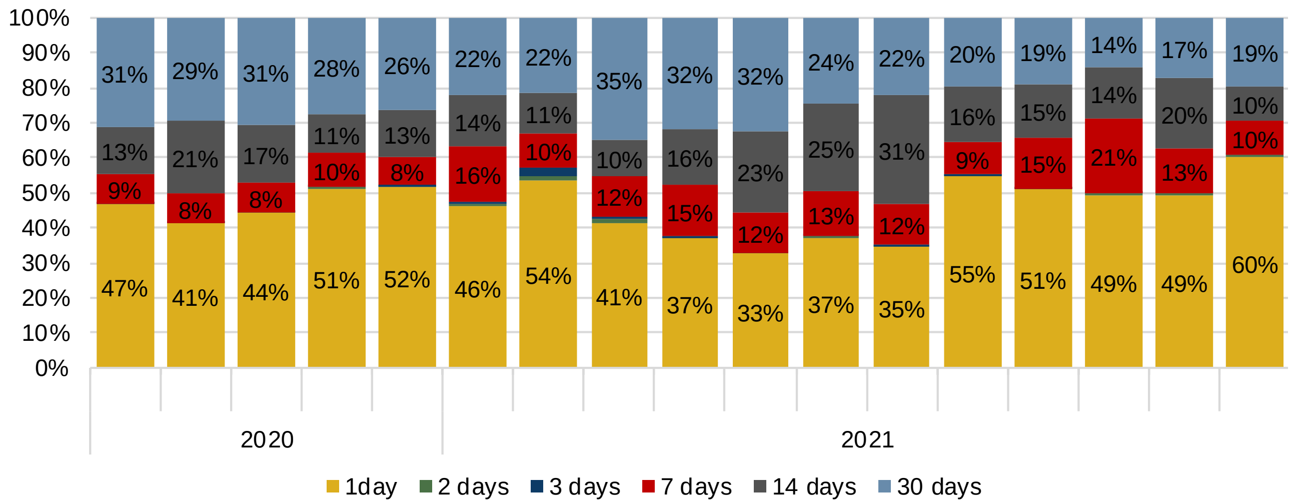
Most transactions in the automatic repo market are still concluded overnight, in 2021 overnight repos accounted for 92% of all transactions, 7-day repos accounted for only 4% of transactions. However, weighting transactions by maturity shows that in borrowing liquidity 1-day transactions accounted for 46%, and about 23% of liquidity was borrowed for a period of 30 days.

Chart 1.35 ***Volumes of automatic repos by months and by maturity***



Source: *KASE*

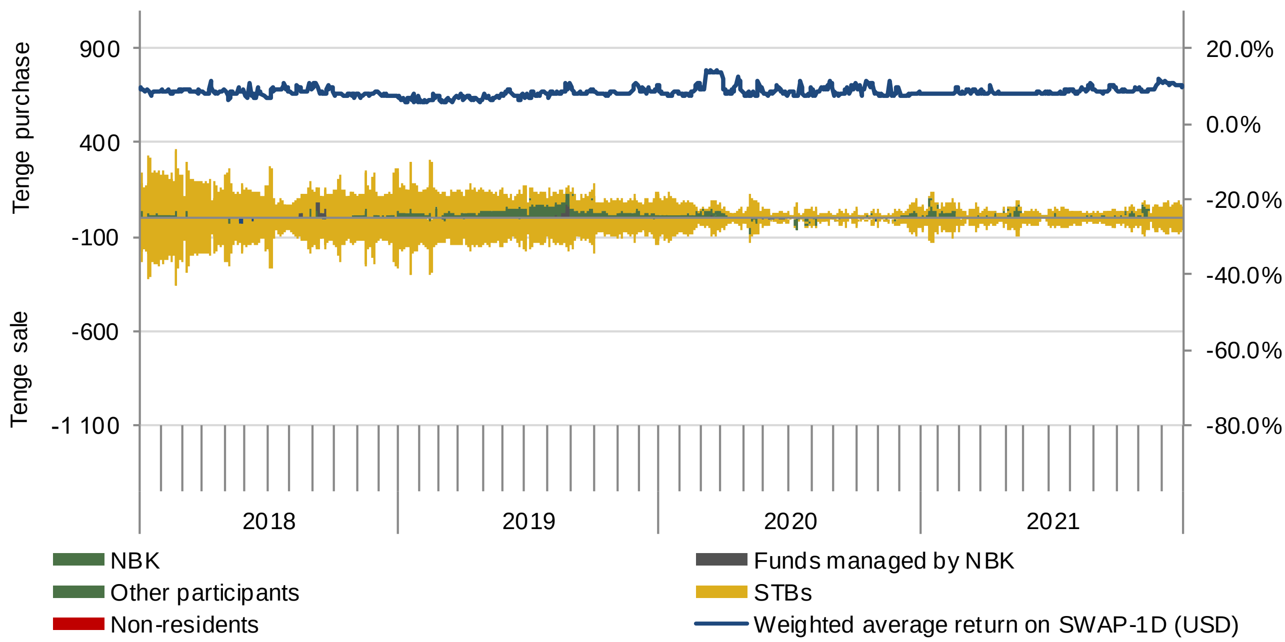
Chart 1.36 ***Volumes of automatic repos weighted by maturity***



Source: *KASE, NBK's computations*

The low activity in the swap market in 2020-2021 is explained by the fact that the level of dollarization of bank deposits is still relatively low compared to previous periods (37% at the end of 2021). Although the volume of transactions in the currency swap market in 2021 increased by 11% compared to 2020 (to 11 trillion tenge), it remains quite low compared to prior years. Thus, in 2018, the volume of transactions was three times larger, and in 2017, it exceeded that of 2021 by more than five times. Since 2014, STBs have been the main participants in the currency swap market. For STBs with a high level of dollarization, the currency swap market played the role of a money market, which enabled to obtain the tenge liquidity while maintaining a low level of currency position, in other words, swaps were both a liquidity borrowing tool and a hedging tool. In 2020-2021, deposit dollarization has noticeably decreased, furthermore, the financial market is operating in a liquidity surplus, and the NBK is actively withdrawing liquidity largely through notes. Therefore, STBs, having significant reserves of government securities, prefer to borrow liquidity in the repo market. Thus, in 2021, the auto repo market was 12 times larger than the volumes in the currency swap market.

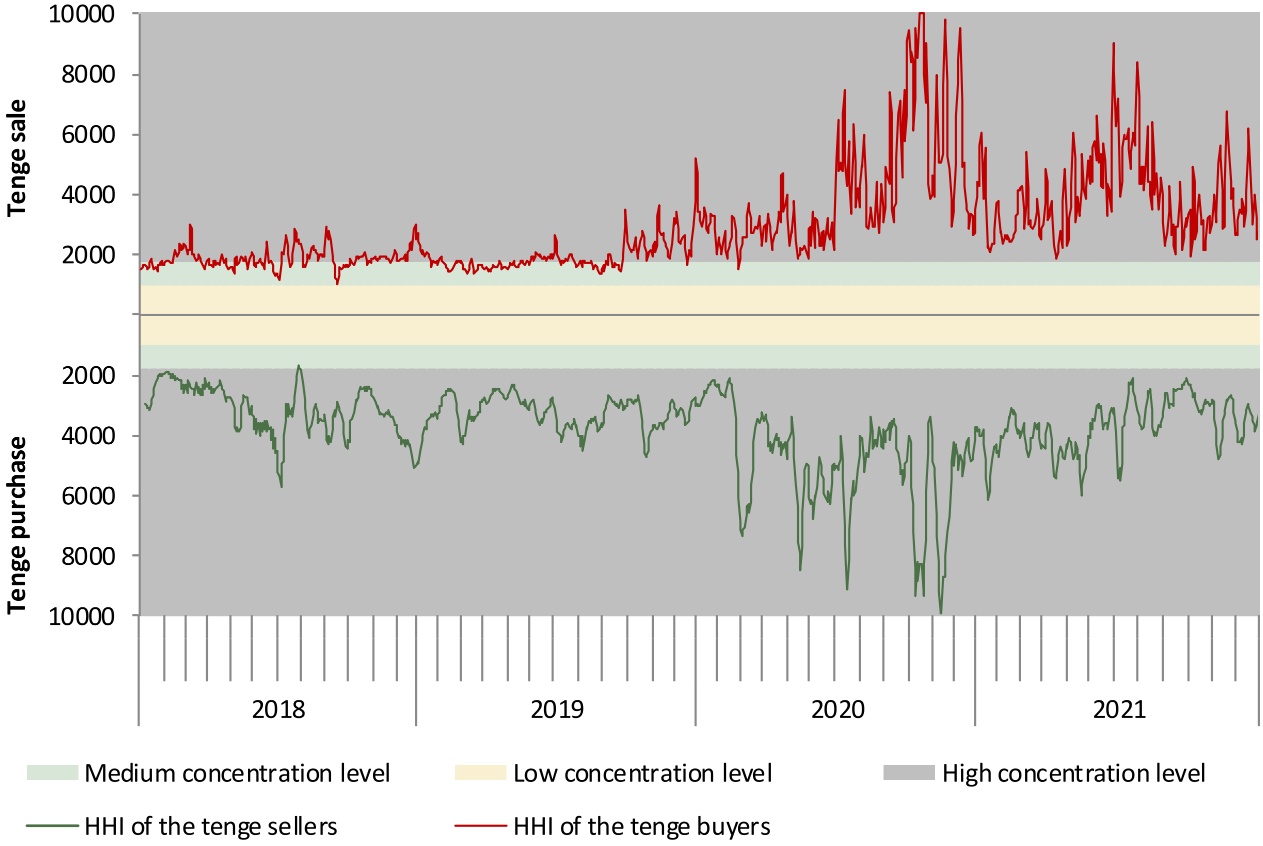
Chart 1.37 ***Volumes in the currency swap market***



Source: *KASE*

The number of buyers of the tenge liquidity in the currency swap market remains very limited, as evidenced by a high concentration among buyers of the tenge liquidity starting from 2020. The high concentration of liquidity sellers present in the swap market since 2020 has been declining in 2021. The NBK's participation in the currency swap market has been insignificant, and liquidity has been distributed by market participants on their own.

Chart 1.38 ***Concentration in the currency swap market***



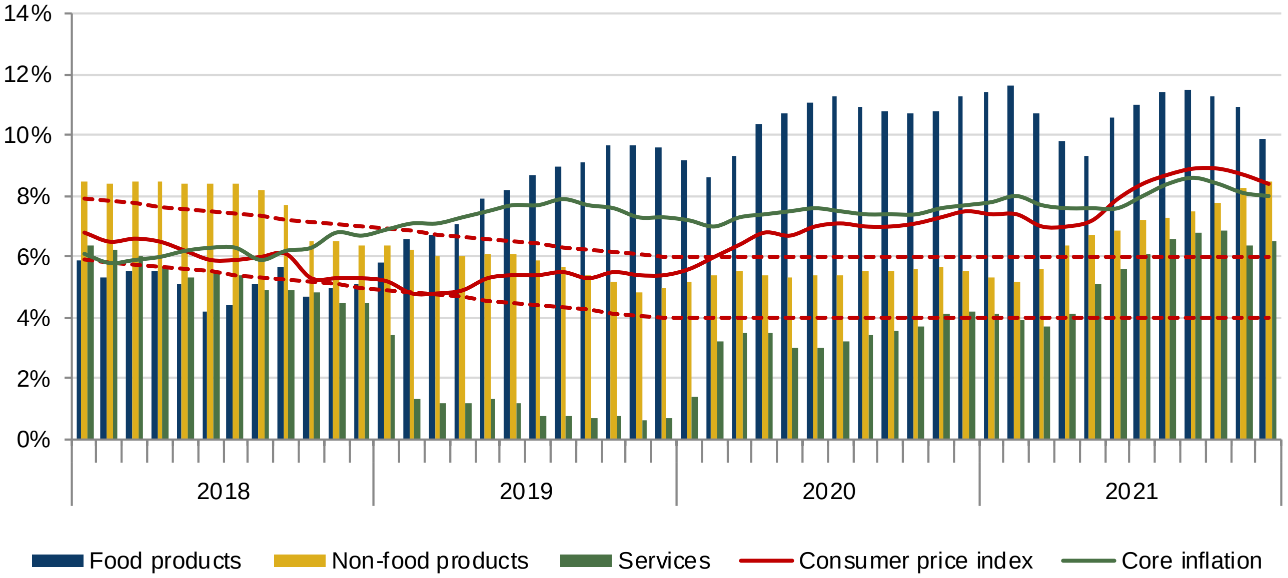
Source: *KASE, NBK's computations*
Note: *HHI – Herfindahl-Hirschman Index, which is computed as the sum of squares of the volume shares of each participant from the total volume of transactions in the market; Concentration was calculated as a moving average of HHI for 5 consecutive days*

In 2021, inflation remained high, exceeding the target level (3-4%) throughout the entire period. At the year-end, inflation was 8.4. Starting from April 2021, inflation was accelerating in all of its components. Food inflation was the highest. At the end of the year, the growth in food prices amounted to 9.9%. The main contribution to the rise in food prices was made by bread and bakery products, cereals, and meat and fish products. The increase in prices for bread and bakery products and cereals is associated with the persistence of high world prices and a reduction in the domestic harvest of grains and pulses (Monetary Policy Report, March 2022).

The non-food inflation began to accelerate in March 2021 and at the end of the year accounted for 8.5%. The largest contribution to the growth in non-food inflation was made by the rise in prices of fuel and lubricants and prices of clothes and footwear.

Service inflation, which was at a fairly low level in the two preceding years, also accelerated in 2021. In 2021, services increased by 6.5% in terms of price. Acceleration of service inflation was caused by the rise in the cost of individual services due to the recovering demand in 2021. In particular, the cost of catering services, services related to home renovations went up. At the same time, the growth in the cost of regulated utility services was not so significant, over the year the cost of utilities has increased by 4.1%.

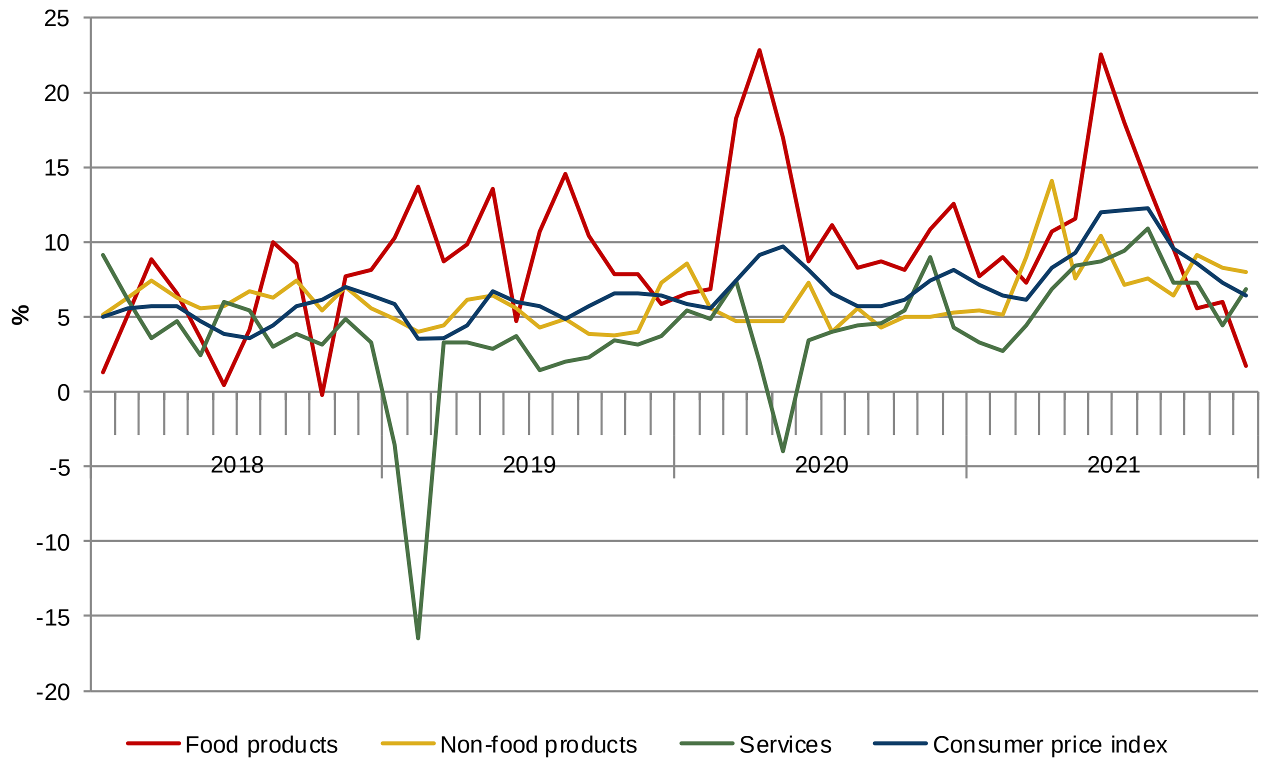
Chart 1.39 ***Dynamics of inflation components***



Source: *ASPR BNS RK*
Note: *The base index excluding fruits and vegetables, utility services (regulated), railway transport, communication, gasoline, diesel fuel and coal is taken as core inflation; before 2019, the inflation target had been set at the year-end, therefore, in 2018 and 2019 the target band had been declining in the Chart throughout the year. The inflation target band is shown by red dotted lines*

An analysis of seasonally adjusted inflation shows that inflation begins to decelerate from the middle of the year, which is driven by a decline in food inflation and service inflation. Food inflation, on the contrary, began to accelerate in the fourth quarter of 2021.

Chart 1.40 ***Seasonally-adjusted annualized inflation***

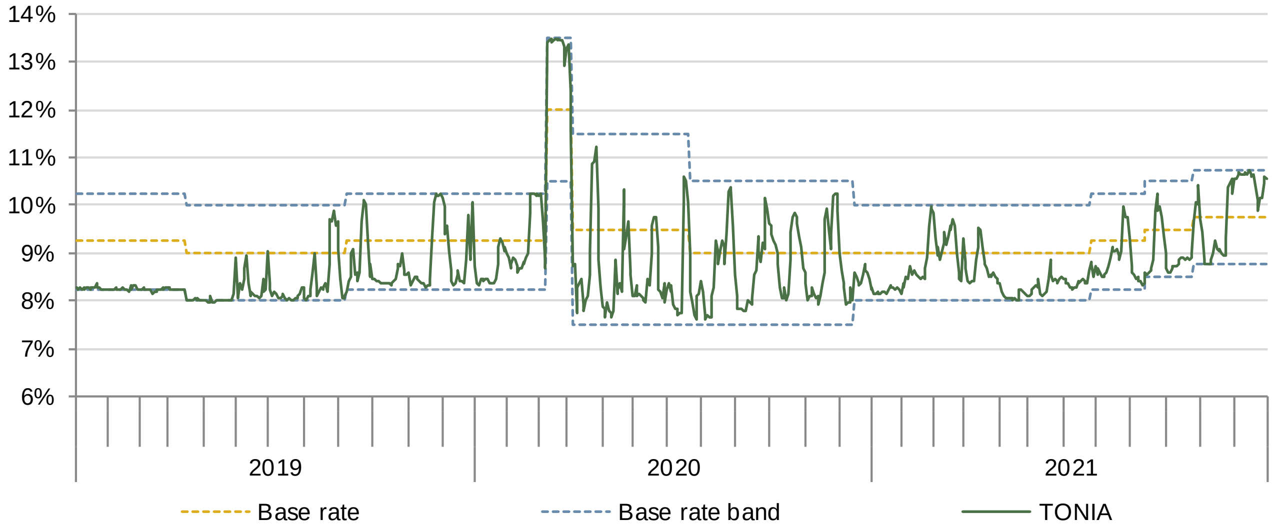


Source: *ASPR BNS RK, NBK's computations*
Note: *The Chart shows annualized seasonally-adjusted monthly data on the consumer price index and its components*

The NBK's Interest Rate Policy and Money Market Rates

In the first half of 2021, the NBK retained the base rate at 9%. However, starting from July 2021, due to accelerating inflation, the NBK began to increase it gradually. Thus, in July, the base rate was raised to 9.25%, in September – to 9.5%, in October – to 9.75%, and in December, the decision to retain the rate was made. TONIA has been staying within the base rate band and mainly was not touching the base rate boundaries. At the end of November, the demand for borrowed liquidity in the tenge increased, thus starting to push interest rates of repo up; TONIA exceeded the base rate and in December reached the upper boundary of the base rate band. In 2021, the NBK was largely participating in the repo market as a liquidity provider; the NBK's participation was the maximal in February and December, and its share in these periods amounted to 28%.

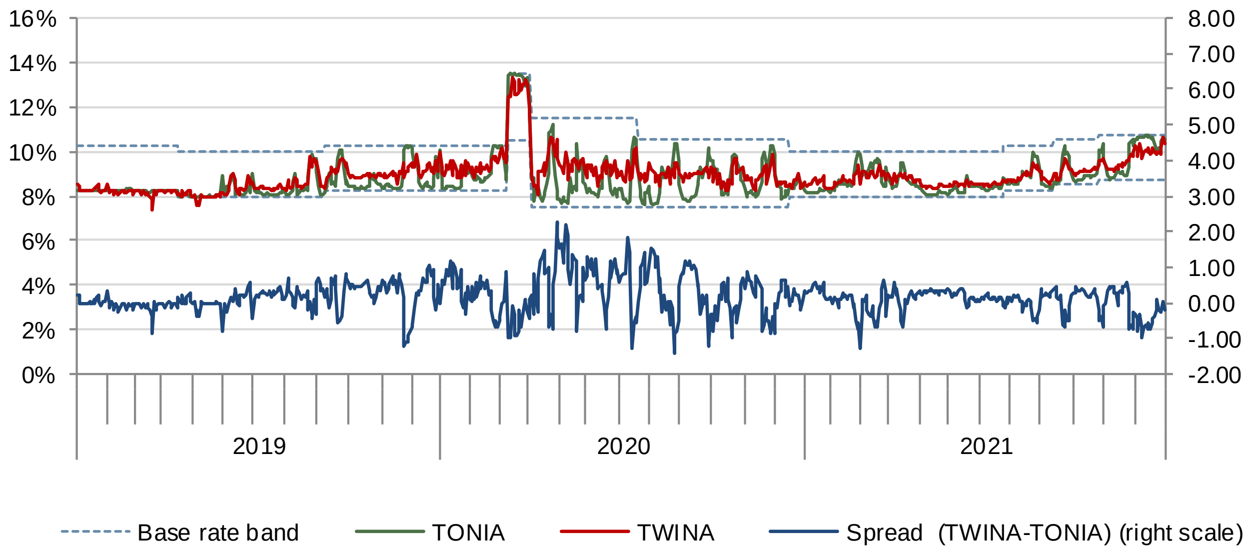
Chart 1.41 ***NBK's operating rate – TONIA***



Source: *KASE*

There is a high correlation between the 7-day and 1-day repo rates; the 7-day repo rates practically repeat the path of the 1-day repo rates but they move with less volatility. This is an evidence of effectiveness of the transmission channel in the money market despite the NBK's absence in the 7-day repo market.

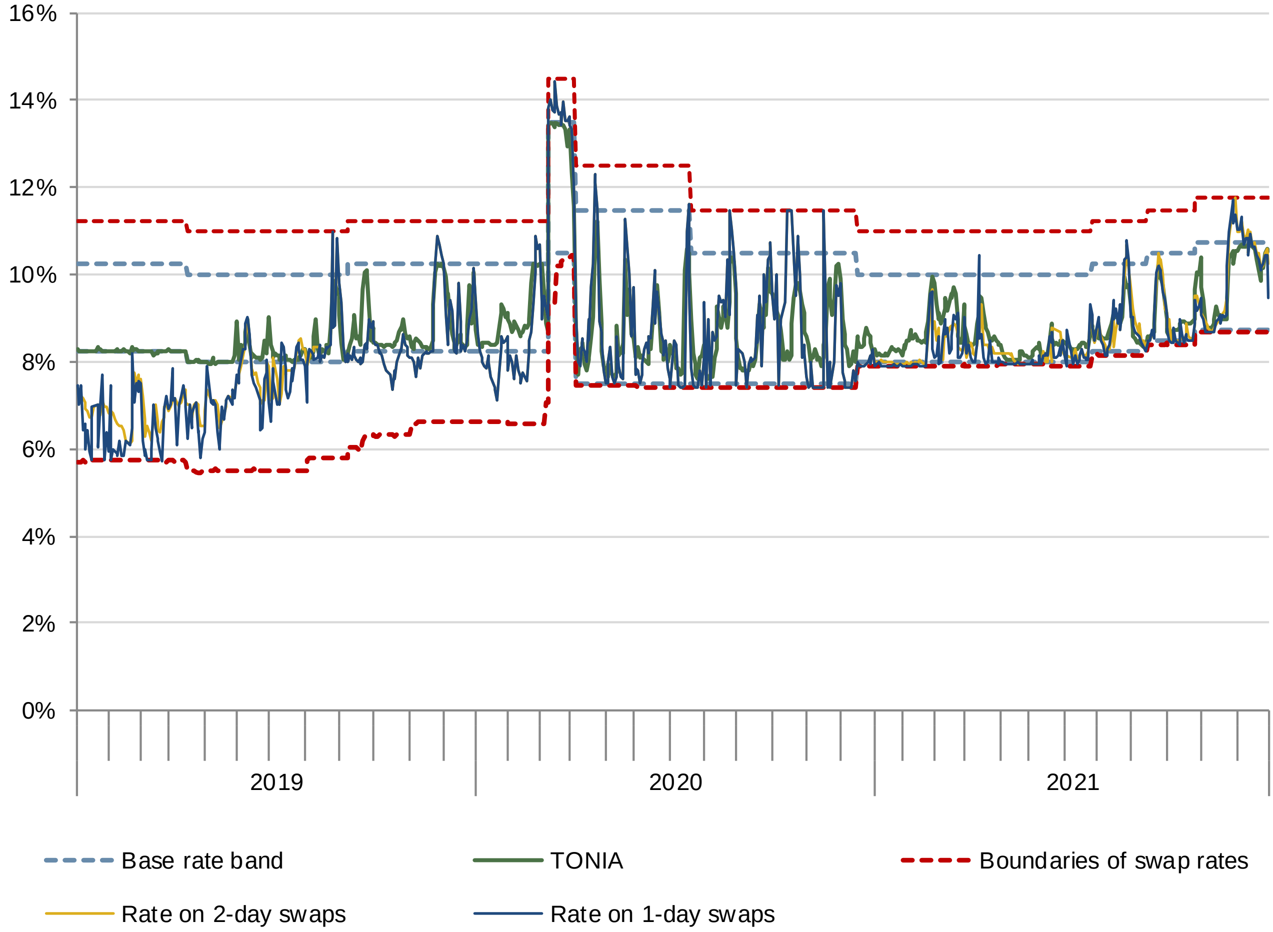
Chart 1.42 ***Interest rates in the repo market***



Source: *KASE*

Swap rates are highly correlated with repo rates; however, they have a wider range, so they can potentially be more volatile. At the beginning of the year, the need for the tenge liquidity was lower, and in January-February 2021, swap rates were at the lower boundary, where liquidity was withdrawn by the NBK. In November-December, on the contrary, swap rates were going above the boundary of repo rates.

Chart 1.43 ***Interest rates in the currency swap market***

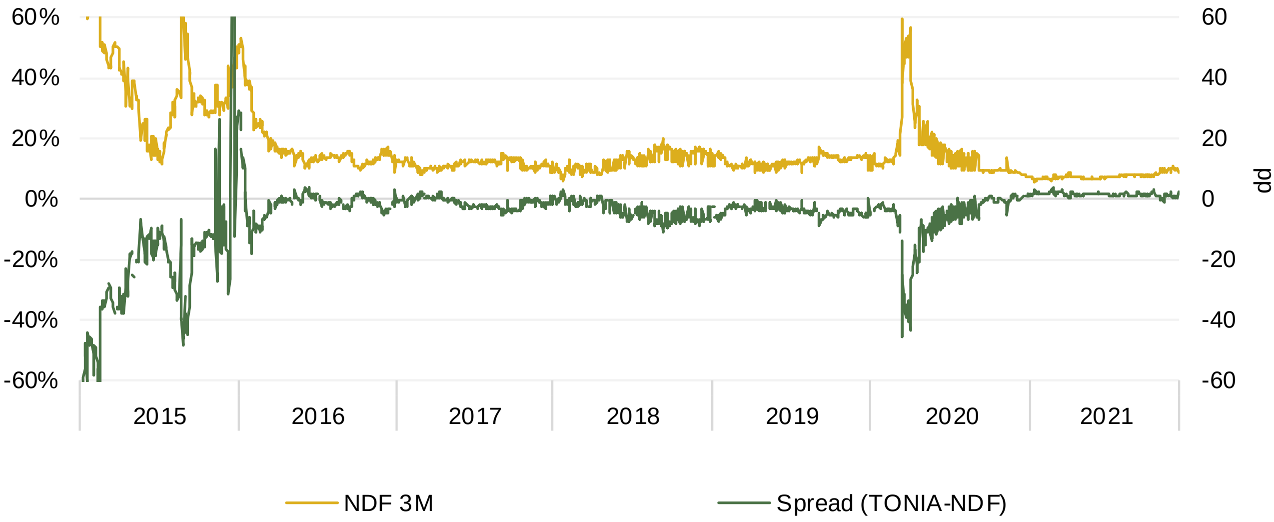


Source: *KASE*

Bank deposits remain the main source of funding for the banking sector of Kazakhstan; therefore, in order to ensure stability in the financial sector, when setting the base rate, it is also important to take into account its impact on depositor preferences for keeping funds in the tenge or in foreign currency. For depositors, two things are decisive: the first is the exchange rate expectations; the second is the expected inflation. Consequently, if the interest rate in the tenge covers expected changes in the exchange rate and inflation and provides a positive return, then preference will be given in favor of the tenge. We evaluate expectations about changes in the exchange rate using NDF rates. To analyze the fulfillment of the second condition, we evaluate the real interest rate as the spread between TONIA and inflation.

In 2021, NDF rates were not increasing, the NBK managed to maintain the spread between the TONIA index and the NDF rate at the level close to zero. Moreover, most of the time, the spread has been slightly above zero, and the absence of arbitrage made the bearish strategies for the tenge unprofitable.

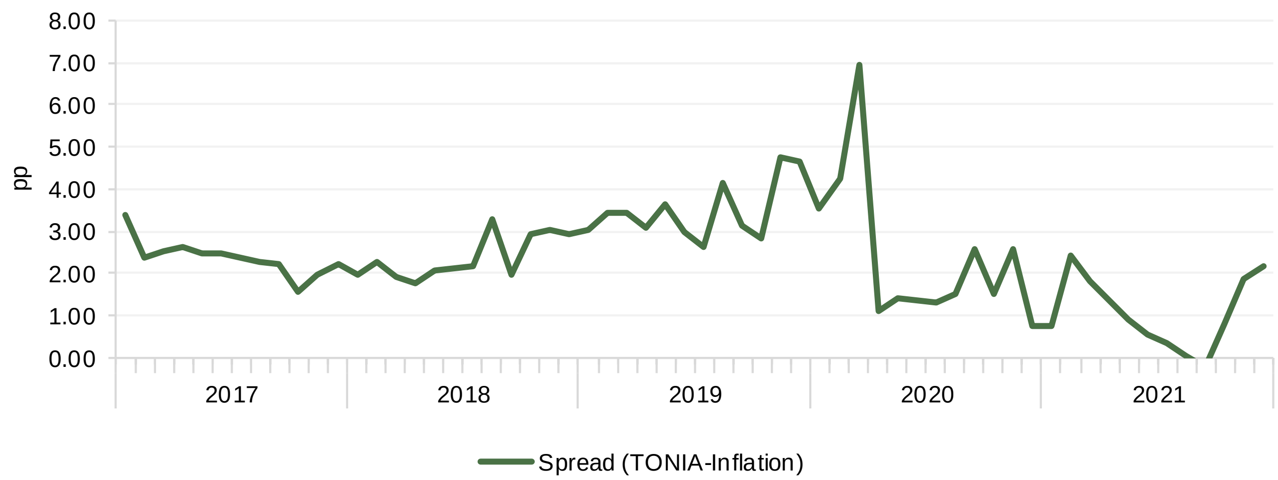
Chart 1.44 ***The spread between TONIA index and the NDF rate on the USD/KZT currency pair***



Source: *KASE, Bloomberg*

Since March 2021, the TONIA index has first been declining faster than inflation, and since June, it has been growing slower than inflation. This led to a gradual decrease in the real interest rate. In August 2021, the real interest rate had dropped to its al-time low since 2017 (to 0.04%). In October, the NBK increased the base rate by 25 bp, and in November-December, the TONIA began to move towards the upper boundary, the spread between TONIA and inflation became positive again and began to gradually widen. By the end of the year, the real interest rate was about 2%.

Chart 1.45 ***The spread between TONIA index and the consumer price index***



Source: *KASE, ASPR BNS RK*

Decisions on the base rate are directly translated into the retail deposit market via the methodology for setting the cap rate on deposits[14]. Therefore, in order to curb risks in the banking sector, the deposit rate in the tenge must give a positive real yield.

Further transmission onto lending rates is constrained by the presence of government support programs, as well as high borrower risks. The interest rate pricing policy of banks is often aimed at minimizing risks, therefore, borrower risks affect rates to a greater extent, as a result, loan rates remain low-sensitive to changes in the base rate.

[14] The methodology for determining and setting the amount of cap interest rate on newly attracted deposits of individuals as approved by the decision of the Board of Directors of the "Kazakhstan Deposit Insurance Fund" JSC, minutes No.12 of July 12, 2018

1.4 Fiscal Policy

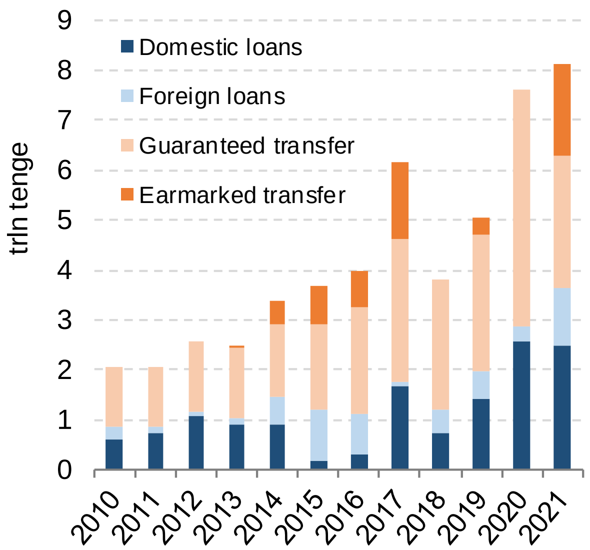
In 2021, government measures to support and restore the economic growth were under way. Given the economic recovery, non-oil revenues to the budget increased by 6.9% and amounted to 7.16 trillion tenge. However, in 2021, the non-oil deficit of the national budget remained at a high level of 9.8% of GDP. As a result of the use of the National Fund resources and raising additional debt financing, the government net financial assets decreased to the lowest level since 2010. The imbalance of public finances carries the risks of narrowing the fiscal space, of a forced consolidation of budget expenditures in the long term, an increase in the cost of raising debt and, as a result, may put pressure on the growth of interest rates in the economy.

Budget Deficit Expansion

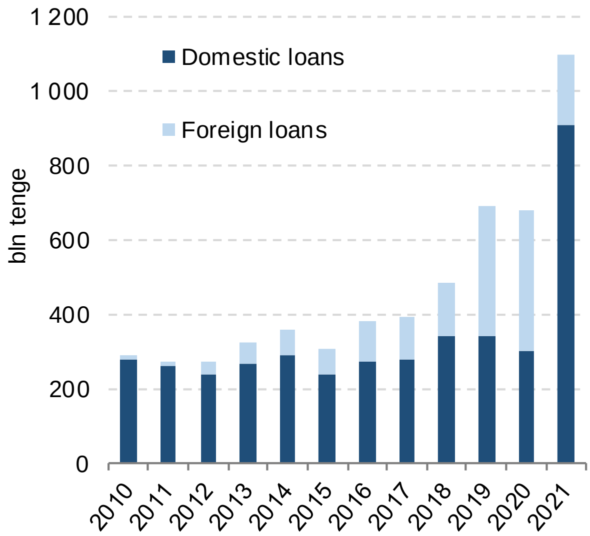
In 2021, the total volume of budget financing with the debt and the National Fund assets amounted to 8.1 trillion tenge, having increased by 6.4% since 2020 *(Chart 1.46)*. As part of the Government support to recover the economic growth, an additional earmarked transfer of 1.8 trillion tenge was allocated. Principal debt repayments on domestic and foreign loans in 2021 equaled 1.1 trillion tenge, having increased by 61.8% compared to 2020.

Chart 1.46 ***Insufficient volumes of non-oil revenues are covered with the National Fund assets and debt raising***

National budget financing with net assets



Principal debt repayments on national debt loans

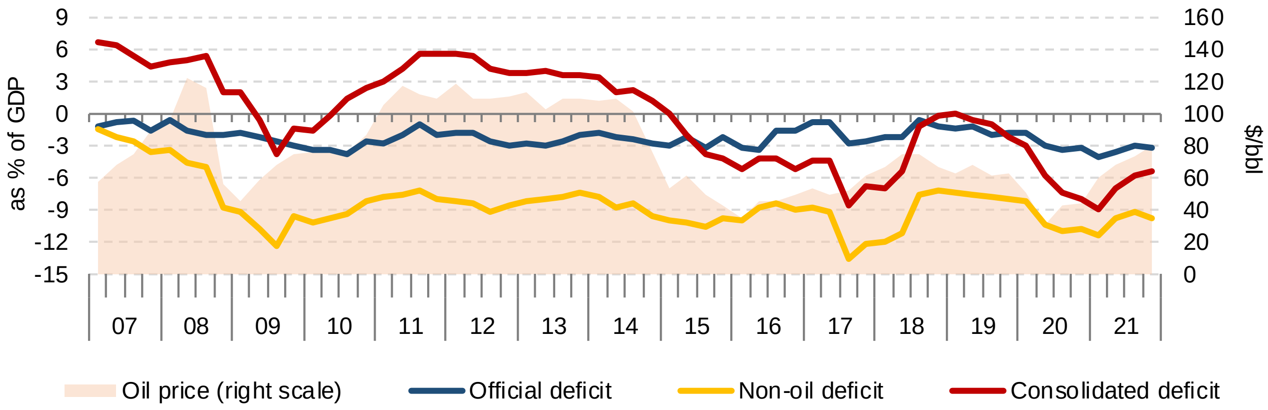


Source: *MF RK*

At the end of 2021, the official deficit of the national budget increased from 2.2 trillion tenge (3.1% of GDP) in 2020 to 2.5 trillion tenge (3.1% of GDP). At the same time, the non-oil deficit of the national budget also increased in absolute terms from 7.5 trillion tenge in 2020 to 8 trillion tenge in 2021; however, in relation to GDP, the indicator decreased from 10.8% of GDP to 9.8% of GDP *(Chart 1.47)*. Due to the rising prices for crude oil, the consolidated deficit of the national budget went down from 5.5 trillion tenge (7.9% of GDP) in 2020 to 4.4 trillion tenge (5.3% of GDP) in 2021. Since the beginning of 2015, the consolidated deficit of the national budget, which includes the statistics of receipts to the National Fund, has been negative, thus adversely affecting the dynamics of country's net assets.

Chart 1.47 ***A high level of non-oil deficit has been persisting over more than 10 years***

National budget deficits as % of GDP

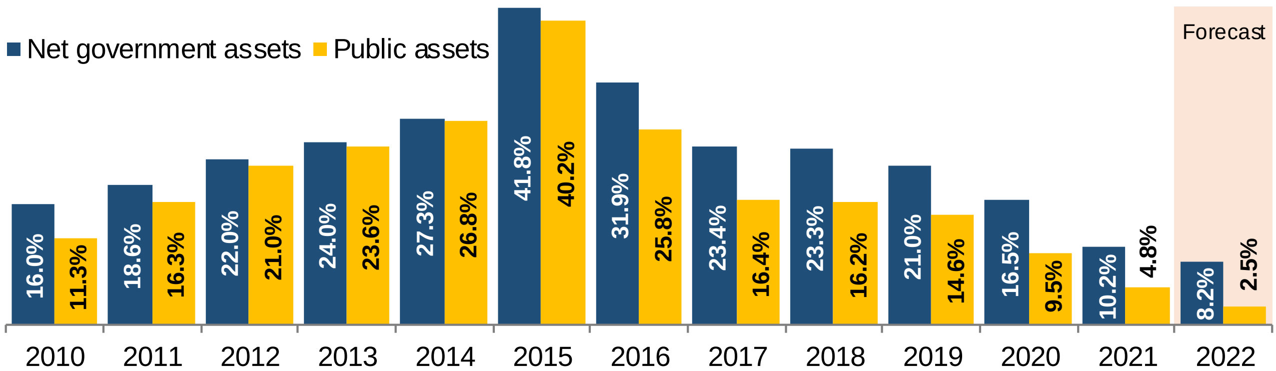


Source: *MF RK, IMF, BNS RK, National Bank's computations*
Note: *Consolidated deficit of the national budget for this Chart was calculated as the official deficit minus transfers from the National Fund plus receipts to the National Fund excluding the investment return.*

Thus, by the end of 2021, the country's net assets, including government debt, decreased to 10.2% of GDP, and public assets, including the public debt guaranteed by the government and debt secured by the government sureties, decreased to 4.8% of GDP *(Chart 1.48)*. A further narrowing of the fiscal space will significantly affect the country's rating and ability to raise debt financing. Thus, according to the Forecast of the Socio-Economic Development of the Republic of Kazakhstan for 2023-2027, the country's net assets in 2022 will go down to 8.2% of GDP, and taking into account the unchanged nominal value of the public debt guaranteed by the government and debt secured by the government sureties, net assets will amount to 2.5% to GDP.

Chart 1.48 ***The country's net financial assets as % of GDP have been declining and have reached the minimum since 2010***

Country's net assets as % of GDP

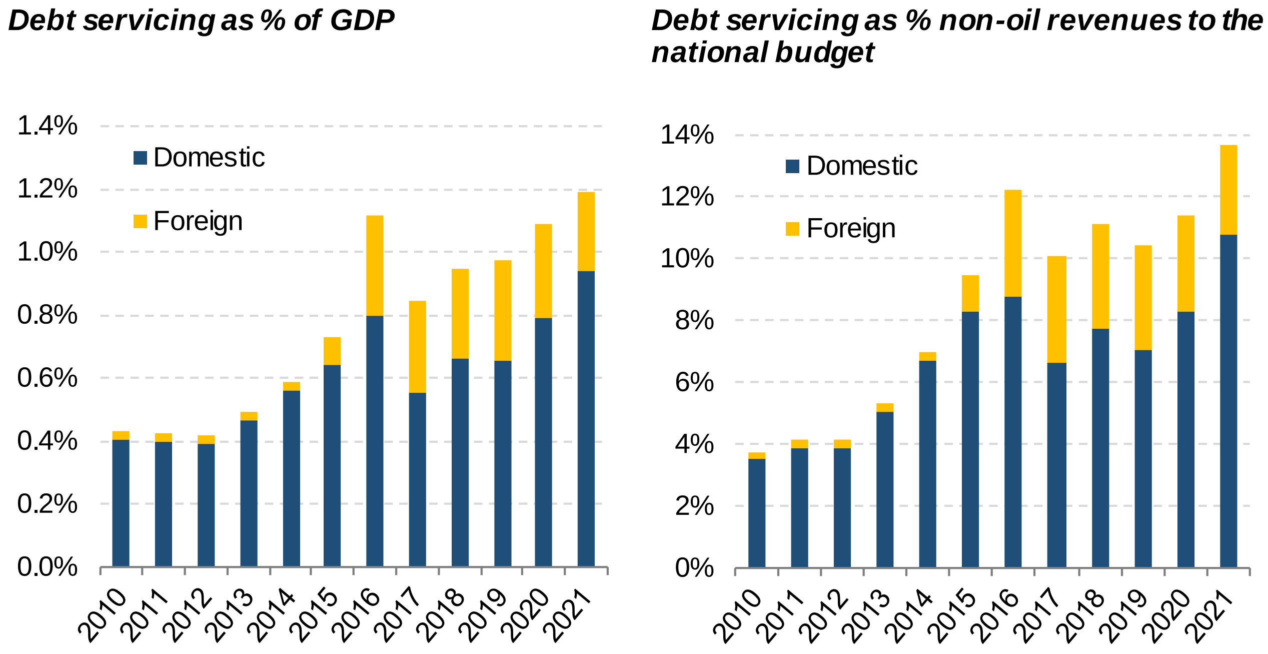


Source: *MF RK, BNS RK, National Bank's computations, PSED 2023-2027 (1 stage)*
Note: *(1) The government's net assets are calculated as the National Fund assets minus government debt. (2) The country's net assets are calculated as the National Fund assets minus debt including the public debt guaranteed by the government and debt secured by the government sureties*

For more than 10 years, a high level of non-oil deficit and a high procyclicity of consolidated deficit of the national budget have been persisting. The chronically high non-oil deficit (8.8% of GDP on average since 2010) is covered by the National Fund assets, which are replenished by volatile oil revenues, and by the government's debt. After the end of the period of high oil prices in 2015, the ability of public finances to service debt is gradually declining, which increases macro-fiscal risks and, therefore, the cost of borrowing in the medium term.

The debt burden on the national budget is growing rapidly. Thus, at the end of 2021, government debt repayments amounted to 13.7% of the volume of non-oil revenues to the national budget *(Chart 1.49)*. At the same time, the growth in government debt repayments outstrips the nominal GDP growth.

Chart 1.49 ***Debt burden on the national budget is increasing***



Source: *MF RK, BNS RK, National Bank's computations*

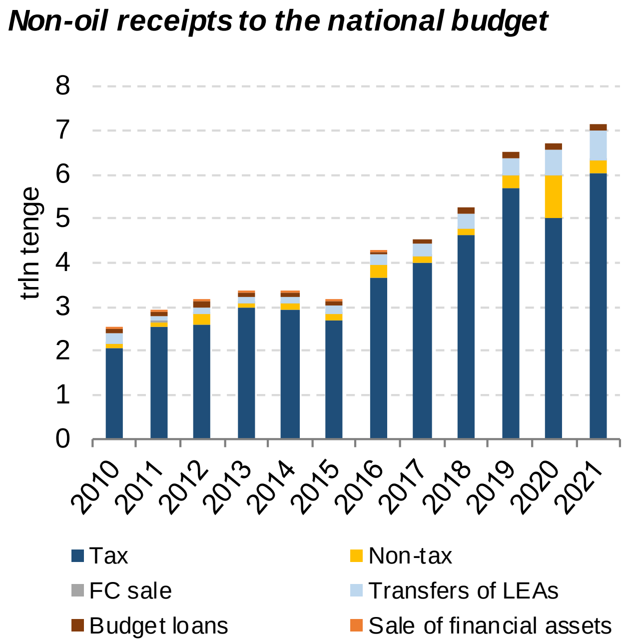
A continuation of the current trend is narrowing the fiscal space, which could lead to a shortage of funds for stimulation of the economy in the event of unforeseen economic shocks. A low level of non-oil budget revenues compared to expenditures in the long term will lead to consolidation of expenditures, both directly, due to the depletion of fiscal buffer, and indirectly, due to an increase in the share of debt service in the overall structure of budget spending.

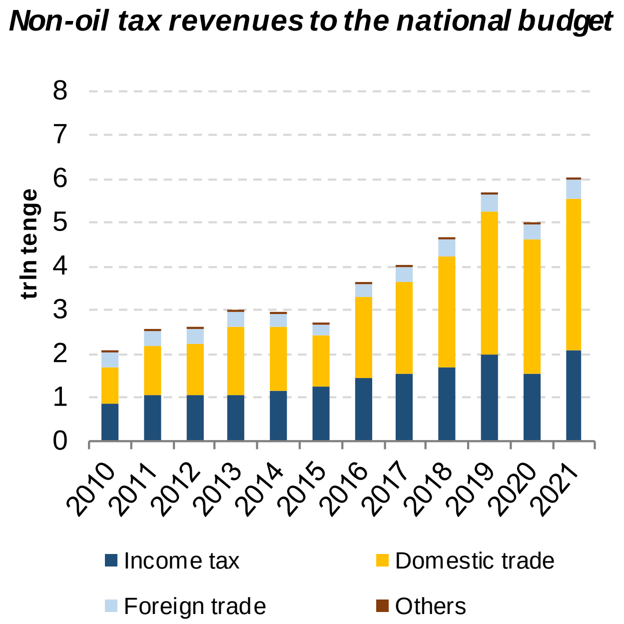
Fiscal Revenues

Recovery of the economic activity has had a positive effect on the amount of tax revenues to the national budget – in 2021 they went up by 26.6% compared to 2020 and amounted to 7 trillion tenge.

Non-oil revenues to the national budget in 2021 grew by 10.1% compared to the pre-pandemic year of 2019 *(Chart 1.50)*. At the same time, over the same period, the growth of the national budget spending amounted to 26.5%. The main source of non-oil revenues since 2010 have been the domestic trade taxes and corporate income taxes, which averaged 44.8% and 31.6%, respectively. Since, 2010, the structure of domestic trade taxes has been as follows: 81.8% of VAT, 14.8% of receipts from the use of natural and other resources with the exception of the oil sector, 3.2% of excises, as well as fees for conducting entrepreneurial and professional activities, and taxes on the gambling business. In addition, from 2020, corporate taxes for small and medium-sized businesses have been kept in local budgets, amounting to 481.6 billion and 732.3 billion tenge in 2020 and 2021, respectively.

Chart 1.50 **Domestic trade taxes and corporate income tax are the main source of non-oil revenues**



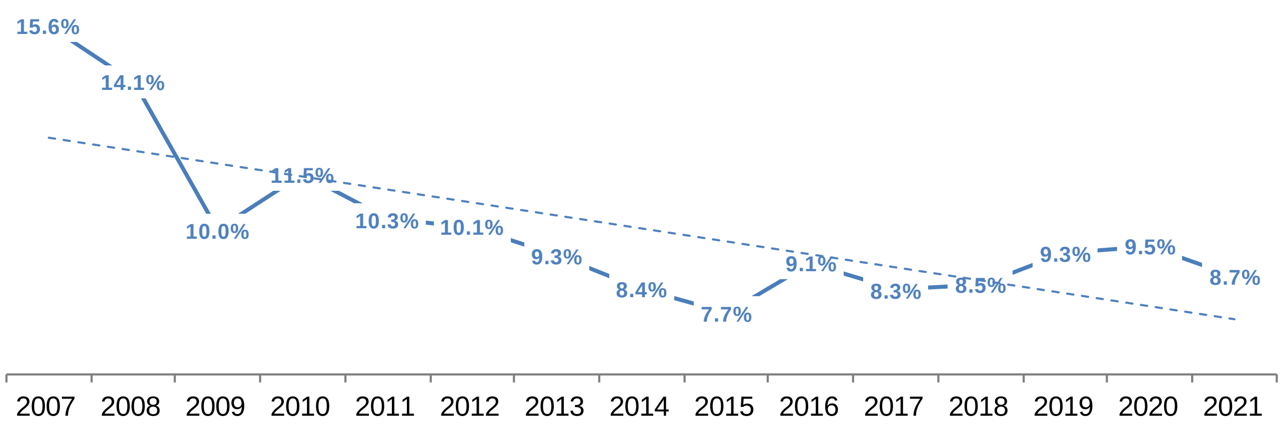


Source: *MF RK, National Bank's computations*
Note: *Non-oil receipts are calculated as the official receipts less transfers from the NF RK and export customs duty for crude oil.*

Despite their nominal growth since 2010, non-oil revenues to the national budget remain low compared to the nominal GDP. The ratio of non-oil revenues to the national budget and GDP had declined significantly after the tax abatements following the 2008 global financial crisis *(Chart 1.51)*. Over the next decade, tax rates remained low, and measures to increase the collection of tax revenues do not exert the desired effect on the growth of oil revenues.

Chart 1.51 **Non-oil revenues to GDP have decreased significantly since 2007**

Non-oil revenues to the national budget as % of GDP



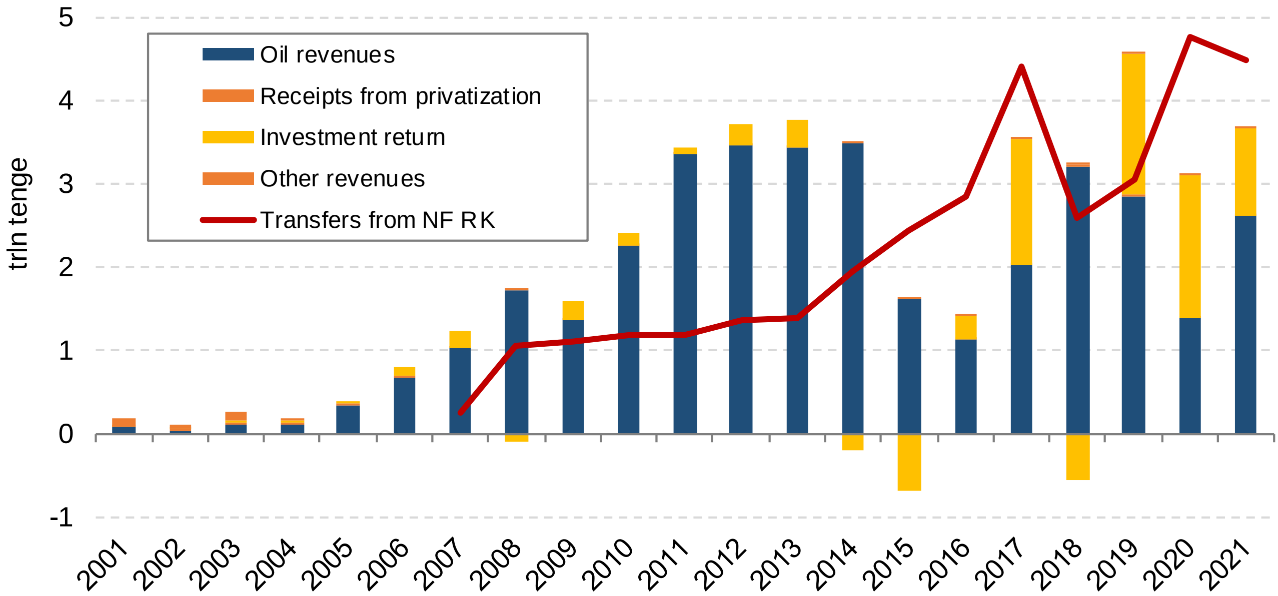
Source: *MF RK, BNS RK, National Bank's computations*
Note: *In 2009, the corporate income tax rate was lowered from 30% to 20%. The VAT rate was gradually decreasing from 2007 to 2009 from 14% to 12%.*

Thus, in order to maintain a high level of spending, the size and share of allocated transfers from the National Fund, whose assets are replenished with proceeds from organizations in the oil sector, are increasing.

After a drop in oil prices at the end of 2014, receipts to the National Fund were much lower than the allocated transfers *(Chart 1.52)*. Given volatility of oil prices, a potential long-term global trend towards a transition to renewable energy sources, as well as the depletion of natural resources, oil revenues cannot be a reliable source of financing budget expenditures without a mechanism to ensure integrity of the National Fund.

Chart 1.52 ***Oil revenues to the National Fund are volatile and will not be able to support the growth of transfers in the long run***

Receipts to the National Fund



Source: *MF RK, National Bank, National Bank's computations*
Note: *Investment returns were calculated excluding the currency revaluation of the National Fund assets*

Box 2. Fiscal Rules to Limit the Amount of Guaranteed Transfer from the National Fund

To ensure soundness of the National Fund assets, amendments to the Budget Code were prepared that will regulate the amount of the allocated Guaranteed Transfer starting from 2023. The amount of the Guaranteed Transfer will not exceed the receipts to the National Fund from organizations in the oil sector at a conservative cut-off price.

The cut-off price is calculated in accordance with the Rules for Determining the Cut-Off Price as approved by the Order of the Minister of National Economy dated March 9, 2022 No.21. Under the Rules, the cut-off price should be determined as follows:

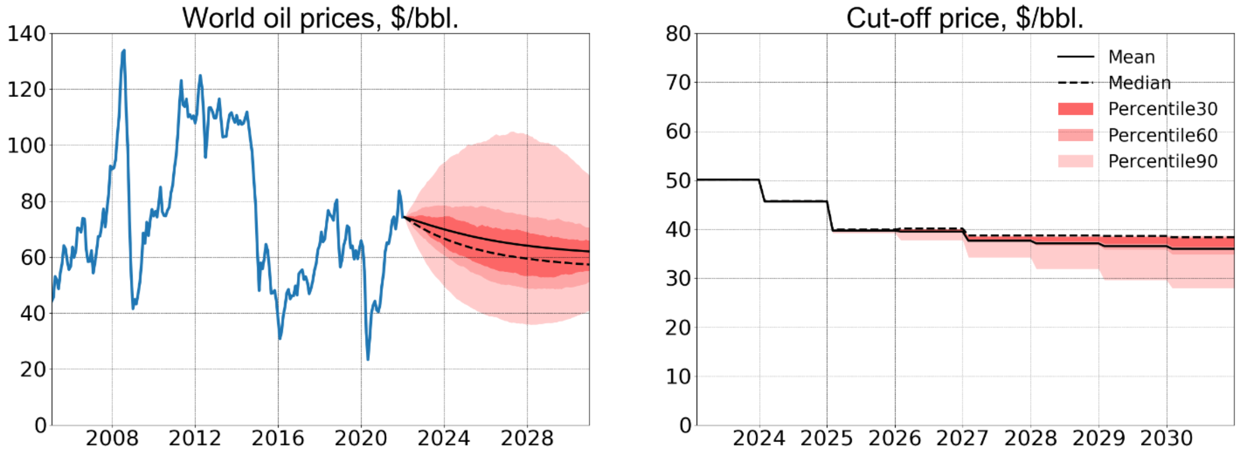
- 15th percentile of the average quarterly historical prices of oil for the preceding 15 years for the year 2023;
- 10th percentile of the average quarterly historical prices of oil for the preceding15 years from 2024;

Additionally, the price is adjusted if the projected level of crude oil production exceeds the historical maximum level of oil production of 90.5 million tons in 2019, in proportion to the excess of the projected value under the following formula:

$$\text{Cut-off price} = \text{Cut-off price without adjustment} * \mathit{min}\left(1, \frac{90.5}{\text{Projected rate of oil production}}\right)$$

The maximum possible amount of guaranteed transfer from the National Fund for the forecast period is calculated as tax revenues to the National Fund from organizations in the oil sector in accordance with the Methodology for forecasting budget revenues as approved by the Order of the Acting Minister of the National Economy of the Republic of Kazakhstan dated January 21, 2015 No. 34, with an oil price equal to the cut-off price.

Chart 1.53 ***Simulation of world oil price paths and the cut-off price***



Source: *World Bank, National Bank's computations*
Note: *Oil prices were simulated by using the AR(1) autoregression process based on one million scenarios and historical parameters from 2005 and a long-term average price of 60$/bbl.*

These rules will help maintain a stable and predictable level of guaranteed transfers that will ensure soundness and accumulation of the National Fund assets. In the long term, this approach will expand the fiscal space and reduce the risks associated with the budget deficit financing, which should reduce the debt burden on the national budget.

Cut-off price rules will significantly reduce the volatility of transfers and limit their growth in the event of high world oil prices. At the same time, when the cut-off price is calculated, an adjustment is made for the projected level of oil production.

At the same time, in the event of unexpected economic shocks, the expansion of fiscal stimulus is possible through the earmarked transfer, which enables to adjust the fiscal policy in the short term.

Budget Spending

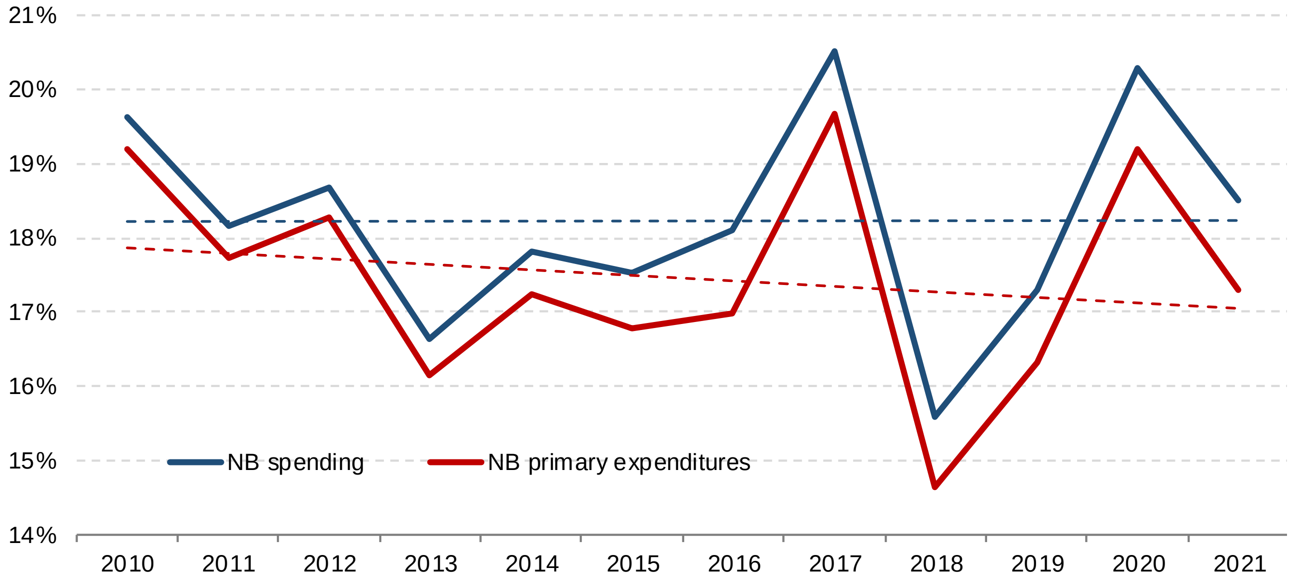
In 2021, the national budget spending amounted to 15.2 trillion tenge (18.5% of GDP), having increased by 6.8% compared to 2020 (14.2 trillion tenge or 20.3 % of GDP). Thus, due to a gradual recovery of the economy, in 2021 the growth of national budget spending was lower than the nominal GDP growth *(Chart 1.54)*.

The national budget spending relative to the nominal GDP exceeded historical averages during the pandemic. The expansion of fiscal stimulus has helped mitigate the negative effects of the pandemic; however, due to the economic recovery, the budget spending should be reduced to ensure the balance of public finances. At the same time, in the event of further stagnation in the growth of non-oil revenues in relation to GDP, there is a risk of the need for excessive consolidation of expenditures and of depletion of the National Fund assets.

Thus, there is an indirect consolidation of the national budget spending, which is associated with an increase in the share of expenditures required to pay interest on loans. The ratio of spending excluding debt service and GDP shows a negative trend, with a relatively stable trend in the national budget spending.

Chart 1.54 ***The increase in debt burden on the national budget leads to an indirect consolidation of spending***

National budget spending as % of GDP



Source: *MF RK, BNS RK, National Bank's computations*
Note: *Primary expenditures are calculated as the national budget spending excluding payment of interest on Government loans.*

The gap between primary expenditures of the national budget for 2021 is already amounting to 1.2 % of GDP. Thus, 997.5 billion tenge of national budget spending in 2021 goes only to pay interest on the government debt. Given the current trend towards narrowing of the fiscal space, the debt burden and the cost of raising future borrowing will be increasing, which could lead to a larger gap with primary expenditures and an indirect reduction in fiscal stimulus in the long term.

Box 3. Fiscal Rules to Limit the Growth Rates of the National Budget Spending

In order to ensure sustainability of public finances as well as the relationship between the growth in expenditures and economic productivity in the long term, amendments governing the budget rule on limiting the growth rates of budget spending were made to the Budget Code[15].

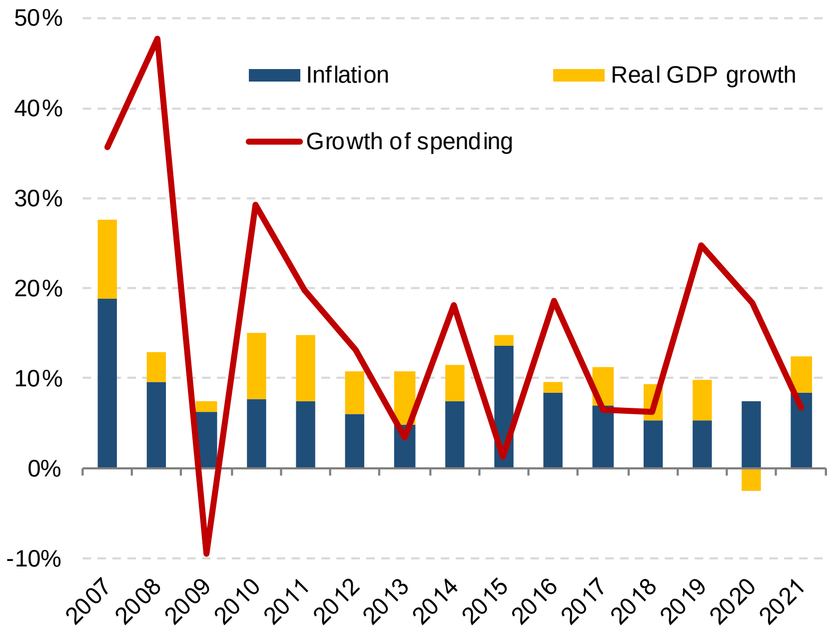
Thus, starting from 2023, the growth rate of the national budget spending cannot exceed the long-term growth of real GDP as increased by the target inflation rate. At the same time, in case a fiscal stimulus is needed during the periods of deceleration or economic recession, the allocation of additional resources in the form of an earmarked transfer from the National Fund is considered.

Such approach will enable to limit an excessive growth of expenditures in the periods of a positive economic cycle while allowing the allocation of additional fiscal stimuli for recovery, which will help enhancing the counter-cyclicity of the implemented fiscal policy.

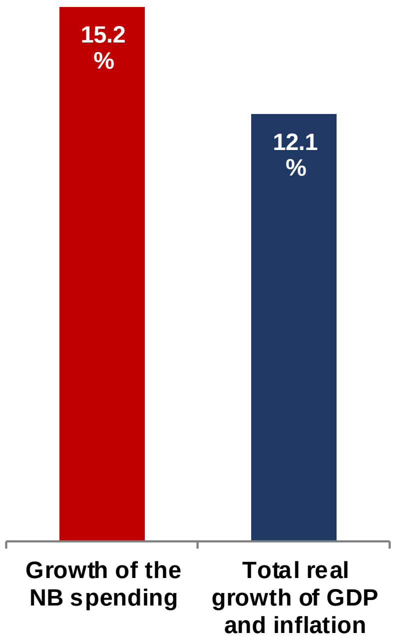
Since the time when the practice of allocating earmarked transfers from the National Fund was introduced in 2007, average growth rates of the national budget spending exceeded the overall growth rates of real GDP and inflation.

[15] On December 31, 2021, the Head of the State Tokayev K.K. signed the Law of the Republic of Kazakhstan No.100-VII "On Amendments to Some Legislative Acts of the Republic of Kazakhstan regarding Public Administration, Improvement of the Collateral Policy of Second-Tier Banks, Regulation of Appraisal Business and Enforcement Proceedings"

Growth rates of the national budget spending, real GDP and inflation



Average growth rates from 2007 to 2021



Source: *MF RK, BNS RK, National Bank's computations*
Note: *The calculations excluded a one-time transaction of 2 trillion tenge to support STBs in 2017.*

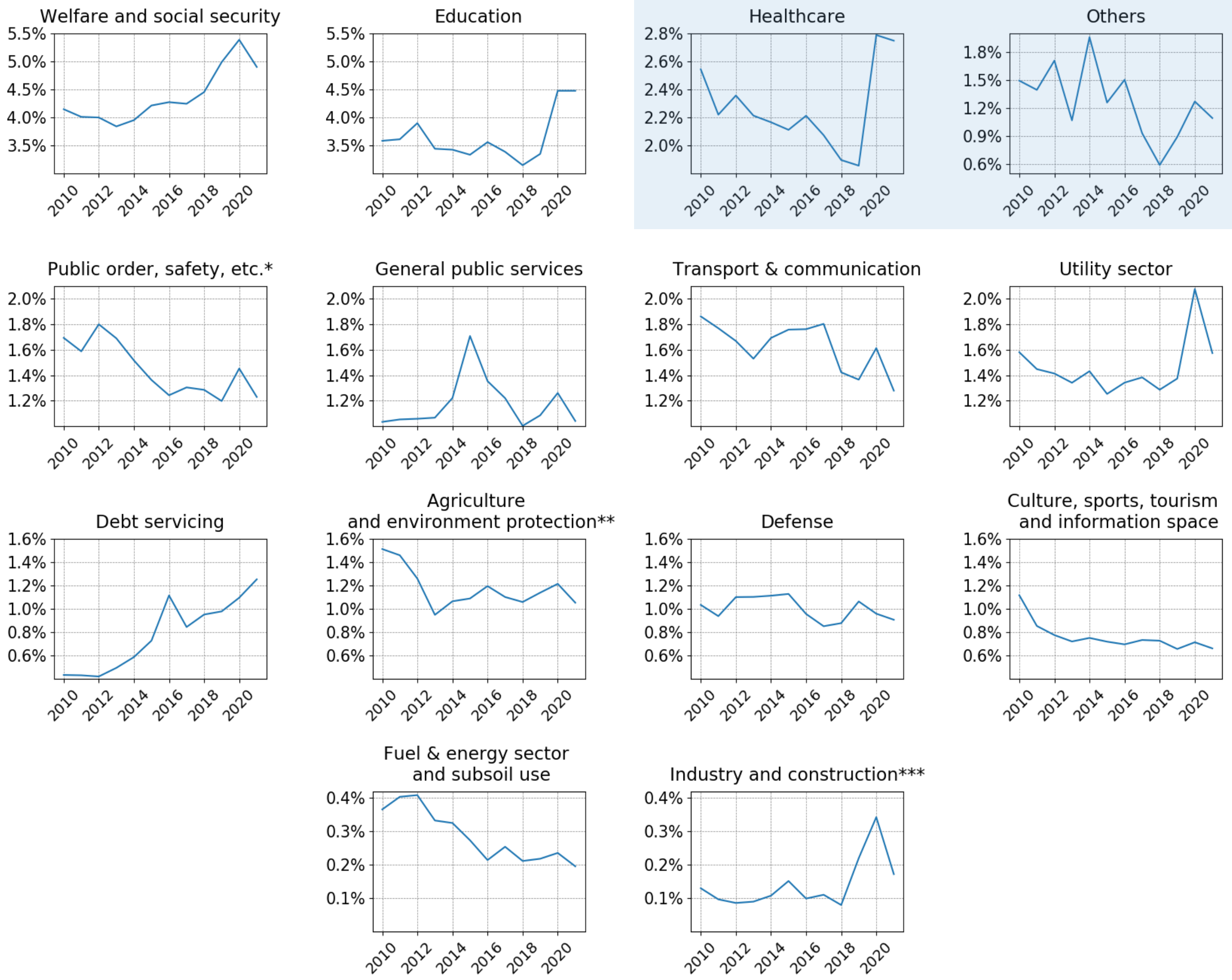
Risks associated with consolidation of the budget policy in the medium and long-term perspective could negatively affect the economic growth taking into account the social focus of the national budget spending.

The largest portion of national budget spending is aimed at social security; the share of such expenditures accounted for 21.7% of spending in 2021 and 4.9% of GDP *(Chart 1.55)*. During the past 5 years, the main categories whose shares have been steadily increasing in relation to GDP were social security and debt service expenditures, which in 2021 amounted to 4.9% and 1.25%, respectively. Since the onset of the coronavirus pandemic, spending on healthcare, education, and utilities sector has increased significantly, due to a high workload on medical personnel and the temporary transition to distance learning and working.

Sectors that account for a smallest portion in the structure of state budget spending include fuel and energy complex and subsoil use as well as the industry, architectural urban planning and construction business. In addition, a significant reduction in the share of spending on other categories of expenditures starting from 2010 is worth mentioning.

Chart 1.55 ***The largest portion of budget resources is allocated to social security***

State budget spending as % of GDP by category



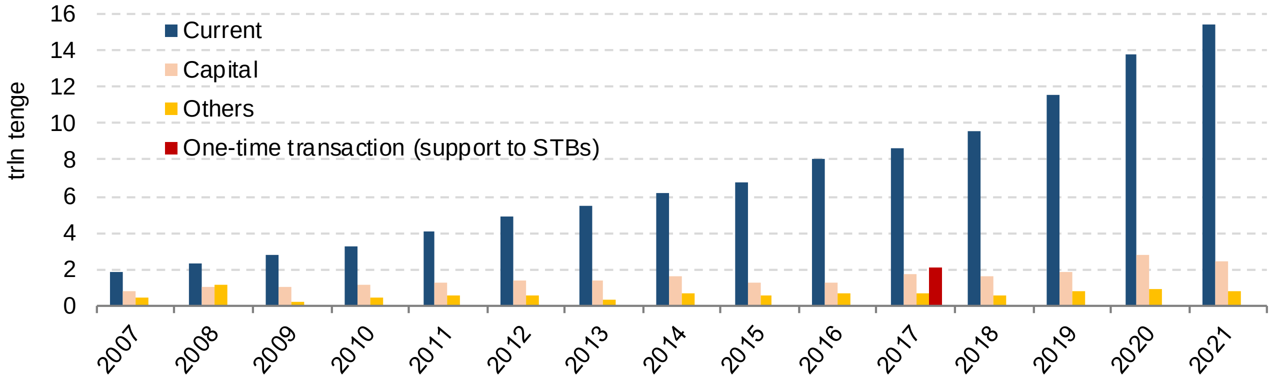
Source: *MF RK, BNS RK, National Bank's computations*
Note: *The state budget spending excluding a one-time transaction of 2 trillion tenge to support STBs in 2017.*
Full names of categories of the National Budget spending:
**Public order, safety, legal, judicial, and penal activities*
********Agriculture, water management, forestry, fisheries, specially protected natural areas, protection of the environment and wildlife, land relations*
*********The industry, architectural, urban planning and construction business*

The government spending in the economic classification shows a stable growth of current expenditures as well as their disproportionate dominance in the structure of total government spending (77.4% of total spending or 19.1% of GDP in 2021), which limits the possibility of increasing capital expenditures (12.2 % of total expenses in 2020).

Current expenditures do not bring long-term returns but only support current consumption, without creating prerequisites for a long-term economic growth and capital formation. At the same time, redistribution of current expenditures in favor of capital expenditures may adversely affect the level of consumption in the economy, which will hold back the economic growth. Thus, in order to make capital expenditures grow, it is necessary to ensure the growth of expenditures in the long term, which is impossible without a real increase in non-oil budget revenues.

Chart 1.56 ***Substitution of capital budget expenditures by current expenditures***

The state budget spending in the economic classification

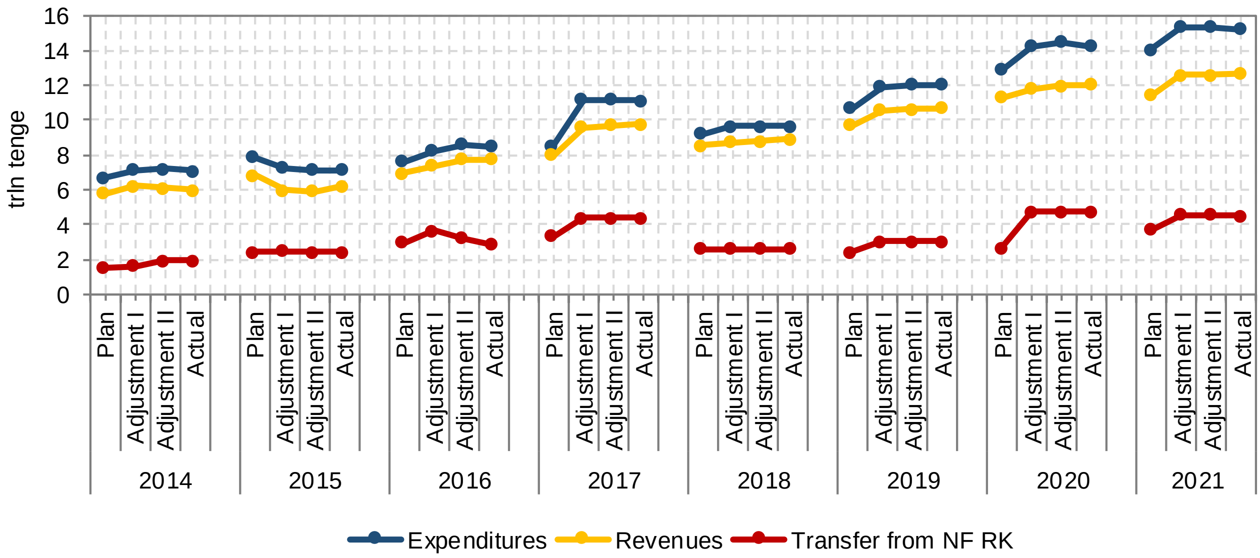


Source: *MF RK*

The fiscal discipline is one of the most important aspects in improving the balance of public finances. In the face of sharp deterioration and economic shocks, short-term fiscal stimuli can support the economy. However, in the medium term, the fiscal policy is not sufficiently disciplined, which is reflected in the frequent revision of the budget. In the current fiscal policy, there is no clear separation between the long-term strategy and short-term fiscal impulses to the economy. Frequent and significant budget adjustments make fiscal policy less transparent and difficult to predict.

Chart 1.57 ***Adjustments of the national budget***

Revenues, expenditures and transfers from the National Fund to the national budget



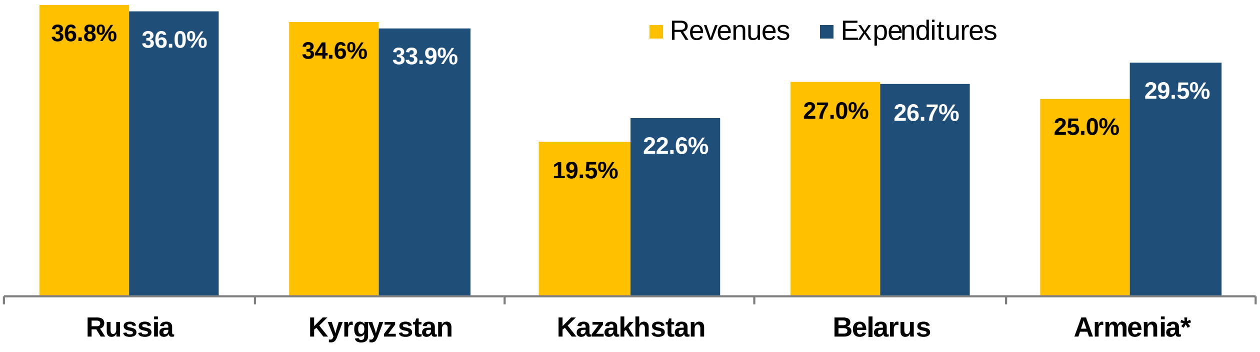
Source: *MF RK*

The process of planning and forecasting the expenditure side of the budget is imperfect, which, in the absence of automatic rules and regulation, leads to the need for frequent revision and adjustments of the budget. In particular, since 2016, budget expenditures have been systematically revised upward, largely due to the allocation of additional transfers from the National Fund. At the same time, the smallest adjustments were observed during the periods of stable oil prices, which is reflected in a minor revision of the national budget in 2018.

It is worth mentioning that compared to the EAEU member countries, consolidated expenditures of the Republic of Kazakhstan are the lowest in relation to GDP *(Chart 1.58)*, which is largely driven by a still lower share of revenues in relation to GDP.

Chart 1.58 ***Among the EAEU member countries, expenditures of the Republic of Kazakhstan as % of GDP remain the smallest***

Revenues and expenditures of the consolidated budget as % of GDP of the EAEU member countries in 2021

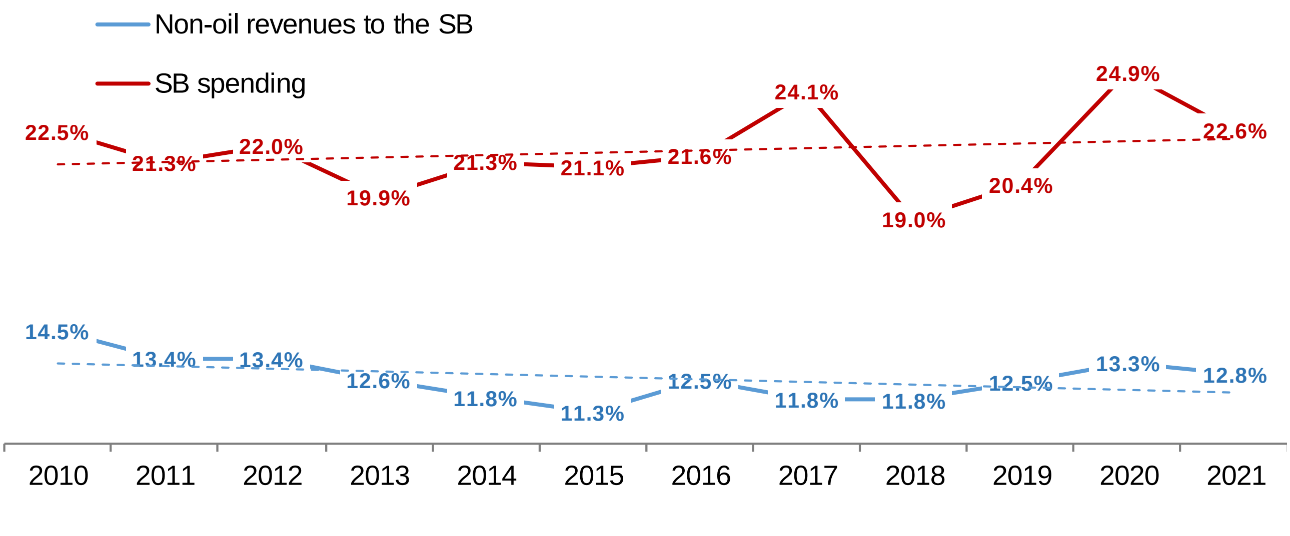


Source: *Eurasian Economic Commission, National Bank's computations*
Note: *Consolidated budget of the Republic of Kazakhstan under the MF RK's methodology (*). The data on Armenia are presented based on the data from the Ministry of Finance of the Republic of Armenia*

The main risk factor for the fiscal policy is the imbalance of public finances. Over the past decade, the share of government spending to GDP has had a positive growth trend, while the share of non-oil revenues has had a negative trend *(Chart 1.59)*. At the end of 2021, the gap was 9.91% of GDP. Non-oil revenues are the most stable source of revenues compared to oil revenues; however, their existing level is not capable of ensuring a long-term growth in revenues. This may result in depletion of the country's net assets, the growth in the cost of raising debt and a forced consolidation of budget spending.

Chart 1.59 ***An imbalanced fiscal policy is expressed in an increasing gap between non-oil revenues and expenditures***

Non-oil revenues and expenditures of the state budget as % of GDP

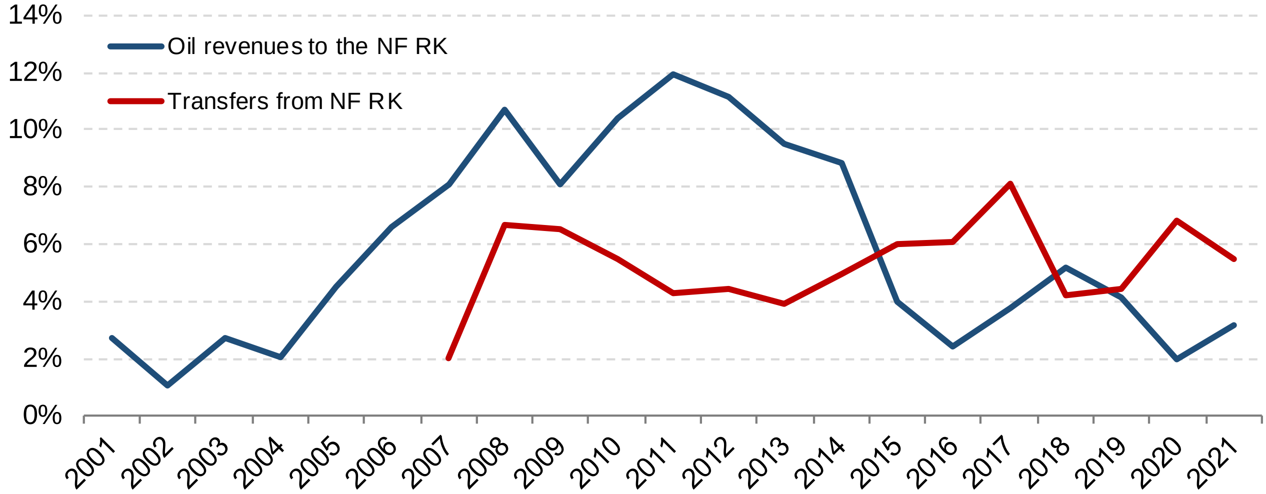


Source: *MF RK, BNS RK, National Bank's computations*
Notes: *the state budget consists of the national budget and budgets of local executive authorities excluding mutual transactions*

The windfall period of crude oil sales ended in 2015, followed by a rapid depletion of the country's net assets *(Chart 1.60)*. Thus, in the long run, without a change in the fiscal policy, oil revenues in the National Fund will not be enough to cover the growth in budget expenditures. As a result, measures to increase non-oil budget revenues, improve the efficiency and discipline of budget expenditures, which are reflected in the draft Concept for Public Finance Management until 2030, are becoming the main priority of the fiscal policy.

Chart 1.60 ***The period of windfall oil sector revenues ended in 2015***

Tax receipts to the National Fund and guaranteed transfers, as % of GDP



Source: *MF RK, BNS RK, National Bank's computations*

The fiscal channel of support to the economy worked effectively in the context of deep economic crisis caused by the spread of COVID-19. However, if the current dynamics persist, the risks of macro-fiscal sustainability due to the narrowing of the fiscal space are increasing.

A low level of non-oil revenues relative to the nominal GDP growth over the past decade has led to a significant decline in government net assets. As a result, there is a risk associated with an increase in the debt burden and an indirect reduction in fiscal stimuli in the long-term perspective.

In order to balance public finances, fiscal rules have been developed that are aimed at ensuring the safety of the National Fund assets and increasing the counter-cyclicity of spending, which will be used in the formation of the budget for 2023 and beyond.

Thus, the main priority of the fiscal policy in the medium term should be to improve the discipline and efficiency of budget spending and to spur the real growth of non-oil budget revenues.

1.5 Lending Activity

In 2021, the easing of restrictive measures that were in effect during the COVID-19 pandemic, helped to accelerate the growth rate of GDP. Along with that, the lending activity also became an active, which is reflected in the increasing overall volume of lending nearly by all types of creditors.

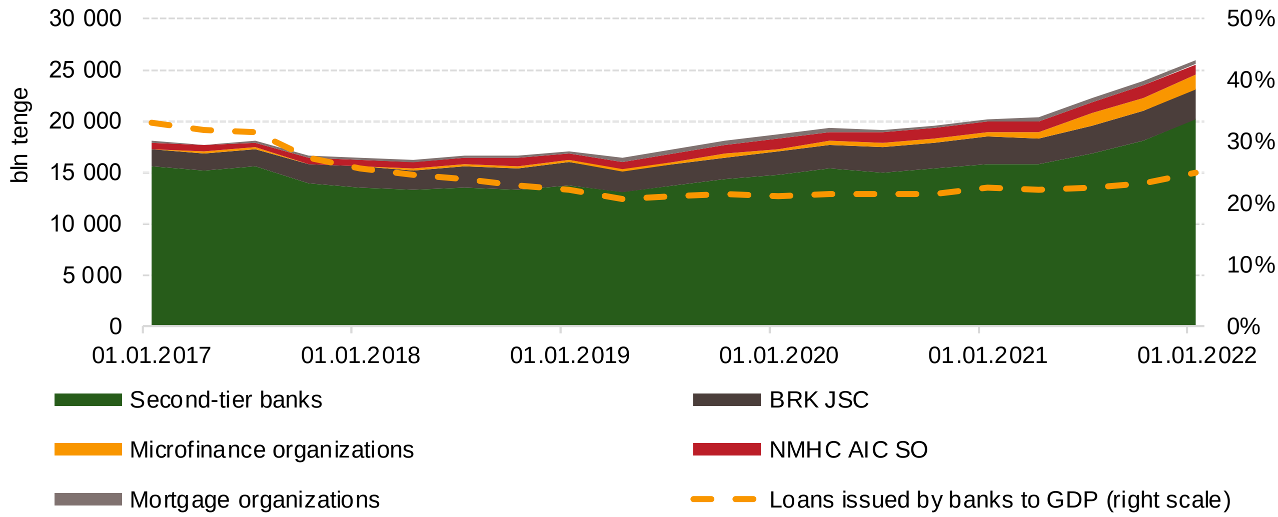
The expansion of the banks` loan portfolio was explained by issuance of new loans to individuals and SMEs, while the reduction of corporate loan portfolio was caused by a continued work on cleaning up banks' balance sheets from distressed loans and exit of insolvent banks from the system. The main sectors of the economy credited by banks were services, trade, the manufacturing industry and construction sectors.

Disbursements of new consumer and mortgage loans increased significantly in the structure of the retail portfolio. Technological advancement of banking instruments and a wide range of products have made the process of obtaining a loan easier and more affordable. The use of pension savings and government lending programs aimed at improving housing conditions had a significant impact on the growth of demand for mortgage lending.

In 2021, the lending activity of financial organizations recovered from deceleration during the COVID-19 pandemic. The growth in lending is observed among all types of creditors in the economy. So, the loan portfolio of banks, the main lender to the economy, went up by 27.9% and amounted to 20.2 trillion tenge as of January 1, 2022 *(Chart 1.61)*. Such lenders as "DBK" JSC, microfinance and mortgage organizations, except a subsidiary of the National Management Holding Company "Agro-Industrial Complex", also increased the volume of lending *(Box 4)*. Overall, bank loans to GDP in 2021 increased to 24.9% (22.4% in 2020).

Chart 1.61 ***The growth of lending is observed in almost all types of creditors***

Dynamics of the total loan portfolio, by lender



Source: *Reporting of financial organizations, Credit Register, ASPR BNS RK*

Box 4. Key Lenders to the Economy (excluding the Second-Tier Banks)

Kazakhstan's lending market, apart from the second-tier banks, is presented by such lenders as the "Development Bank of Kazakhstan" JSC, microfinance organizations, mortgage organizations and subsidiaries of the National Management Holding Company in the sector of agro-industrial complex.

The "Development Bank of Kazakhstan" JSC (the "DBK") is a state-owned development bank whose mission is to facilitate a sustainable development of the national economy by making investments into the non-primary sector of the country.

The "DBK" JSC specializes in financing and developing medium-sized and large businesses by providing medium and long-term lending services for investment projects and export operations, loans for day-to-day operations, intermediate and mezzanine financing, syndicated financing, financing of leasing transactions, provision of guarantees, equity participation and interbank financing. In addition, the "DBK JSC" finances projects in the manufacturing sector and infrastructure, including greenfield projects, as well as export operations and/or leasing transactions.

A microfinance organization[16] is a financial organization providing secured or unsecured micro loans to individuals and/or corporate entities in the amount not exceeding 20 000 MCIs.

[16] Hereinafter: "MFOs" shall mean solely microfinance organizations; "CPs" are credit partnerships, "LMDs" – lombards and "microfinance organizations" shall mean the totality of MFOs, CPs and LMDs.

As of January 1, 2022, there were 237 microfinance organizations in Kazakhstan. Credit partnerships and lombards are also classified as microfinance organizations.

A credit partnership (the "CP") is established in the form of a limited liability partnership that provides loans to its members only on a contractual and a fee-for-service, maturity and repayment basis in accordance with the lending policy as approved by the charter.

As of January 1, 2022, there were 213 credit partnerships in Kazakhstan.

Lombards ("LMDs") specialize in providing micro loans to individuals secured by movable property and intended for personal use for a period of up to one year in an amount not exceeding 8,000 MCIs.

As of January 1, 2022, there were 596 lombards in Kazakhstan.

Subsidiaries of the National Management Holding Company in the sphere of agro-industrial complex (NMHC AIC) are the organizations that help promote the development of agro-industrial complex of the Republic of Kazakhstan by building up an affordable and efficient financing system. They include the following entities:

The "Agrarian Credit Corporation" JSC provides concessional financing to entities in the agro-industrial sector through direct lending, as well as financing and co-financing mainly of small and medium-sized businesses through credit partnerships, microfinance organizations, regional investment centers, second-tier banks and leasing companies. In all regions of Kazakhstan, the company is represented by 17 branches. In addition, in December 2021, as part of the merger of the "Fund of Financial Support for Agriculture" JSC with the "Agrarian Credit Corporation" JSC, the functions of lending to microbusiness, an operator in the field of insurance in the agro-industrial sector, and a rural mortgage agent were transferred under the "With a diploma to the village!" Project.

The "KazAgroFinance" JSC provides leasing of agricultural machinery and equipment and lending to entities of the agro-industrial sector. In all regions of Kazakhstan, the company is represented by 16 branches.

A mortgage organization (the "MO") is a corporate entity whose exclusive activity is to provide mortgage loans on the basis of a license for banking borrowing operations granted by the competent authority. Mortgage organizations include the "Mortgage Organization "Express Finance" JSC and the "Kazakhstan Housing Company" JSC (formerly the MO "Kazakhstan Mortgage Company" JSC).

Source: *The Law of the RK "On Microfinance Business", the Law of the RK "On Government Regulation of Development of the Agro-Industrial Complex and Rural Territories", the Law of the RK "Regarding Mortgage on Real Property", official web sites of financial organizations*

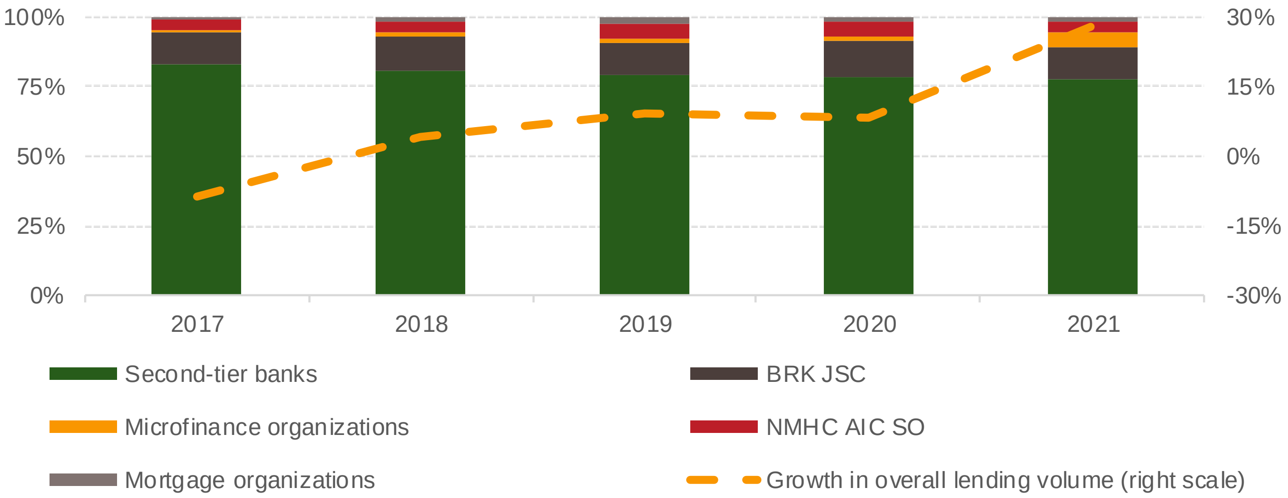
Lending to Microfinance Organizations

In 2021, the loan portfolio of mortgage organizations expanded to 1.4 trillion tenge versus 0.4 trillion tenge in 2020. Such an increase in the loan portfolio of microfinance organizations is mainly driven by legislative changes. Thus, at the end of 2020, the business of microfinance organizations was included into the perimeter of regulation in order to reduce risks in the non-banking sector, increase its transparency and protect the rights of the financial services consumers. In this regard, since January 1, 2021, the licensing of microfinance business has been in force in Kazakhstan, whereby CPs and LMDs began to submit reports on loans provided from July 2021.

At the same time, a simplified process of issuing loans and relatively low solvency requirements for clients of microfinance organizations compared to the requirements in respect of banks contributed to the increase in their loan portfolio. Thus, at the end of 2021, the share of the loan portfolio of microfinance organizations in the total volume of credits to the economy increased from 2.2% in 2020 to 5.3% *(Chart 1.62)*. Meantime, the referrals of SMEs in agriculture to large microfinance organizations, whose priority area of financing is to support projects in this sector, also contributed to the expansion of portfolio of microfinance organizations and to some reduction in the loan portfolio of the NMHC "AIC" subsidiaries.

Chart 1.62 ***Despite the increased share of microfinance organizations, second-tier banks remained as the main lender to the economy***

Shares of lenders in the overall lending volume

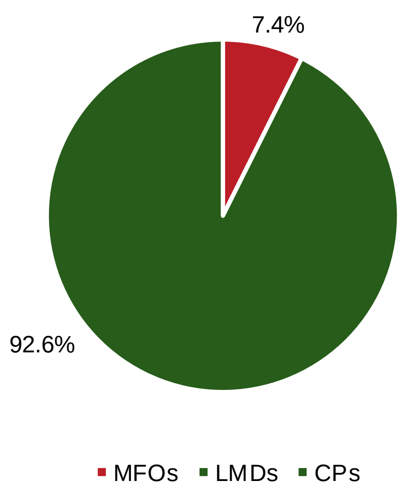


Source: *Reporting of financial organizations, Credit Register*

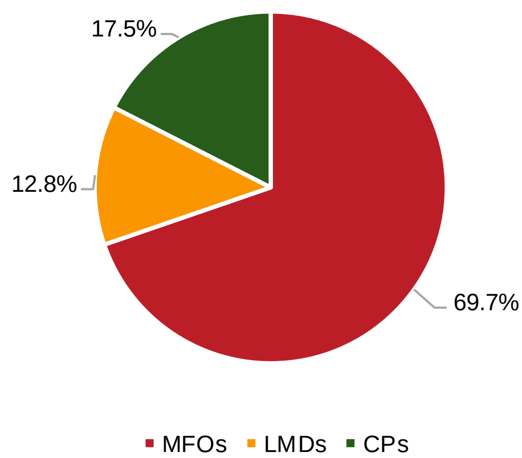
In terms of the loan portfolio structure of microfinance organizations broken down by entities to whom loans are provided, as of January 1, 2022, 92.6% of microloans to corporate entities were provided by CPs *(Chart 1.63 (a))*, and 69.7% of microloans to individuals were provided by MFOs *(Chart 1.63 (b))*. The loan portfolio of lombards is represented solely by microloans to individuals.

Chart 1.63 ***Corporate entities were the main clients of CPs, whereas individuals were mostly credited by MFOs***

a) Loans to corporate entities



b) Loans to individuals



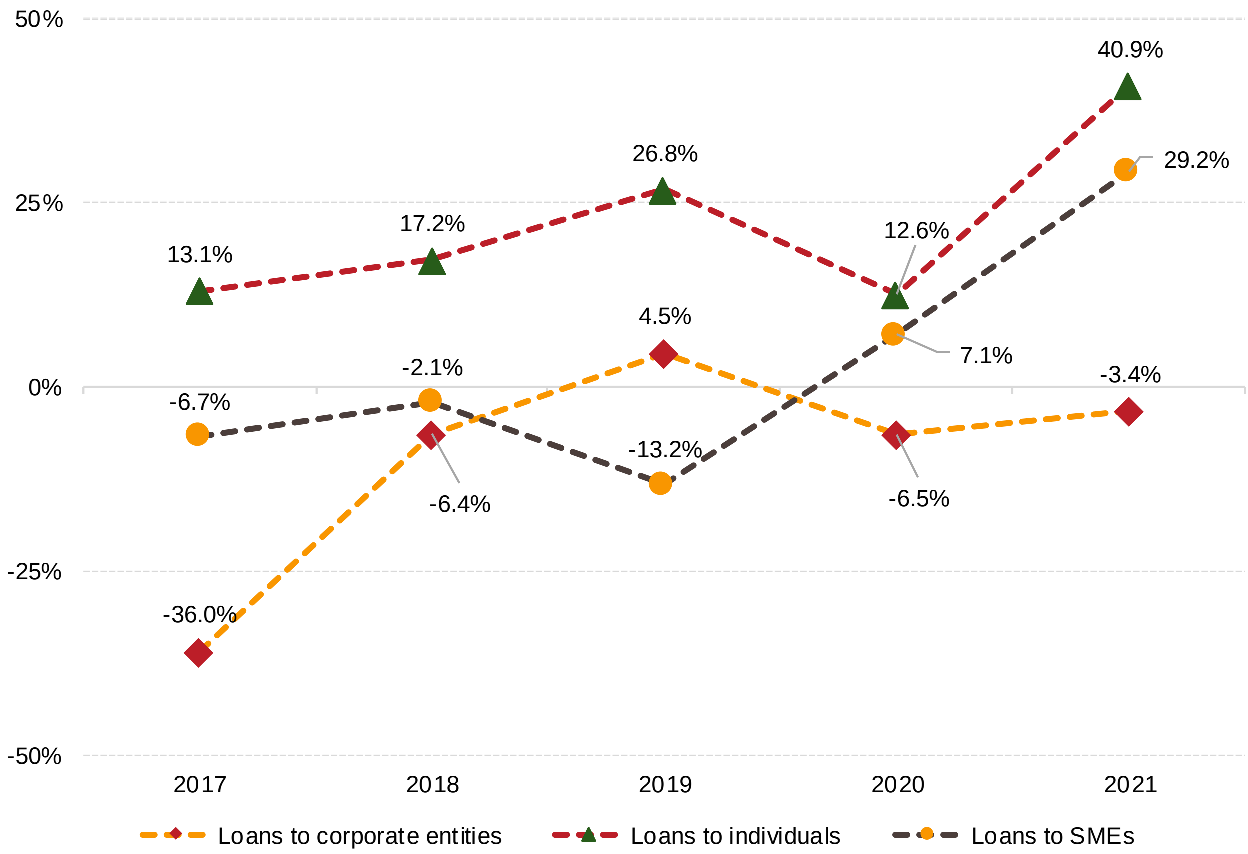
Lending to Banks

As of January 1, 2022, there were structural changes in the loan portfolio of banks in terms of entities to whom loans are provided as regards a reduction in the share of corporate entities (from 24.3% in 2020 to 18.4%) and an increase in the share of individuals (from 45.1% to 49.7%). At the same time, the share of SMEs remained almost unchanged (from 26.9% to 27.2%).

The persisting downward trend in the corporate loan portfolio in 2021 is due to the continued work of banks to clean up their balance sheets from distressed loans, including as part of the merger of two large banks in the reporting year, the exit of insolvent banks from the system as well as the reclassification of loans of this category into the category of loans to SMEs by certain banks when reporting. In general, the corporate portfolio of banks (excluding SMEs) in 2021 decreased by -3.4% YoY (the reduction accounted for -6.5% YoY in 2020) *(Chart 1.64)*. Thus, the volume of new loans issued by banks to corporate entities amounted to 11.1 trillion tenge (51.6% of all loans provided in 2021), which is 20.3% more than in the preceding period.

Chart 1.64 ***The loan portfolio of banks continued to grow by providing loans to individuals and SMEs***

Growth rates of the loan portfolio of banks, by lending entities (YoY)

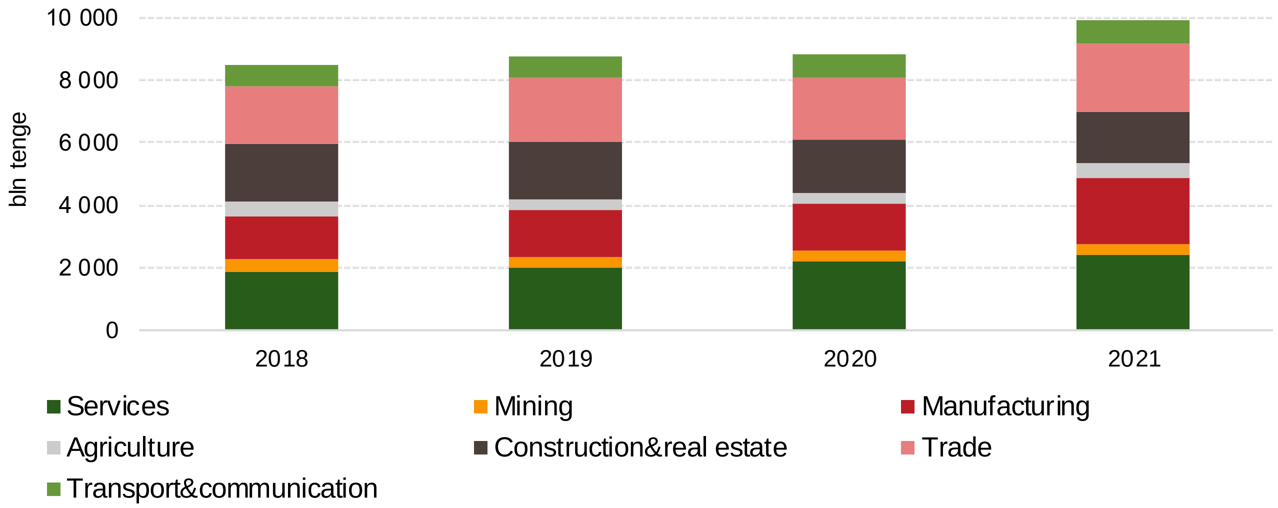


Source: *Official web-site of the National Bank*

In 2021, the industry-based structure of the corporate loan portfolio of banks has not undergone significant changes. Over the past years, the largest shares in lending fell on such sectors as services (24.4%), trade (22.3%), the manufacturing industry (21%), as well as construction and real estate (16.5%). In turn, loans to entities from the mining industry (3.6%) and agriculture (4.7%) account for the smallest shares *(Chart 1.65)*.

Chart 1.65 ***The largest share in the lending are occupied by such sectors as services, trade, the manufacturing industry as well as construction and real estate***

The loan portfolio of banks, by economic sector



Source: *Credit Register*

In 2021, the key drivers for the expansion in the loan portfolio of banks were loans to individuals and SME loans, which increased by 40.9% YoY and 29.2% YoY, respectively *(Chart 1.66)*.

The growth in loans to SMEs was driven by an ongoing government policy to support business entities, including as part of implementation of a set of anti-crisis measures initiated during the pandemic. According to the report entitled “Bank Loans to Small Enterprises by Economic Sectors[17], the growth rate of small business loans in 2021 accelerated by 2.1 times, and the size of the loan portfolio reached 3.8 trillion tenge. The largest increase in lending to small enterprises was observed in sectors such as the industry and trade, where the share in small business loans amounted to 24.1% and 23.9%, respectively.

In 2021, a significant increase to 10 trillion tenge (1 trillion tenge in 2020) was observed in the retail portfolio, 34.1% of which were represented by loans for home construction and purchase and 60.4% – by consumer loans.

In the reporting year, 95% of new loans provided for home construction and purchase are mortgage and housing loans, their portfolio has increased from 2.4 trillion tenge in 2020 to 3.3 trillion tenge in 2021. The ability of people to use retirement savings to improve their living conditions in the reporting period significantly influenced the acceleration of mortgage loan growth rates from 32.8% YoY in 2020 to 37.8% YoY in 2021.

In turn, the largest contribution (40.4%) to the growth in retail loans was made by consumer loans; the expansion of their portfolio reached its five-year peak of 33.5% (24.4% YoY in 2019, 4.0% YoY in 2020) *(Chart 1.66)*. Such rapid increase in consumer loans in recent years was driven by many factors. On the one hand, a higher consumer demand from the population, the development of new banking products, in particular, in online lending, and entire financial ecosystems, the improvement of banks’ scoring models and a prompt decision-making about making a loan, and other technology innovations have led to high competition for borrowers in the market. On the other hand, the deceleration of real income of the population observed since the onset of the pandemic, the rising food prices, as well as the reduction in the share of income from employment and the increase in the

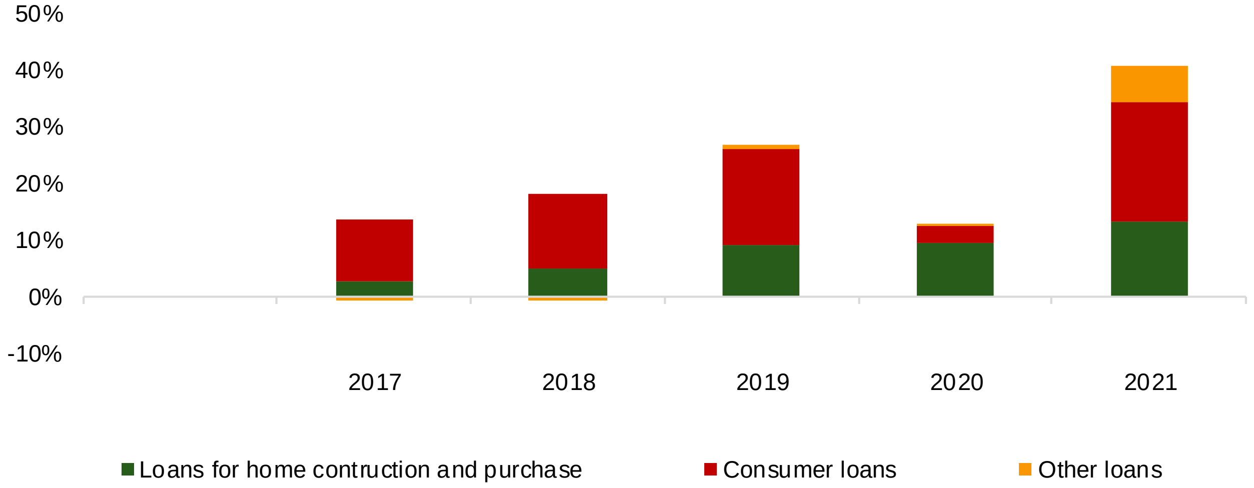
[17] Bank loans to small business entities, by economic sector, see https://nationalbank.kz/ru/news/kredity-bankov-malomu-predprinimatelstvu-po-otraslyam-ekonomiki/rubrics/1778

population's dependence on social payouts, resulted in a lower purchasing power of the population. This, for its part, may lead to the replacement of household income with borrowed funds and, therefore, heighten the risks for banks.

According to a bank lending survey, the main factor behind the increase in consumer loans in 2021 was the pandemic recovery of customer solvency, as well as the competition of banks for a better borrower in the form of marketing promotions and campaigns. In addition, during the year, there were changes in lending terms and conditions in the form of lowering of interest rates on products and fees on banking operations, easing requirements to collateral provided by a borrower, which also contributed to an increase in demand for consumer loans.

Chart 1.66 ***The largest contribution to the growth of loans to individuals is made by consumer loans***

Contribution to the growth of retail portfolio



Source: *Official web-site of the National Bank*

Bank Lending under Government Programs

In the reporting year, banks continued to provide loans to corporate entities as part of government programs. In the meantime, in accordance with the monetary policy strategy[18], the National Bank initiated the process of gradual exit from government concessional lending programs by 2025 with an aim to develop market-based mechanisms of lending to the economy.

Thus, in 2021 the "Concessional Lending Program for SMEs" was completed[19]. This program was launched in 2020 as part of anti-crisis measures to support SMEs affected by the consequences of the COVID-19 pandemic and was extended until the end of 2021 with a total funding of 0.8 trillion tenge. In 2021, loans in the amount of 0.6 trillion tenge were provided under this program with an approval share of 92.9% (0.5 trillion tenge and 69.5% in 2020) *(Chart 1.67)*.

In their turn, banks continued to provide loans to corporate entities as part of the "Economy of Simple Things" Program[20], which was launched in 2018 with a final financing volume of 1 trillion tenge (original budget – 0.6 trillion tenge). The Program provides for allocation of loan capital for processing in the agro-industrial complex of 0.3 trillion tenge,

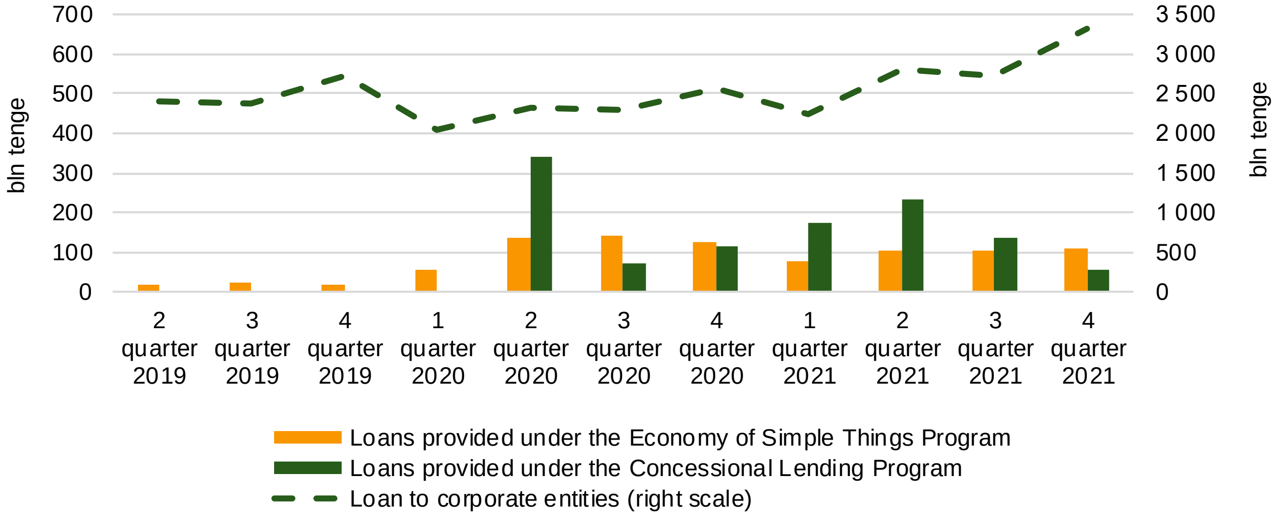
[18] Monetary Policy Strategy until 2030, see https://nationalbank.kz/ru/page/osnovnye-napravleniya-dkp
[19] Under the Program, loans to business entities are provided for the term of 12 months at the interest rate of up to 8% per annum
[20] As part of the Program, loans to business entities are provided for investment purposes and to replenish their working capital for the term of up to 10 years at a borrower's final interest rate of up to 6%

for production in the AIC – 0.3 trillion tenge and to the manufacturing industry and services – 0.4 trillion tenge *(Chart 1.67)*.

In 2021, loan disbursements under the two programs specified above amounted to 8.9% of the total volume of loans to corporate entities (10.7% in 2020).

Chart 1.67 ***Despite a full utilization of allocated resources under the "Concessional Lending Program for SMEs" in 2021, the interest of corporate entities in bank loans has increased***

Loans to corporate entities as a part of government programs



Source: *KSF data, Official web-site of the National Bank*

In turn, in the retail lending segment, the main government programs were the "7-20-25" programs with a total budget of 1 trillion tenge and the "Baspana Hit" program with a total budget of 0.6 trillion tenge that had been launched in 2018 as part of the government social initiatives to improve the welfare of the population in Kazakhstan.

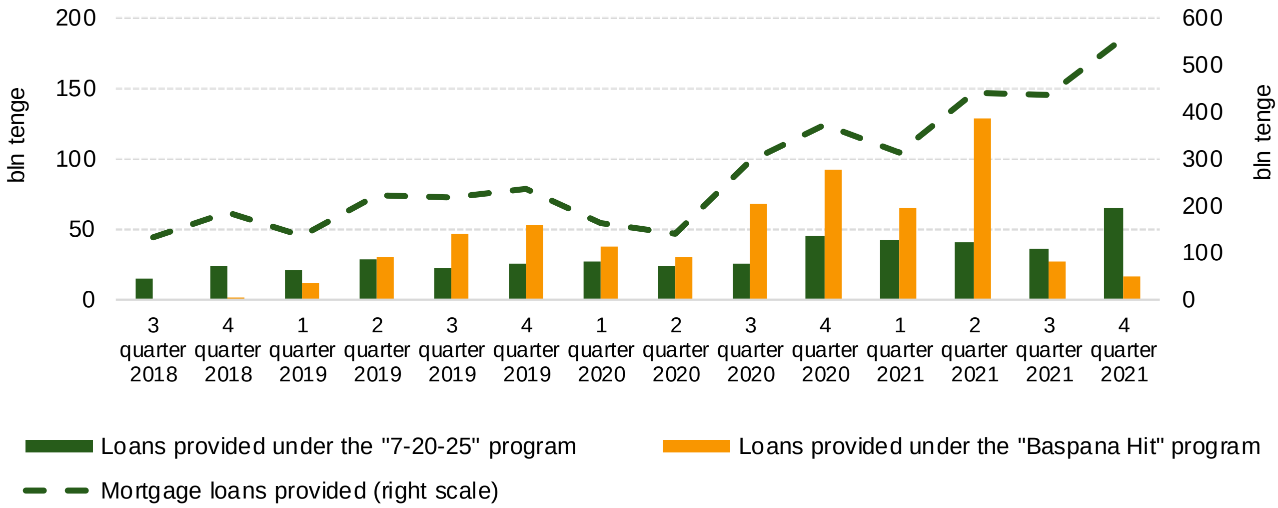
According to the terms and conditions of the "7-20-25" program, clients received a loan for a home purchase in the primary market at a preferential rate of 7% per annum with a down payment of 20% for the term of up to 25 years. In 2021, within the framework of this program, mortgage loans in the amount of 0.2 trillion tenge have been provided, and the share of approval for them was 57.2% (0.1 trillion tenge, 56.3% in 2020).

Along with this, under the "Baspana Hit" program, clients purchased real estate in the primary or secondary housing market with a down payment of 20% for the term of up to 15 years at a rate equal to the National Bank's base rate + 175 bp. In 2021, mortgage loans worth 0.2 trillion tenge were provided under this program, and the share of approval for them was 53.8% (0.2 trillion tenge, 52.8% in 2020).

In addition to government programs aimed at improving housing conditions, in 2021, the population was given the opportunity to use retirement savings for these purposes; this caused the growth in mortgage loans from the 2nd quarter. Thus, the issuance of mortgage loans in the reporting period amounted to 1.7 trillion tenge, which is 1.8 times more than in 2020. At the same time, according to the UAPF, as at the end of 2021, 0.3 trillion tenge was allocated for making a down payment on a mortgage loan or obtain it. However, despite such significant increase in disbursement of mortgage loans, the share of "7-20-25" and "Baspana Hit" government programs in these loans decreased from 36.1% in 2020 to 24.2% in 2021. The main factor that caused such decline was the completion of the "Baspana Hit" program in 2021 in connection with the full utilization of the allocated resources under this program *(Chart 1.68)*.

Chart 1.68 ***Availability of government programs and possibility of using pension savings ensured the growth in the issuance of mortgage loans***

Mortgage loans as a part of government programs



Source: *KSF data, Official web-site of the National Bank*

1.6 Corporate Sector

In 2021, the revenues and cash flows of enterprises grew significantly, mainly at the expense of solvent enterprises, the bulk of which did not have bank loans. At the same time, lending to enterprises with low or negative capital continues. A key factor in issuing loans to such enterprises is their cash flows. It is noted that the net cash flow of enterprises with low or negative capital and bank debt is on average higher than that of the same enterprises without it.

The liabilities to assets ratio of enterprises has been gradually decreasing over the past 6 years. Meanwhile, the largest debt burden is concentrated on the balance sheets of enterprises in the trade and construction sectors. The debt of these enterprises is mainly short-term, due to a high level of their working capital.

The volumes of property, plant and equipment of enterprises that potentially reduce the risks of non-repayment of bank loans, on average is at a level not lower than their bank debt. Nevertheless, large volumes of debt in the structure of liabilities of some enterprises significantly increase their default risks. Thus, almost half of enterprises (47%) among those with bank debt are classified as undercapitalized or insolvent[21]. These enterprises account for a major part of the so-called zombie companies, whose profits barely cover their interest costs. Enterprises need to make up for the deficit to cover debt expenditures at the expense of their own capital, and in case of its absence, at the expense of injections from outside. The long-term functioning of zombie companies largely depends on the government support, refinancing of loans or additional contributions from owners.

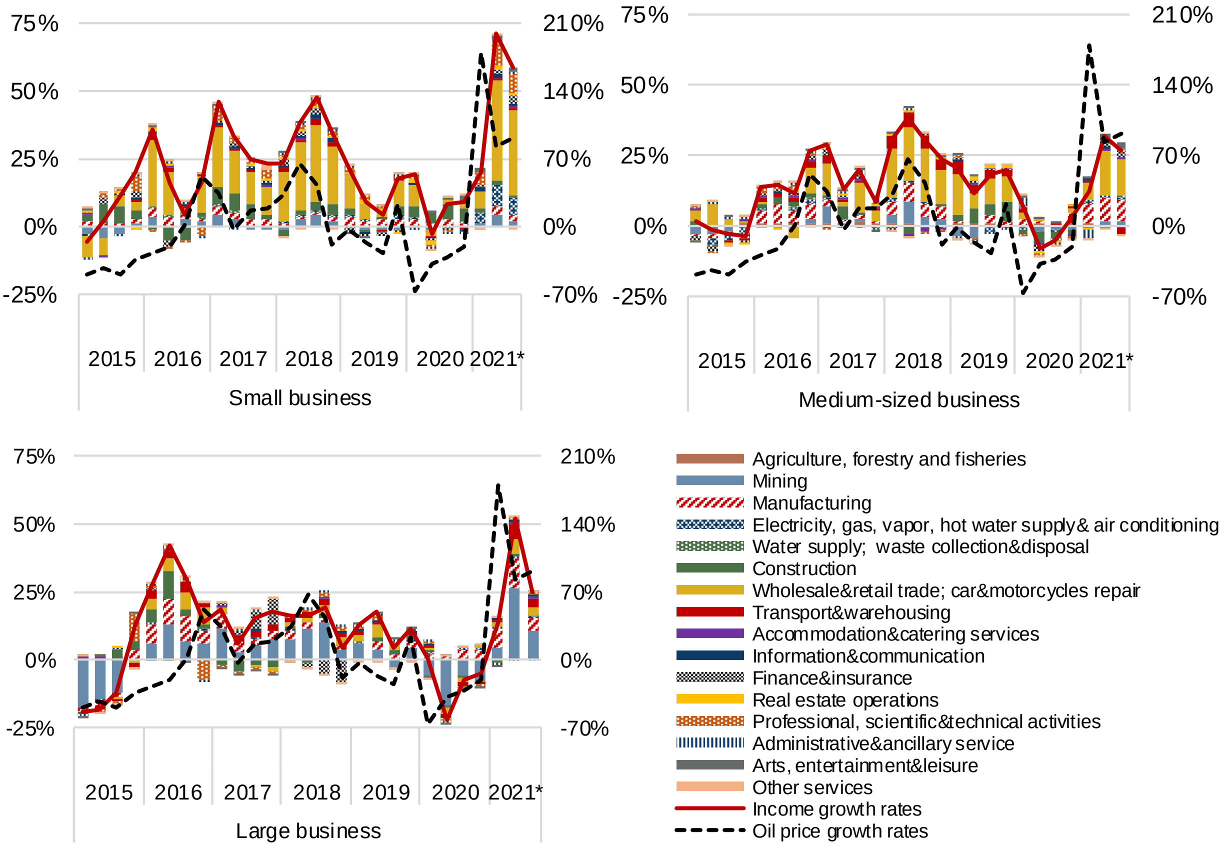
In 2021, growth rates of total revenues of enterprises, after their reduction in the preceding year, roared ahead in the second quarter *(Chart 1.69)*. The main contribution to the growth of total revenue was made by enterprises in the mining and manufacturing industries of large and medium-sized businesses as well as wholesale and retail trade of small and medium-sized businesses. A significant increase in enterprise revenues in 2021 is explained by a low income base of the preceding year but they still significantly exceeded

[21] For the purposes of real sector analysis, enterprise having a positive capital but a high debt burden (over 80%) are defined as undercapitalized; enterprises with a negative capital are defined as insolvent and those with capital of more than 20% of assets – as solvent.

the level of income in 2019. On average, it is observed that in 2021 the quarterly revenue of an enterprise [22] with bank debt was 2 times higher than the same revenue of an enterprise without bank debt. At the same time, solvent enterprises accounted for three-quarters of all revenues.

An important feature of the dynamics of enterprise revenues is their relationship with the dynamics of oil prices. Thus, the correlation coefficient of quarterly growth rates of the total revenues of enterprises and oil prices in the period from 2015 to 2021 was 60%. Most of all, oil prices correlate with revenues of medium-sized enterprises (61%), and to a lesser extent with the income of large businesses (50%). This relationship is an evidence of high reliance of the Kazakh economy on world oil prices.

Chart 1.69 ***Revenues of enterprises spiked in 2021***

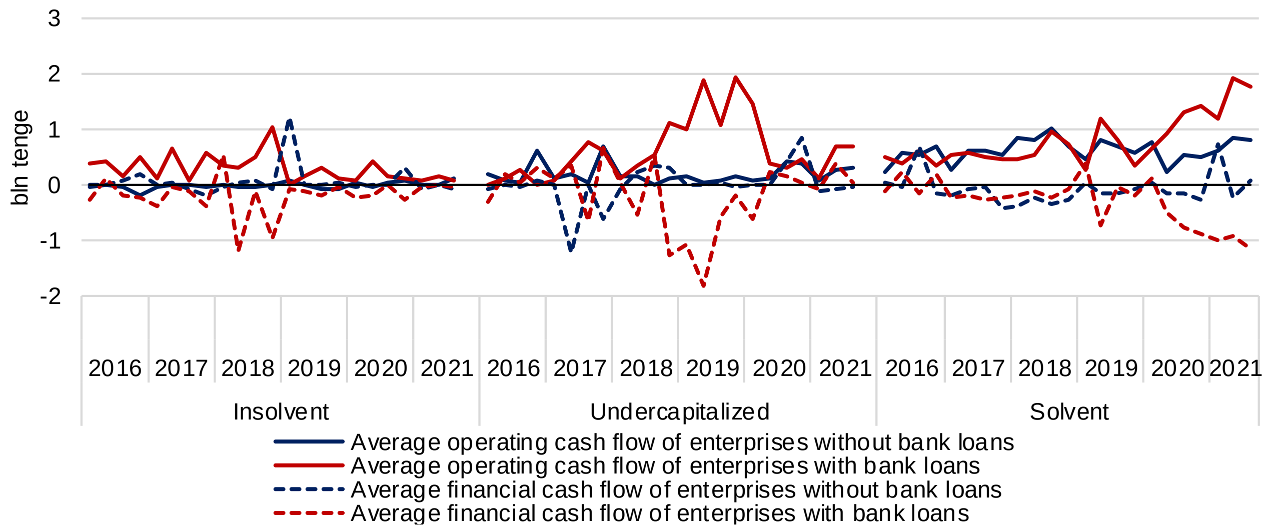


Source: *ASPR BNS RK*
Note: *Growth rates of revenues (quarter to the same quarter of the preceding year) are calculated on aggregate volumes of quarterly revenues of enterprises. At the same time, revenues of small enterprises are presented based on data extended to the total population, and in the medium-sized and large business – on the total population. Only the data for the 1-3 quarters of 2021 is available.*

[22] The information about bank debt on a quarterly basis is available only in respect of large and medium-sized enterprises; as for small enterprises, such information is collected on an annual basis only.

In 2021, along with the recovering growth of enterprise revenues, cash flows of enterprises have been also increasing[23]. Net cash flows from operating, financial and investment activities of enterprises in 2021 were almost 3 times higher than cash flows of the preceding year. Cash flows of enterprises increased mainly due to the operating activities of solvent enterprises, whose share accounts for 63% of the total number of respondents *(Chart 1.70)*. The cash flow from operations of a solvent enterprise, both with and without bank debt, have gone up by 1.5 times in 2021 on average during a quarter, compared to the preceding year, and in case of an undercapitalized enterprise or enterprise with negative capital this indicator somewhat decreased.

Chart 1.70 ***Cash flows of solvent enterprises are growing***



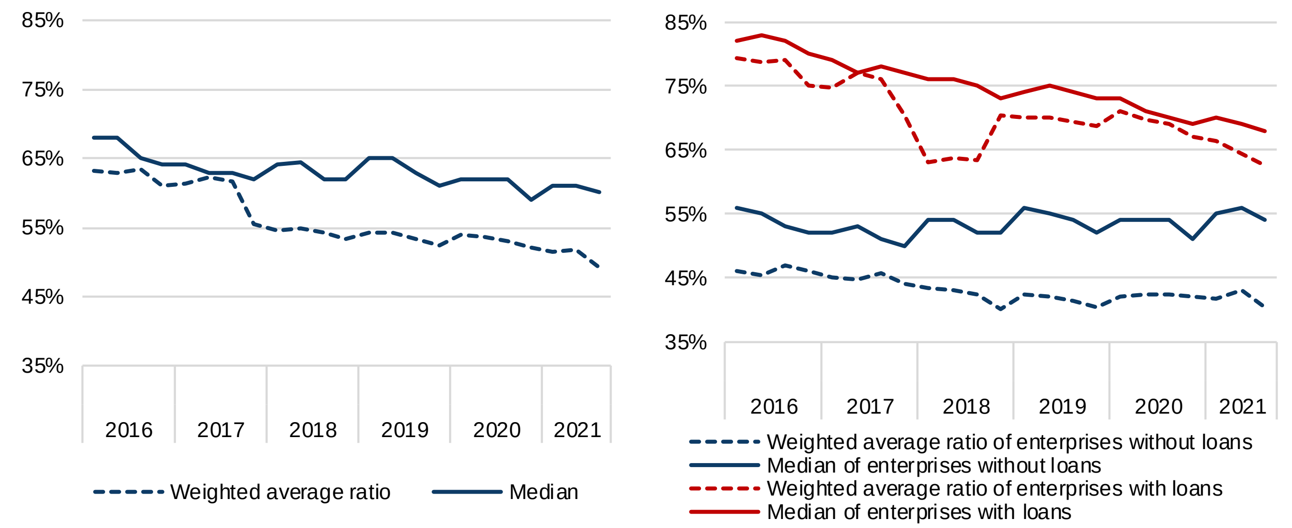
Source: *ASPR BNS RK*
Note: *The quarterly cash flow of an enterprise is calculated as the arithmetic mean of the general population for medium-sized and large enterprises. Cash flow is equal to the difference between the inflow and outflow of cash*

Cash flows from operating activities of enterprises with bank debt, on average, exceed the negative cash flows from financing activities that are largely associated with the bank debt financing. At the same time, depending on the debt burden of an enterprise, the level of cash flows is different. Thus, in the category of solvent enterprises, the net average cash flows from operating and financial activities are lower for an enterprise with bank debt than for an enterprise without it. Whereas in the categories of undercapitalized and insolvent enterprises, on the contrary, an enterprise with bank debt has higher cash flows from operating and financial activities. This feature indicates that banks, when providing loans to enterprises with a high debt burden, primarily focus on business cash flows. In turn, solvent enterprises, for the most part, most likely do not need additional funding in the form of a bank loan.

Aggregated levels of debt burden of enterprises[24], as the liabilities to assets ratio, have been going down over the recent 6 years and the reduction occurs due to a lessening debt burden of enterprise with bank debt *(Chart 1.71)*. At the end of the reviewed period, the debt burden of half of the respondents exceeded 60%, and among enterprises with bank debt – 68%. The weighted averages of liabilities to assets are below the median, which indicates a low level of debt burden among enterprises with larger amount of assets.

[23] The information about cash flows on a quarterly basis is available only in respect of large and medium-sized enterprises; as for small enterprises, such information is collected on an annual basis only.
[24] The information about liabilities on a quarterly basis is available only in respect of large and medium-sized enterprises; as for small enterprises, such information is collected on an annual basis only.

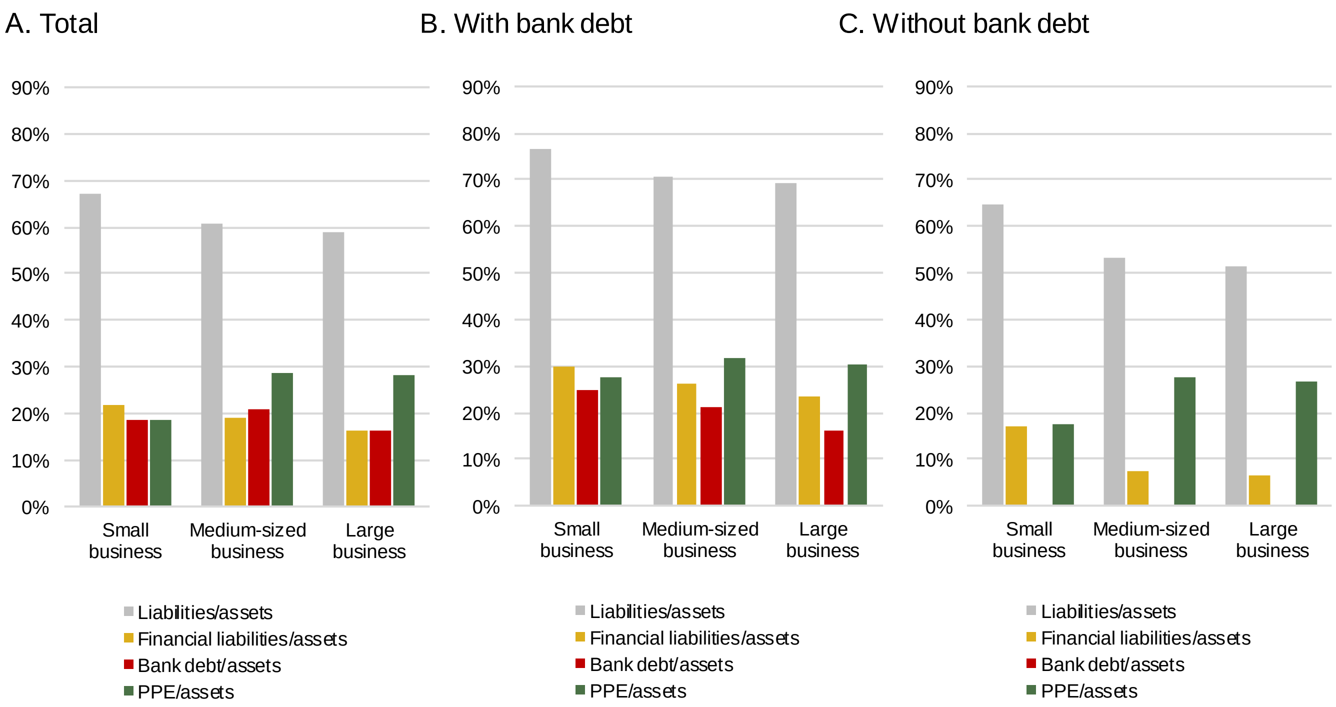
Chart 1.71 ***The liabilities to assets ratio of enterprises is decreasing***



Source: *ASPR BNS RK*
Note: *The weighted averages of liabilities to assets ratios of enterprises (quarter) are asset-weighted*

Consequently, a negative relationship between an enterprise's size and its debt can be observed on average *(Chart 1.72)*. At the beginning of 2021, the level of liabilities is noticeably lower for large enterprises than for small ones. Such a difference in the levels of debt burden by the size of enterprises remains in groups of enterprises both with and without bank debt. According to the time structure of liabilities, enterprises have more short-term borrowings than long-term ones. Small enterprises have especially a lot of short-term liabilities; on average, they account for almost half of their balance sheets (45%).

Chart 1.72 ***The share of PPE at enterprises is generally comparable with the level of their bank debt***



Source: *ASPR BNS RK*
Note: *The median of liabilities, financial liabilities, bank debt and PPE to assets at the beginning of 2021. Annual data of enterprises was used for a sample of small enterprises, and for the general population of medium-sized and large enterprises. 2756 respondents fell into the sample with bank debt, and the remaining 23482 respondents were in the category without bank debt*

In theory, the property, plant and equipment of an enterprise can potentially serve as additional collateral for debt, which allows creditors to reduce the risk of default. The balance sheet shows that the PPE volume of a median enterprise with bank debt is higher than that of a similar enterprise without bank debt. The average PPE volumes of large and medium-sized companies are approximately equal to a half of their liabilities and exceed the levels of their financial and bank debt. In the small business group, PPE, in turn, approximately corresponds to the level of bank debt.

The distribution of enterprises with bank debt by their share of bank loan, PPE, liabilities structure and size enables to distinguish a number of specific features *(Chart 1.73)*. Thus, only insolvent enterprises may not have enough assets to cover bank debt. The share of such enterprises is 23% in the group of companies with negative capital and bank debt, half of which have less than 30% of PPE in assets. In half of the undercapitalized enterprises, loans and PPE do not exceed 50% of assets. At the same time, loans of 37% of enterprises in the group of undercapitalized enterprises exceed half of their assets, while at the majority (77%) of these enterprises PPE comprise less than half of their assets. Among all bank borrowers, 53% are solvent enterprises, of which two-thirds have loans and PPE that do not exceed 50% of assets.

In addition to the above-described differences in the structures and levels of debt, there are cross-sector differences on the liabilities side of enterprise balance sheets under consideration, and their debt levels vary depending on the type of economic activity. An average[25] of median values of liabilities to assets for the period of 2009-2020 in the trade sector is equal to 84%, and in the construction sector – 78%. Given a high share of respondents in the trade and construction business[26], they account for the bulk of enterprises in the category with the highest debt burden.

Chart 1.73 ***The higher the debt burden, the larger the bank debt***

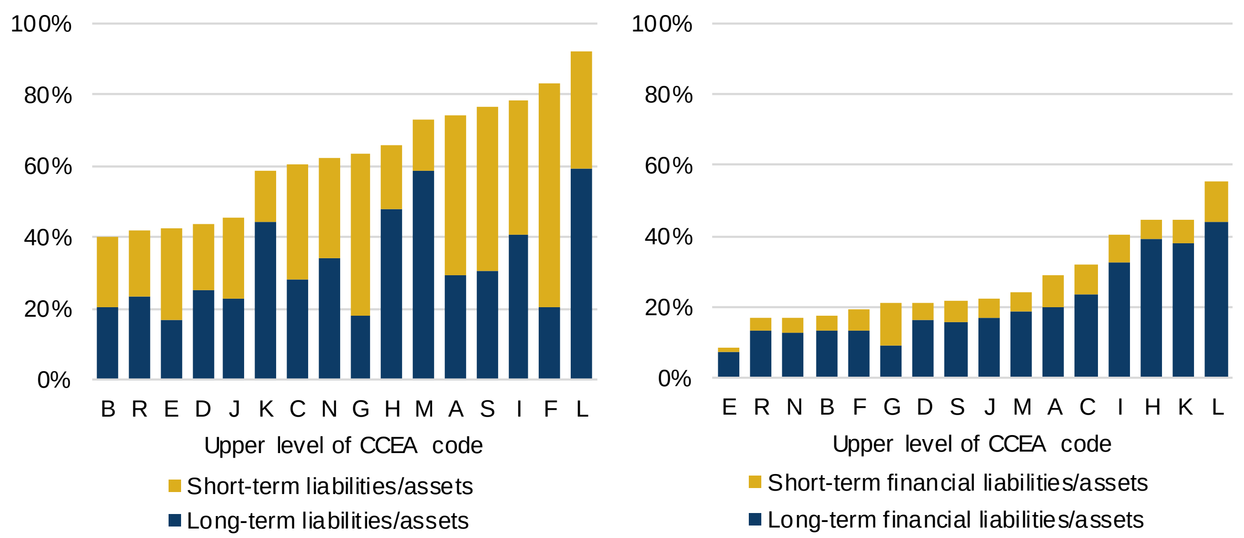
A sample of enterprises with bank debt

Source: *ASPR BNS RK*
Note: *The area of the bubble is proportional to the volume of assets. The sample included small, medium-sized and large enterprises with bank debt. Data as of the beginning of 2021 for small enterprises - by the sampled population, and for medium-sized and large enterprises – by the general population*

[25] The arithmetic mean of medians of liabilities to assets ratios of enterprises for the period from 2009 to 2020.
[26] The largest share of respondents is in the sectors of trade (14%) and construction (12%).

As for weighted average values of debt-to-asset ratio[27], the distribution of liabilities structure by sectors looks different *(Chart 1.74)*. The construction sector is remaining in the category of the largest share of liabilities in the balance structure indicating a positive correlation between the amount of assets and liabilities in the sector. Liabilities of construction companies are short-term and the percentage of financial debt[28] is low, which is to a large extent explained by a high share of their payables. Trade enterprises just as construction enterprises are characterized by a high share of short-term liabilities that require a high level of working capital in their operations. Businesses in the sphere of real estate operations have the largest share of debt (especially long-term) on financial liabilities. On the contrary, financial debt of enterprises in the trade sector is mainly short-term.

Chart 1.74 ***Construction and real estate operations sectors are characterized by the largest debt burden***



Source: *ASPR BNS RK*
Note: *The weighted averages of indicators (liabilities to assets) for enterprise assets were averaged over the period from 2009 to 2020. The data is annualized. Upper level of CCEA: A - Agriculture, forestry and fisheries, B - Mining industry, C - Manufacturing industry, D - Supply of electricity, gas, steam, hot water and air conditioning, E - Water supply; collection, treatment and disposal of waste / pollution, F - Construction, G - Wholesale and retail trade; repair of cars and motorcycles, H - Transport and warehousing, I - Provision of accommodation and catering services, J - Information and communication, K - Financial and insurance activities, L - Real estate operations, M - Professional, scientific and technical activities, N - Administrative and ancillary services, R - Arts, entertainment and leisure, S - Provision of other services*

It's is also worth mentioning that the analysis of enterprises by the level of revenue concentration of companies by sectors[29] (Herfindahl-Hirschman, HHI) showed the financial and insurance market as the most concentrated in 2020 (HHI=2570). Moderately concentrated sectors include the mining industry as well as the arts, entertainment and leisure (1000<HHI<=1800). The remaining sectors are in the low-concentration category. The uneven distribution of enterprise revenues by sector can be graphically represented by the Lorentz curve *(Chart 1.75)*. In the finance and insurance sector, 1% of the largest respondents have 78% of all revenues. On the contrary, in the least concentrated sector of agriculture, forestry and fisheries, 1% of the largest enterprises have 32% of revenues.

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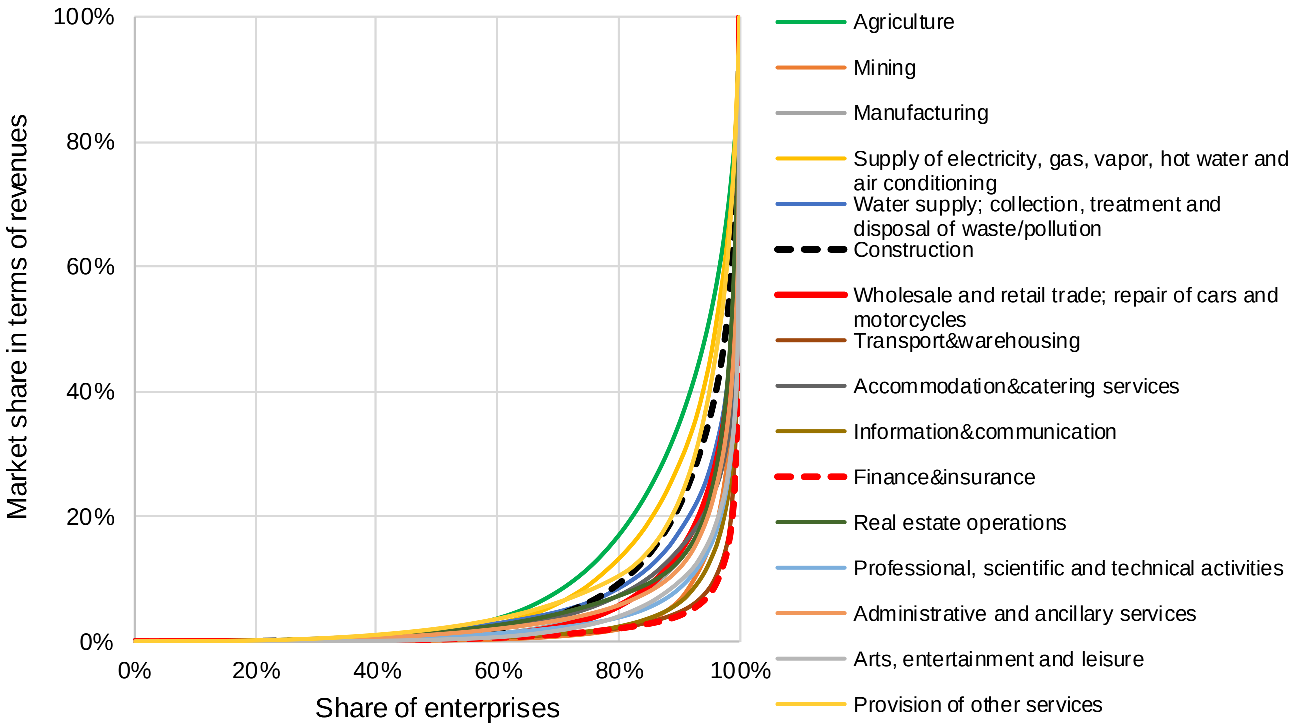
[27] In the calculation of weighted average by assets of the debt-to-asset ratio, the sample of enterprises is narrowing to respondents with non-zero liabilities.
[28] Financial debt includes bank loans and other financial liabilities.
[29] Under the upper level of the Common Classifier of Economic Activities of the RK. A market share was calculated based on respondents' revenues.

Chart 1.75 ***The degree of company's concentration is the highest in the financial and insurance business***



Source: *ASPR BNS RK, end-2020 data*

Box 5. Estimation of the Share of Zombie Companies in Kazakhstan

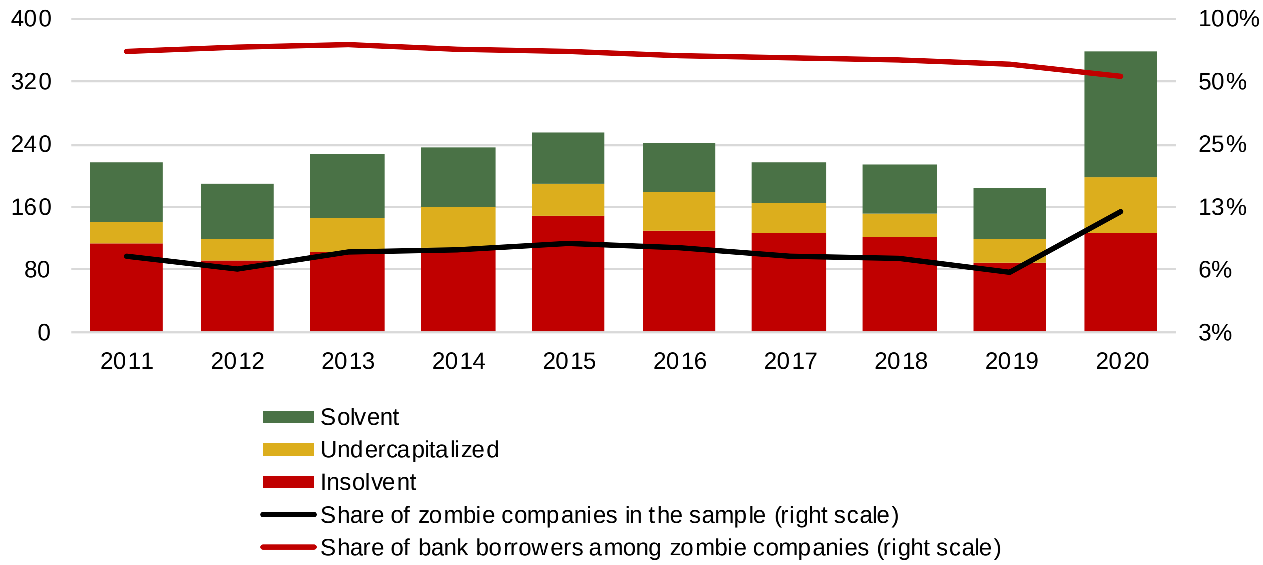
The National Bank based on the data from enterprise reports[30] estimated the number of the so-called zombie companies whose profits barely cover their interest expenses. So, in 2020, the number of such enterprises doubled compared to 2019, according to our estimates *(Chart 1.76)*. The sample of interest included 3013[31] large, medium-sized and small enterprises, whose earnings before interest and tax (EBIT) were non-zero each year from 2010 to 2020.

In the international literature, "zombie companies" are usually defined as unprofitable firms that do not leave the market through takeovers or bankruptcy and continue to operate. The OECD classifies as zombie firms the companies 10 years old or older and with an interest coverage ratio of less than 1 for three consecutive years. In our case, zombie companies include enterprises that existed for at least 10 years before the pandemic year 2020 and with an interest coverage ratio equal to or less than 1 for two consecutive years.

At the end of 2020, based on the sample, the share of enterprises that fell into the zombie category reached a maximum of 12%, while in the prior 10 years the share of such companies was significantly lower and ranged from 6% to 8%. More than half of the enterprises in the zombie category are undercapitalized or insolvent. Besides, more than half of zombie companies are bank borrowers.

[30] Based on annual reports 1-PF "Statement of Financial and Economic Activities of an Enterprise" and 2-MP "Statement of the Small Enterprise Operations"
[31] The total number of unique respondents that showed operating profit for at least one period from 2010 to 2020 equals 108 thous.

Chart 1.76 ***In 2020, the number of zombie enterprises doubled***



Source: *ASPR BNS RK*

A major portion of companies that fall into the category of zombies historically consist of a number of insolvent enterprises whose liabilities exceed their assets. Thus, over the past 10 years, insolvent enterprises on average accounted for half of zombie enterprises, while undercapitalized and solvent enterprises accounted for 17% and 33%, respectively. Nevertheless, in 2020, the number of zombie companies increased mostly due to solvent enterprises; this is explained by the specifics of the pandemic crisis, which negatively affected the business of many companies, regardless of their capital structure (liabilities). Thus, the share of solvent enterprises in 2020 reached 45%, and enterprises with low and negative capital accounted for 20% and 35%, respectively.

Due to the specifics in the liability structure of zombie enterprises, their distribution of earnings under EBIT certainly differs before and during the pandemic. For example, in 2020 the share of enterprises with negative earnings before interest and taxes was 47% or 169 enterprises, while in 2019 the share of such enterprises was at 71%, or 130 enterprises.

In the sectoral context, there were no significant differences in the share of zombie companies between enterprises before and during the pandemic. So, the bulk of zombie enterprises in 2020 was in the manufacturing industry (22%), agriculture[32] (12%) and trade (11%).

It is worth noting that a separate group of enterprises has consistently fallen into the category of zombies for 10 years. Thus, from the sample under study, only 845 (28%) enterprises fell into the zombie group at least once in the period from 2011 to 2020, while 17% (147) of them remained in this category five or more times. On average, just over half (80) of the businesses that consistently fall into the zombie category were insolvent.

Obviously, when the interest coverage ratio is equal to or below one for several years, the deficit to cover debt expenses of enterprises must be replenished from their own capital, and in case of its absence, with injections from outside. Considering that the majority of zombie enterprises do not have own capital, such companies undoubtedly receive government support, apply for loan refinancing, or operate at the expense of additional contributions from owners.

[32] Including forestry and fisheries

II. Government Securities Market

Market liquidity has been gradually improving over the past two years. This was influenced by such factors as a change in the practice of debt issuance, which includes an obligation to create large control issues, changes in the structure of market participants aimed at strengthening the competition among dealers, as well as including Kazakhstani government securities in global indices and facilitating the access of international investors to the Kazakhstan's market, which is a positive aspect.

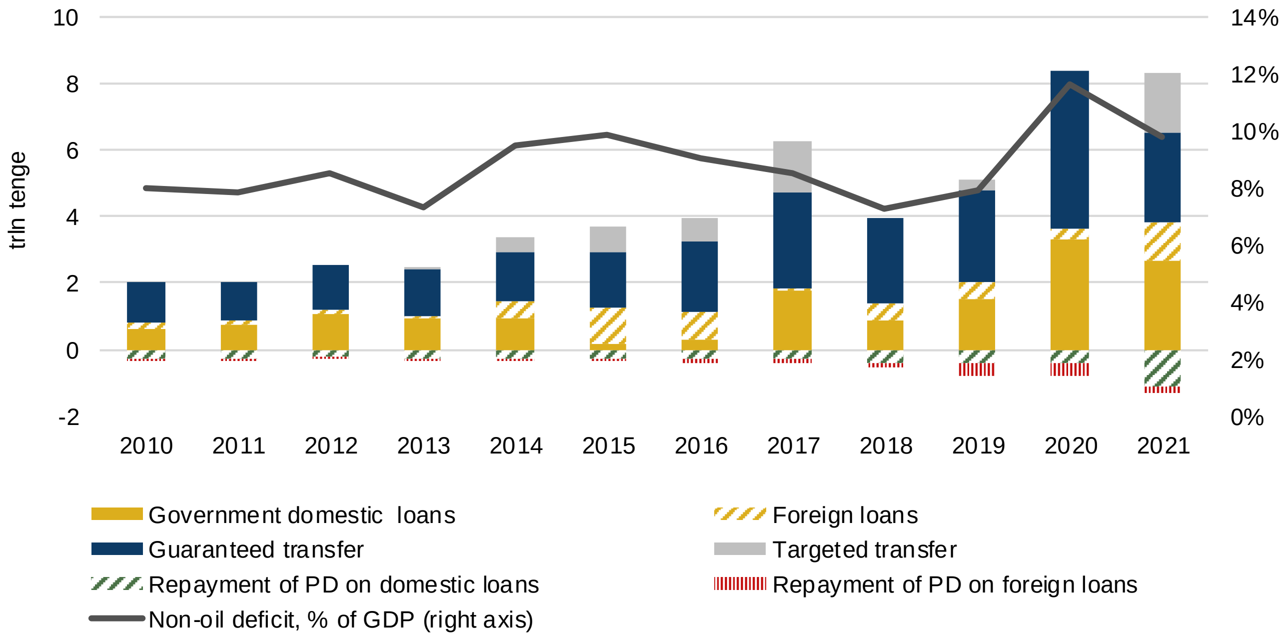
However, liquidity of the bond market of the Ministry of Finance of the Republic of Kazakhstan remains limited. The factors limiting the growth of liquidity level are as follows: concentration of about two thirds of the tenge debt of the MF in the portfolios of captive investors; most investors tend to hold government securities to maturity; a high degree of debt fragmentation; an unbalanced repayment scheme; and the absence of a methodical policy for managing public debt. Low liquidity has a negative impact on the meaningfulness of the yield curve and its ability to effectively aggregate market participants' expectations regarding interest rates. This limits the role of the government securities market as the initial link in the interest rate channel of the monetary policy transmission mechanism.

The NBK note market was more liquid and interest rates in this market continued to reflect voluntary demand on the part of banks. The National Bank went on with optimization of liquidity withdrawal tools by reducing the maturity of issued notes. This will help decrease the extent of influence of the regulatory opinion on interest rates of maturities above the overnight and will allow removing a non-market distortion over the short-term segment of the yield curve.

2.1 Public Debt

Chart 2.1 ***Repayment of principal debt on domestic loans demonstrates growth and amounted to 1.1 trillion tenge***

Funding structure of Kazakhstan's non-oil budget deficit



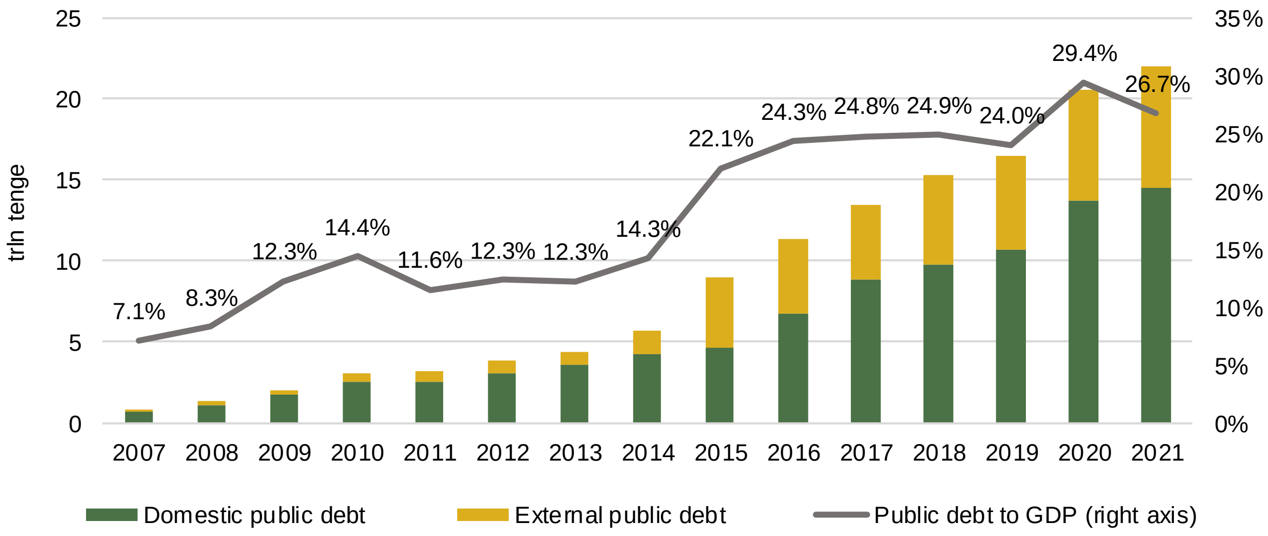
Source: *MF RK, CSD, NBK's computations*

Note: *1) PD – principal debt; 2) redemptions of the 2020 issues resulted in the increased PD repayment in 2021*

Transfers from the NF RK remained the main source for financing the non-oil deficit of the national budget in 2021 *(Chart 2.1)*. As of January 1, 2022, 4.5 trillion tenge were allocated to the state budget from the NF RK (the guaranteed transfer of 2.67 trillion tenge, and the targeted transfer of 1.83 trillion tenge). Foreign loans amounted to 1.15 trillion tenge, having increased by 3.9 times over 2021. The principal repayment on domestic loans amounted to 1.1 trillion tenge, an increase of 2.6 times in 2021. This trend carries the risk of reducing the ability to finance capital investment in the future. Thus, in order to cover this category of current government spending that does not contribute to increasing productivity in the economy, it is necessary to ensure the growth of stable non-oil revenues and the reduction of highly cyclical oil revenues. The low ratio of non-oil budget revenues compared to total expenditures potentially leads to absolute reliance and depletion of the country's net assets, and the need for indirect consolidation of budget expenditures. This means deprioritization of sectors with long-term returns, requiring a higher proportion of capital investment, due to the difficulty of reducing recurrent spending on social security and welfare. Thus, the continuation of this trend carries the risk of reducing the capacity of capital financing of the state budget.

Chart 2.2 ***Dynamics of public debt demonstrates risks of approaching to thresholds***

Structure of Kazakhstan's public debt



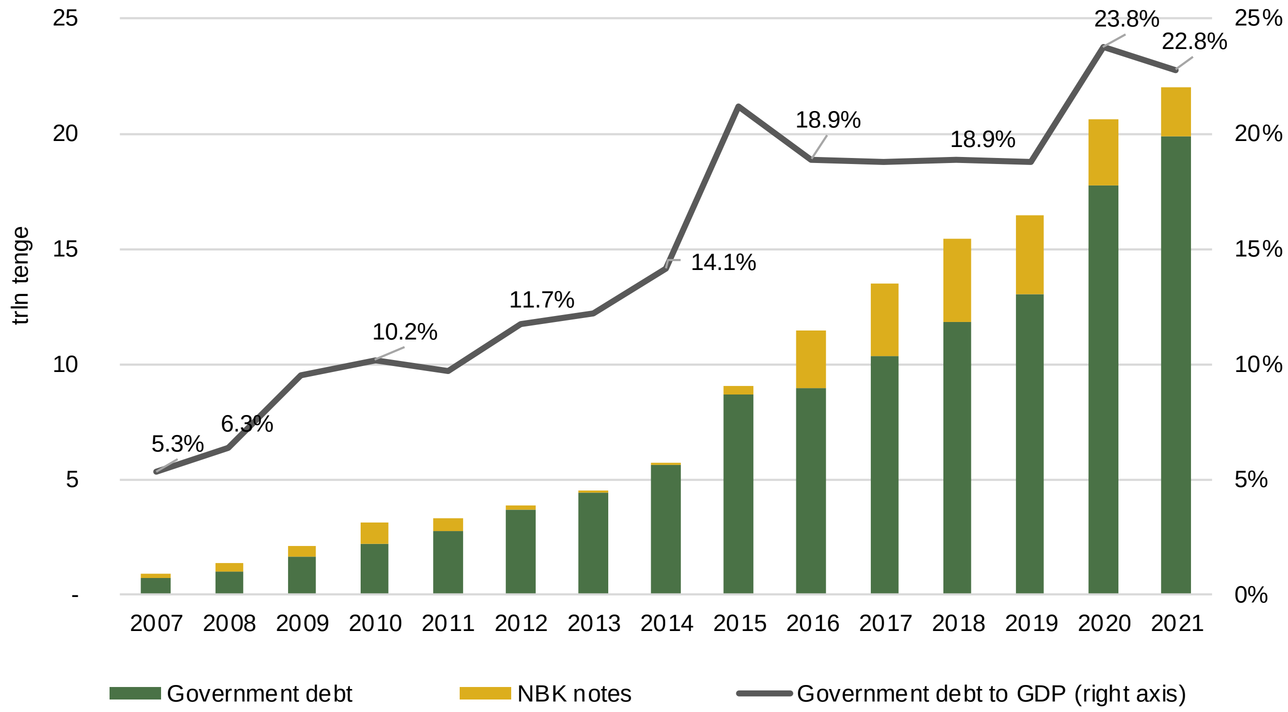
Source: *MF RK*

At January 1, 2022, the public debt amounted to 21.97 trillion tenge, having increased by 6.4% compared to a year earlier. The public debt of the Government of the Republic of Kazakhstan accounts for 85.2%, the National Bank's debt is 9.6%, and that of the local executive authorities of the Republic of Kazakhstan is 5.2%. Domestic public debt as of January 1, 2022 amounted to 14.57 trillion tenge, and external debt – to 7.4 trillion tenge. The share of public external debt as of January 1, 2022 amounted to 33.7%, as of January 1, 2021 – to 33.4%. The public debt to GDP ratio as of January 1, 2022 was 26.7% (29.4% a year earlier). The decline in the public debt to GDP ratio was caused by a higher GDP growth relative to the growth in public debt in 2021 restrained by a reduction in the National Bank's debt (NBK notes).

The average annual rate of public debt growth in 2010-2021 was 21.6%; the nominal GDP grew by 14.03%. The average annual growth rate of public debt to GDP accounted for 6.7%, and the real GDP growth rate – 3.9%. The persistence of this trend in the long term will lead to an increase in the cost of borrowing, market revaluation and low attractiveness of the tenge assets. Under such a scenario, financial stability risks will increase.

Chart 2.3 ***Alongside with the growing government debt, the National Bank's debt is decreasing***

Government debt to GDP



Source: *MF RK*
Note: *Government debt includes in aggregate Government debt and debt of local executive authorities of the RK*

As of January 1, 2022, the government debt to GDP was 22.8% (23.8% a year earlier). The government debt went up by 12.4% and amounted to 18.7 trillion tenge. The NBK notes demonstrated a 28.2% reduction, equaling 2.1 trillion tenge (2.9 trillion a year earlier).

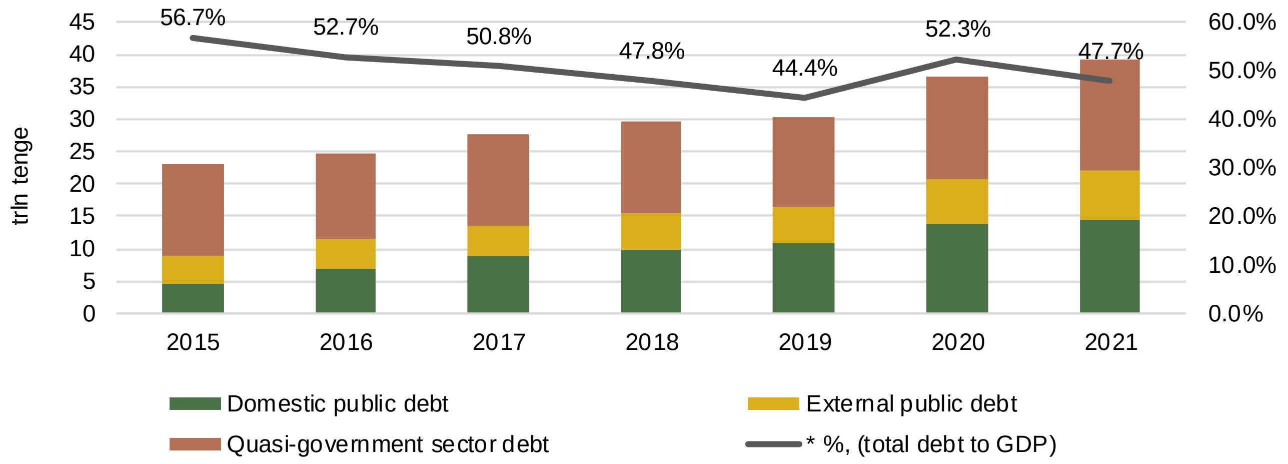
As part of the monetary policy implementation and the fulfillment of its main mandate of maintaining the price stability, the National Bank, by expanding or contracting its balance sheet through the instruments of liquidity provision or withdrawal, including note issuance, regulates the level of liquidity in the financial system and influences the cost of borrowed capital. These operations constitute a part of the interest rate channel of the transmission mechanism.

The National Bank optimizes withdrawals towards short-term instruments, reducing the quantity of notes in circulation. Thus, the share of notes in the structure of outstanding government securities at January 1, 2022 amounted to 13.6% (20% at January 1, 2021).

In order to improve the process of monetary policy implementation and make the transmission mechanism more efficient, the National Bank decided to exclude the issuance of 182-day notes starting from the second quarter of 2022, limit the issuance of 91-day notes to 100 billion tenge and focus on regulating short-term liquidity.

Taking into account the practice of conducting auctions for note placements, when the priority for targeting is not the amount of withdrawal but the interest rate, a further reduction in the maturity of notes issued will increase market pricing and reduce regulatory distortion in the short-term segment of the yield curve, which was often the case in 2021.

Chart 2.4 ***The quasi-government sector debt intensifies the risks to financial stability***



Source: *MF RK*
Note: *1) Total public debt consists of public debt and debt of the quasi-government sector*

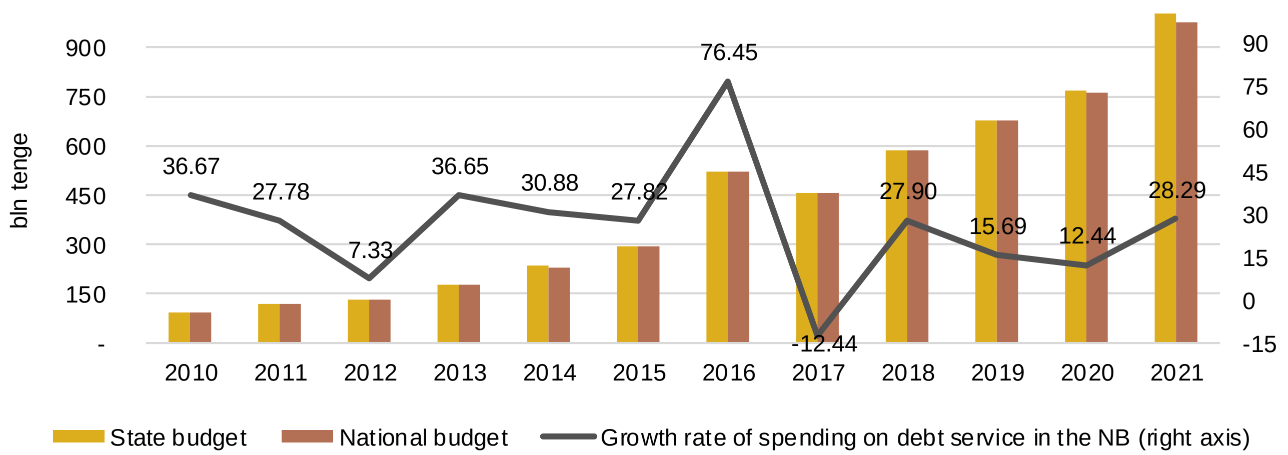
The quasi-government sector debt of Kazakhstan at January 1, 2022, amounted to 17.3 trillion tenge or 21% of GDP. At January 1, 2021 – 16.03 trillion tenge or 22.9% (in 2021, the growth accounted for 7.7%). In toto, at January 1, 2022, the quasi-government sector debt and public debt to GDP accounted for 47.7% *(Chart 2.4)*, having demonstrated a decline from 52.3% a year earlier due to the GDP growth.

The draft Concept of Public Finance Management until 2030 sets a limit for the government debt to GDP ratio of 30%, and 35% for public debt. There are risks that the trend towards threshold levels would be accelerating in the medium term, in accordance with the draft Concept.

Also, in order to reduce risks to financial stability, it is necessary to monitor hidden extra-budgetary obligations such as guarantees and sureties of the government for the debts of the “NWF “Samruk-Kazyna” JSC and “NMH “Baiterek” JSC groups, which can have a significant impact on the sustainable path of public debt due to their high concentration in the economy.

Chart 2.5 ***The average annual growth rate of spending on debt service in 2018-2021 was 21%***

Growth rate of spending on debt service

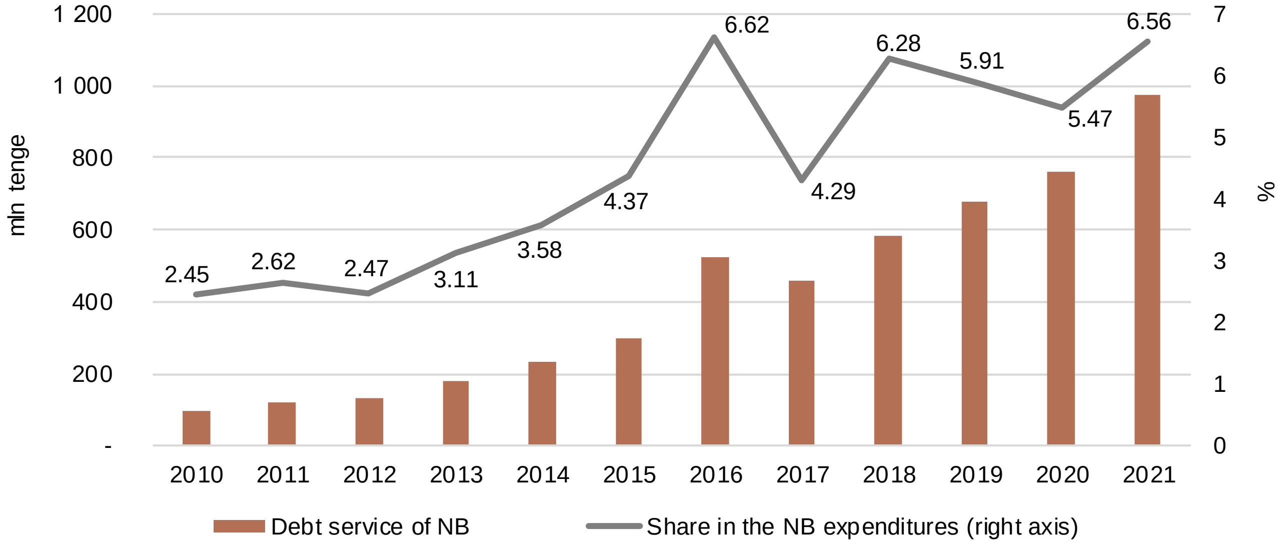


Source: *MF RK, NBK's computations*

In 2018-2021, there has been a trend of growth in debt service costs and their share in the cost structure of the national budget also increased. At the end of 2021, the servicing of national budget debt showed an increase of 28% YoY, amounting to 977.7 billion tenge compared to 762.1 billion tenge a year earlier *(Chart 2.6)*. At the same time, at the end of 2017, debt servicing amounted to 458.1 billion tenge. Debt servicing had demonstrated the 2.1 times growth over four years.

Chart 2.6 ***The share of debt service in the structure of national budget expenditures is growing***

Dynamics of debt service in the structure of national budget expenditures



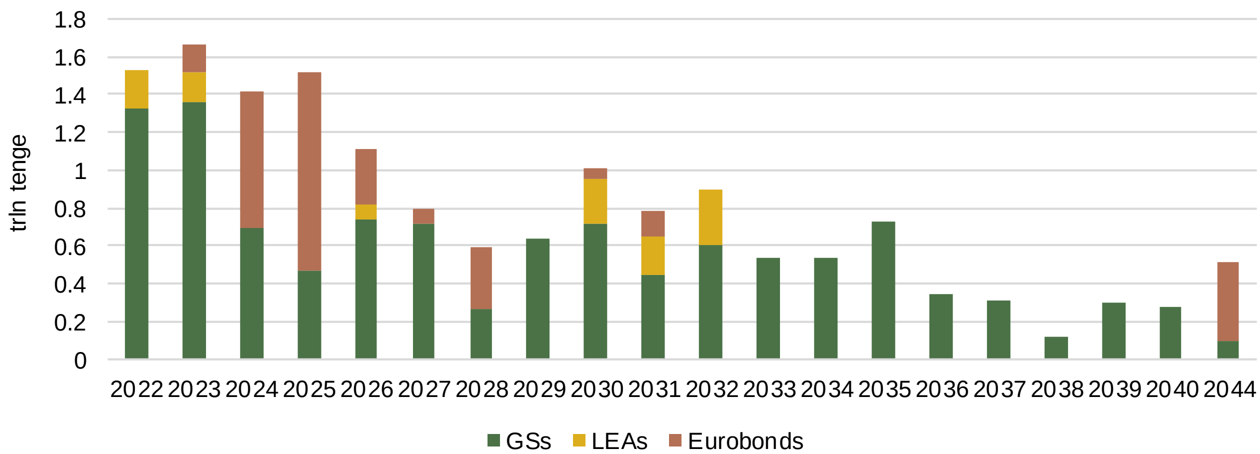
Source: *MF RK, NBK's computations*

At January 1, 2022, the share of debt service made up 6.6%, and at January 1, 2021 – 5.56%. At January 1, 2022, the amount of debt service ranked five in the structure of national budget expenditure, at January 1, 2021 – ranked eight, and at January 1, 2020 – nine.

The trend towards an increase in debt service, both in absolute terms and in the structure of state budget expenditures, points to the need to improve the quality of public debt planning and management.

Chart 2.7 ***Time structure of public debt repayments remains uneven***

Public debt repayment schedule at January 1, 2022



Source: *KASE*
Note: *LEA – local executive authorities*

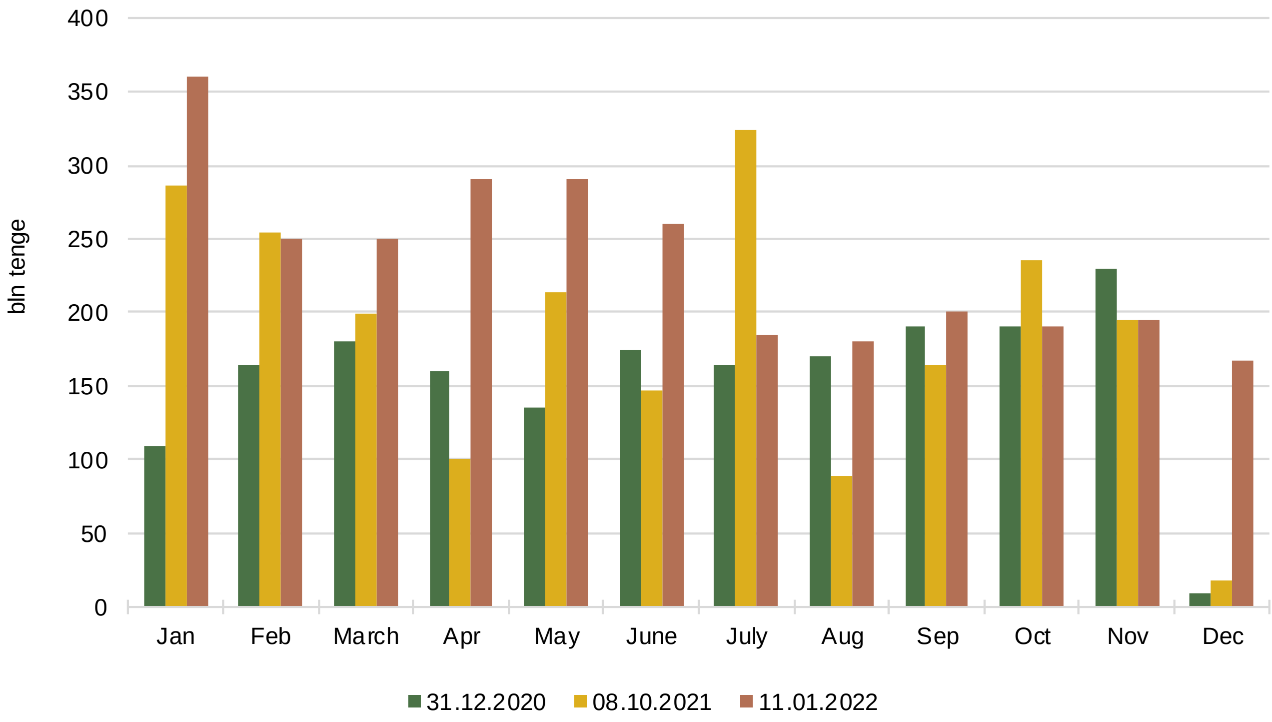
The time structure of public debt repayment remains quite uneven. Thus, in 2022-2026, the amount payable on public debt exceeds 1.4 trillion tenge, while in 2036-2040, the annual repayment is less than 400 billion tenge.

Investor confidence is of great importance in optimizing the government borrowings. For the lender, the repayment schedule scheme is often an indication of the borrower's pragmatism. The problems of goal-setting in the fiscal process often give priority to short-term goals over strategic ones. The latter include the systematic development of the public debt market in terms of balancing its structure and capacity.

The existing time structure of government securities redemption remains subject to liquidity and currency risks. This increases the procyclicity of fiscal policy and also narrows the fiscal space. Insufficient attention to this trend may indirectly cause a long-term decline in investment attractiveness, which may limit demand on the part of foreign investors.

Chart 2.8 ***Revision of the volume of issues during the year is insignificant***

Issuance schedules of GSs of the MF RK



Source: *KASE*
Note: *1) the volumes of Schedule as of October 8, 2020 significantly exceed the original plans for the year. The dates mean the dates of schedules of RK's government securities issues; 2) the volumes of planned issuance for 2022 are shown in yellow, according to the issuance schedule of January 11, 2022*

The issuance schedule of MF government securities is subject to revision during the year. Thus, the volumes according to the issuance schedule of October 8, 2021 differ significantly from the volumes provided for by the issuance schedule of December 31, 2020. The total volume of the issuance schedule of October 8, 2021 amounted to 2.2 trillion tenge, while on December 30, 2020, the volume of 1.88 trillion tenge was planned for placement. The excess in 2021 accounted for 18.6%, in 2020 – 80.9%. Conformity of the actual placement of government securities with the approved schedule helps increase the level of investor confidence in these instruments.

Let us note that GS placements outside the regular schedule reduce predictability and confidence of investors. This narrows the investor base and affects the efficiency of borrowing for the issuer. Therefore, the Ministry of Finance needs to continue working on improving the discipline of planning.

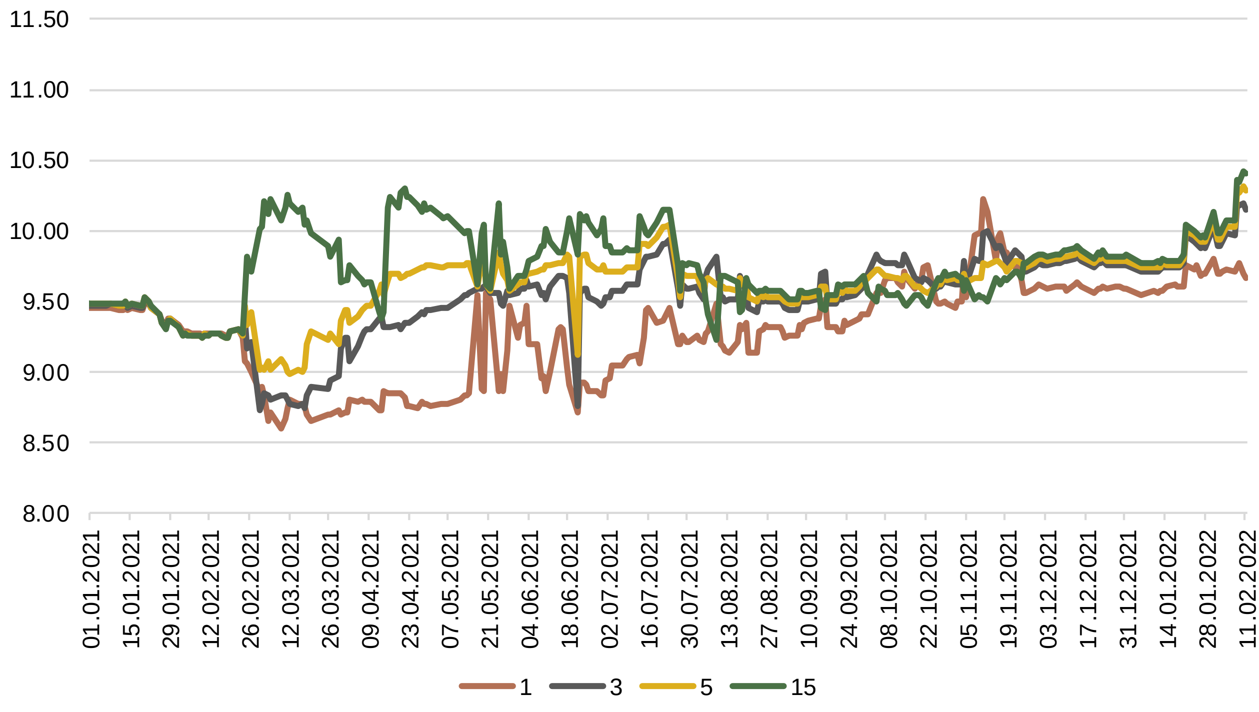
Box 6. Yield Curve of Government Securities

Construction of the government securities yield curve is based on the Nelson-Siegel parametric model and consists of four parameters *(b0, b1, b2, TAU)*. The beta parameters (*b1, b2, b3*) are the coefficients of the Nelson-Siegel equation component and can be interpreted as latent factors that together describe the level and slope of the curve, as well as the magnitude and duration of the inflection. Thus, the first factor *b0* determines the long-term rate, and *b0+b1* determines the short-term rate. The *b2* parameter specifies the magnitude and direction of the curve's inflection. The *TAU* parameter characterizes the term structure of this inflection.

In 2021, the positive slope of the curve remained until the second half of the year. The yields on the GS of the RK showed a direct dependence on the maturity, except for the trades in January, February and November. Thus, the yields on government securities with maturity of up to one year exceeded the yields on government securities of other categories at auctions from November 8-22, 2021. At auctions in January and February, the yields varied in the range of 9-9.5%, while the yield on 10-year government securities did not exceed the yield on government securities with maturity of up to one year by more than 0.03%. On November 8, 2021, inversion of yields on government securities was observed. The yield on government securities with maturity of up to one year exceeded the yield on government securities with the 10-year maturity.

Chart 2.9 ***Yields on government securities demonstrated the divergent dynamics in 2021***

Yields on GS by maturity

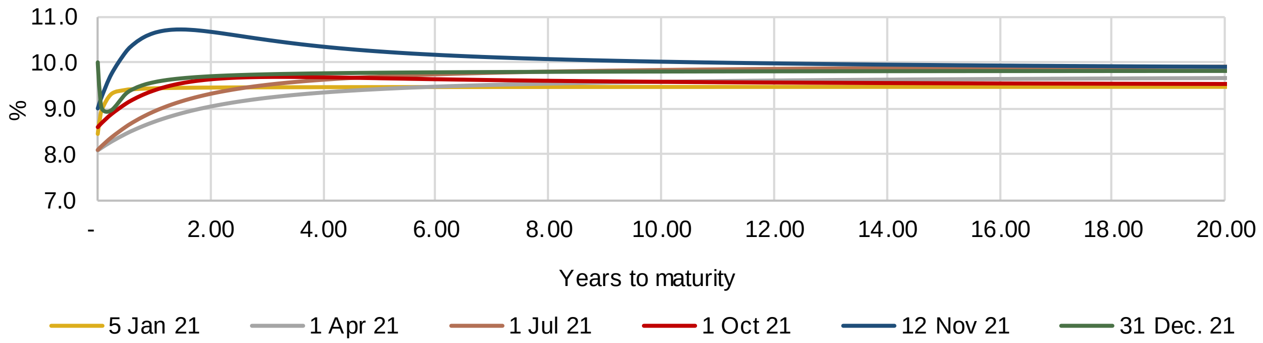


Source: *KASE*

In order to reduce volatility of the curve shape and limit the influence of the regulatory effect on the segment of up to one year, on April 5, 2022, the KASE Market Risk Committee decided to change the search limits for the TAU parameter to the range from 1 to 2 inclusive. The previous range was from 0.076 to 1 inclusive. In addition, from April 06, 2022, the Committee increased the number of maturity ranges from 4 to 6.

Chart 2.10 ***The yield curve remains flat over a long-term segment***

The yield curve on government securities (spot)



Source: *KASE*

The positive slope of the curve was declining in the second half of 2021, except for November, where it was observed to increase over a short-term horizon. The shape of the curve in the medium- and long-term segment continues to be flat. The performance by the government securities market of its function as the first link of the monetary policy's interest rate channel in 2021 was not effective enough, thus generally reducing the effectiveness of the pursued monetary policy.

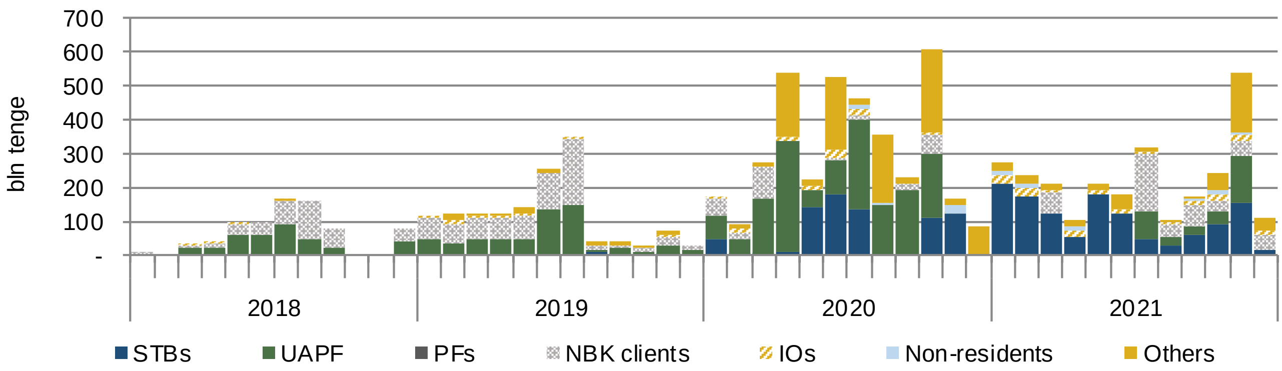
The 2019 transition to a new yield curve model as a valuation tool has certainly increased the level of transparency and offers potential for further liquidity enhancement. However, as long as the yield curve is drawn from observations in a still illiquid market, its ability to effectively reflect the market participants' expectations of the value of long-term funds remains insufficient. On the other hand, knowing this, the curve does not inspire sufficient confidence among the market participants as a benchmark for market pricing for other instruments and products. In contrast to countries with a developed stock market, in Kazakhstan business is largely financed via the banking system, where regulated short-term rates are the main benchmark. Thus, the degree of liquidity of the government securities market directly affects the effectiveness of the monetary policy transmission mechanism.

2.2 Holders of Government Securities

The main demand for the debt of the Ministry of Finance was formed by the second-tier banks. Among voluntary investors, non-residents and insurance companies also participated in the market but their share is insignificant. As a result of interest from the market participants, the concentration of captive investors by holders has slightly decreased.

Chart 2.11 ***Placement volume of GSs with average maturities has increased***

Placement volumes of the MF RK government securities by holders



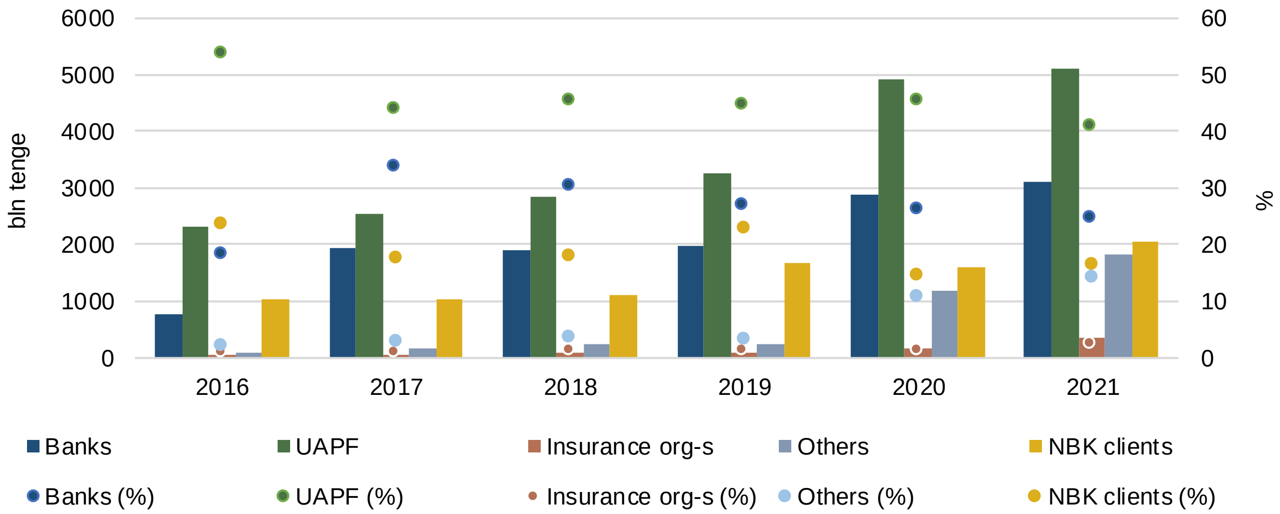
Source: *CSD*
Note: *1) The "Other" type of investor includes broker-dealers, investment funds, individuals, government organizations, other corporate entities and pension funds' own assets; IOs - insurance organizations*

In 2021, banks were the main buyers of government securities in the primary market; their share accounted for 46.4%, the UAPF's share was 11.5%, that of insurance organizations – 6.4%, non-residents – 2%, NBK's clients – 17%, and others – 16.7%.

The problem of high concentration of demand for government securities of the Republic of Kazakhstan remains relevant. Thus, the UAPF and funds managed by the NBK hold more than a half of the share. Despite active placements of short-term securities, the share of banks in the structure of the Ministry of Finance debt holders decreased slightly, while the share of insurance organizations showed a significant increase.

Chart 2.12 ***The share of UAPF and banks in the structure of debt holders remains high***

Debt holders of GSs of the MF RK

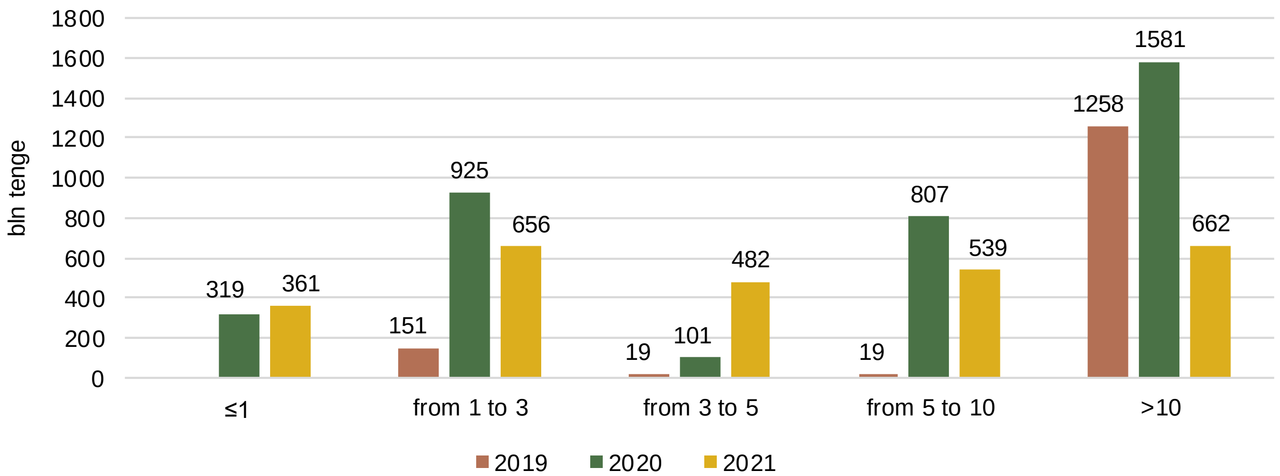


Source: *CSD*
Note: *1) The "Other" category includes other corporate entities, individuals, nominee holders, brokers-dealers, other licensees of the securities market*

The share of banks in the structure of debt of Kazakhstan's government securities at January 1, 2022 amounted to 25.04% (26.6% a year earlier), the UAPF – 41.05% (45.7% a year earlier), insurance organizations – 2.7% (1.6% a year earlier), others – 14.6% (11.1% a year earlier), and NBK's clients – 16.6% (15% a year earlier).

Chart 2.13 ***Placement volume of government securities with average maturity increased***

Placement volumes of the MF RK government securities in the primary market by maturity



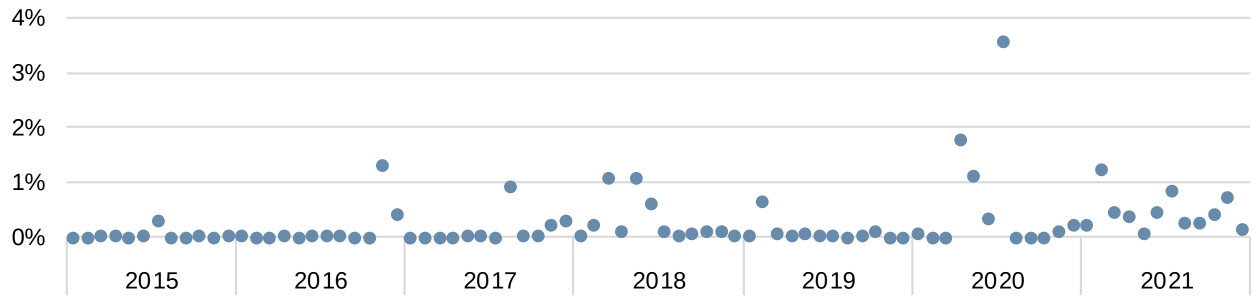
Source: *KASE*

The dynamics of initial placements by maturity in 2021 is characterized by an increased volume of placements with maturity of less than 1 year, from 3 to 5 years, and a decreased volume of placements in other categories. The share of placements of securities with maturity of 3 to 5 years increased from 3 to 18%, the share of placements with maturity of more than 10 years went down from 42 to 25%.

Thus, the imbalance in the volume of placements in the primary market of Minfin's government securities observed in 2020 was adjusted in 2021. The work carried out by the Ministry of Finance of the Republic of Kazakhstan to improve the discipline of placements gave a positive result in this aspect.

Chart 2.14 ***Low liquidity in the government securities market is persisting***

Monthly turnover rate of GSs of the MF RK

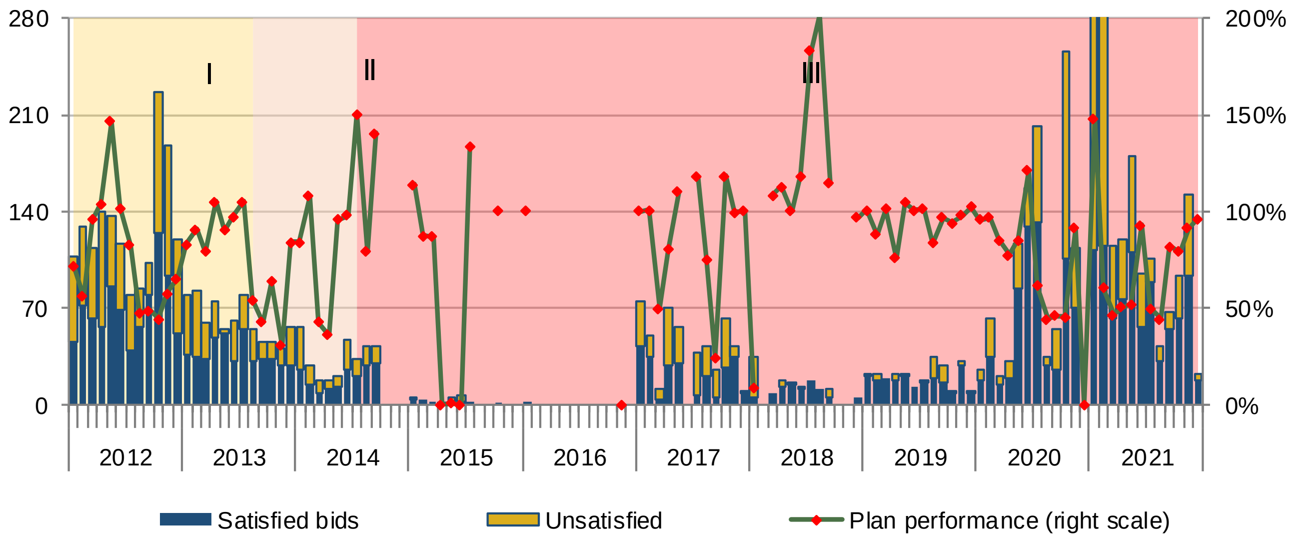


Source: *CSD*
Note: *the indicator is calculated as the ratio of transactions in the secondary market for the month to the volume placed at the beginning of the month*

The government securities market of Kazakhstan has low liquidity. Despite a significant volume of the primary market, transactions in the secondary market are quite rare. Thus, a maximum monthly turnover rate of GSs of the MF RK in 2021 was 1.2%, while during 11 months out of 12, this indicator was below 1%.

Chart 2.15 ***The ratio of satisfied bids demonstrates the growing interest and competition in the market***

The plan performance by the end of 2021 had stabilized



Source: *KASE*
Note: *1) Excluded from the sample are government securities purchased by a systemically important bank in July 2017 as part of its rehabilitation transaction; 2) The percentage of plan performance is calculated as the ratio of the actually placed volume to the announced volume of government securities; 3) I – period of private accumulative pension funds; II – the period of merger; III – the UAPF period*

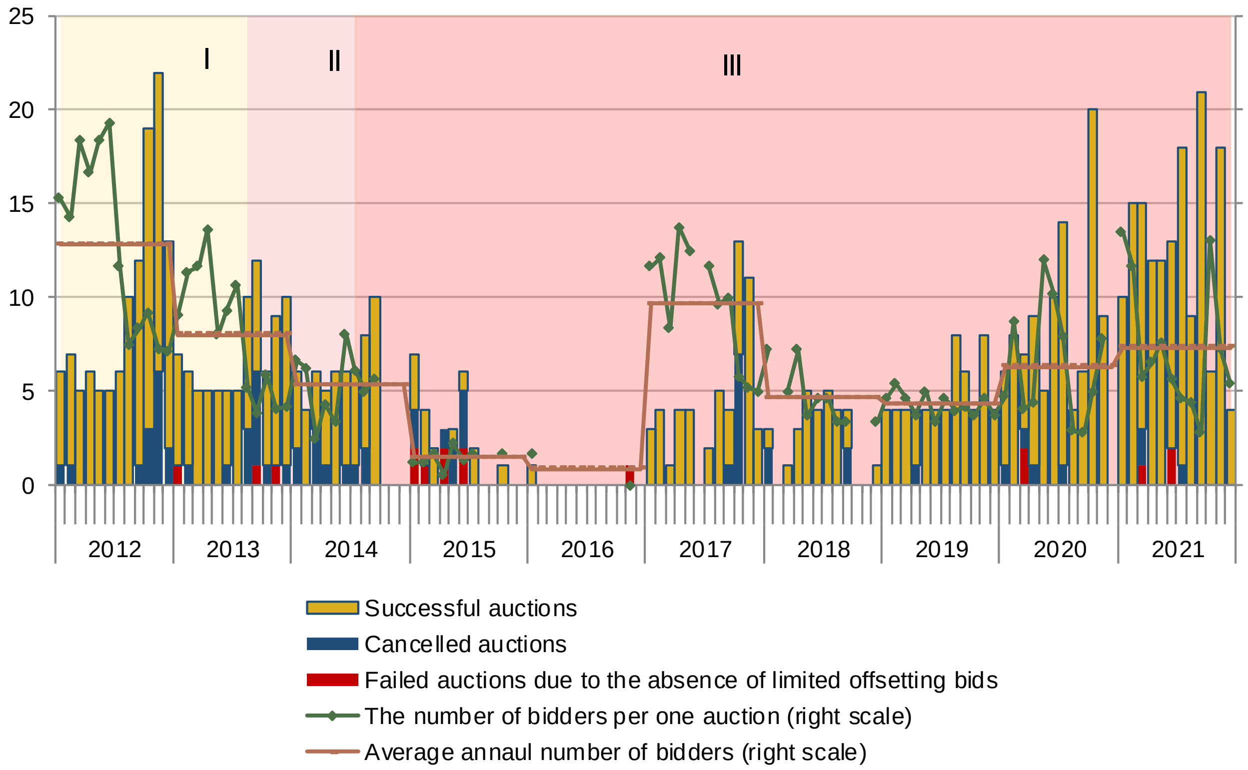
In 2021, the average monthly number of satisfied bids was 73 (55 in 2020). The average monthly number of unsatisfied bids in 2021 was 57 (34 in 2020).

The growth in the number of satisfied bids and continuance of the plan performance at a high level indicates an increased interest on the part of the market participants. Nevertheless, the problem of enhancing market liquidity continues to be one of the key issues for further development.

Volatility of the plan performance reduces the degree of confidence from the market participants in the implementation of the volume announced by the Ministry of Finance. Stabilization of this indicator in the future will indicate that the Ministry of Finance would implement the principle of satisfying volumes and not the principle of cut-off at the rate.

Chart 2.16 ***The average annual number of bidders demonstrates the increasing interest from the market***

The presence of the number of canceled auctions is an evidence of the MF RK's willingness to cooperate with the market



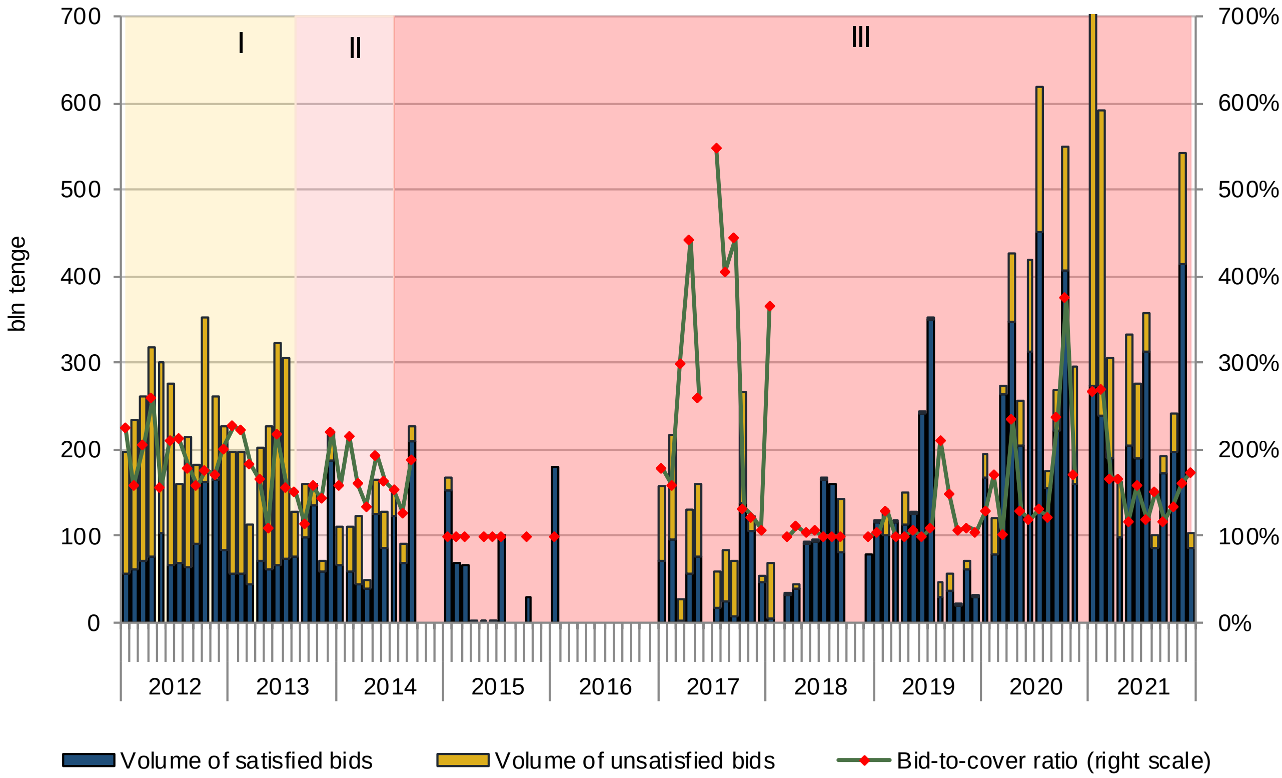
Source: *KASE*
Note: *1) Excluded from the sample are government securities purchased by a systemically important bank in July 2017 as part of its rehabilitation transaction; 2) The number of bidders per auction is calculated as the ratio of the number of bidders to the number of auctions; 3) The average annual number of bidders is calculated as the mean of the number of bidders per auction*

Chart 2.16 reflects the dynamics of the growth in the number of bidders per auction, the number of successful auctions, and also indicates that the frequency of auction cancellations in 2021 remains at a low level, which is a positive sign. The average annual number of bidders was 4.4 in 2021; in 2020, this figure was 3.8.

The existence of canceled auctions in 2021 means that the level of consensus between the Ministry of Finance and the market participants is still insufficient. Thus, in 2021, the total number of canceled auctions as well as failed auctions, due to the absence of limited number of counter bids, amounted to 6, in 2020 – 6, in 2019 – 1 *(Chart 2.16)*.

Chart 2.17 ***Despite volatility in 2021, the volume of unsatisfied bids has demonstrated growth***

The bid-to-cover ratio reflects the growing competition in the primary market



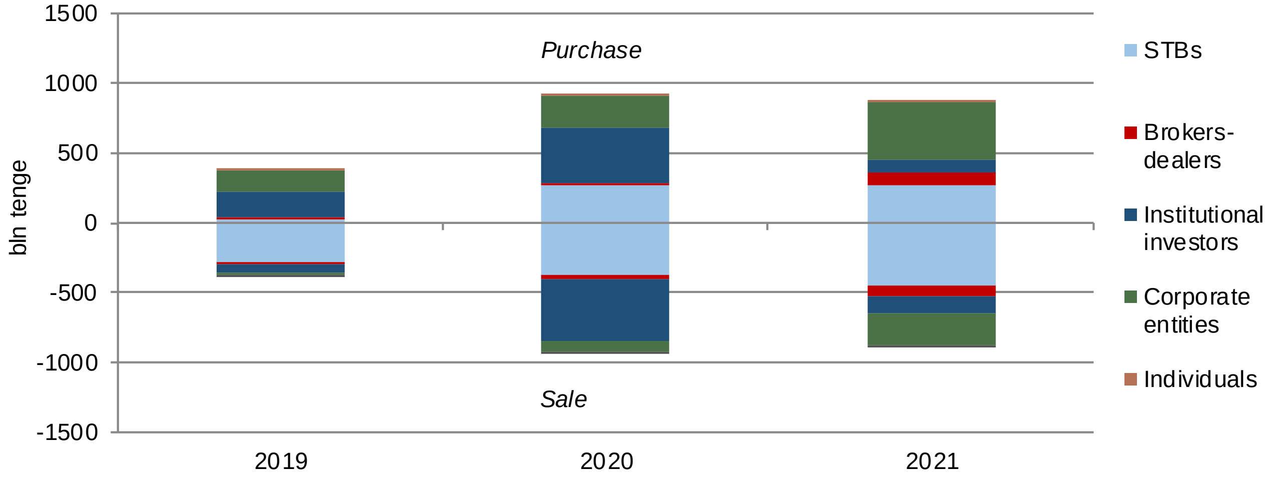
Source: *KASE*
Note: *1) Excluded from the sample are government securities purchased by a systemically important bank in July 2017 as part of its rehabilitation transaction; 2) The bid-to-cover ratio for the month is calculated as a weighted average (according to the announced placement volume) ratio of the number of all active orders to satisfied orders for each placement auction of Minfin's GSs; 3) To calculate the bid-to-cover ratio, only the data on the number of active bids at the successful auctions was taken into account; 4) I – period of private accumulative pension funds; II - the period of merger; III - UAPF period*

The volume of satisfied bids, which showed a significant increase in 2020, remained at a high level in 2021. At the same time, the volume of unsatisfied bids in 2021 increased by 77.6% (1.47 trillion tenge in 2021, 828 billion tenge in 2020), which indicates the increasing competition in the market, as well as the growing interest from the market participants. A high volume of unsatisfied bids was observed even at the auctions, where the planned volume of attraction was not achieved. This suggests that the Ministry of Finance continues to target the rate at auctions rather than attraction of the planned volume, as is the case in the international practice. The problem of increasing the efficiency of public debt, which is in essence both the main fiscal and key monetary instrument, determines the development and stability of the entire financial sector and the economy as a whole.

In 2021, the trading volume in the secondary market amounted to 874.4 billion tenge, which is by 4.6% lower than in 2020. On the purchase side, the share of corporate entities increased (from 26% in 2020 to 48% in 2021), and the share of institutional investors decreased (from 42.7% in 2020 to 10.9% in 2021). On the sale side, the share of corporate entities increased (from 7% in 2020 to 26% in 2021), and the share of institutional investors showed a decline (from 49.4% in 2020 to 12.8% in 2021).

Chart 2.18 ***The volume in the secondary market of government securities of Kazakhstan has stabilized after its growth in 2020***

Volumes in the secondary market of government securities of MF RK by holders

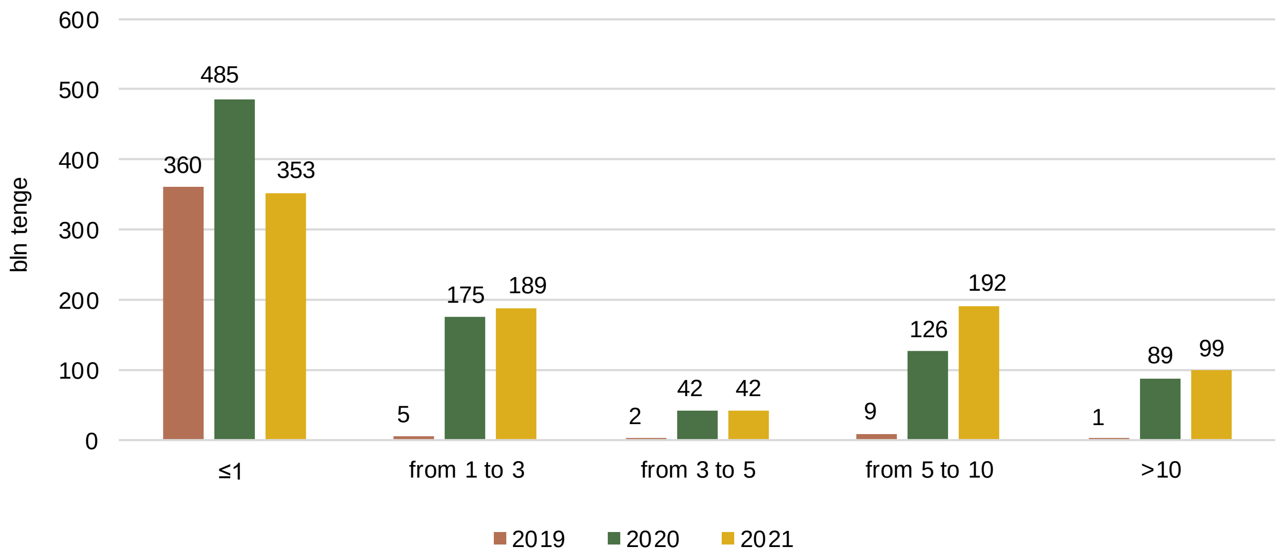


Source: KASE
Note: *transactions in the organized GS market are reported*

The activity of individuals in the secondary market of government securities of the MF RK in 2021 is noteworthy. Thus, the volume of purchases by individuals in 2021 increased by 3 times and amounted to 2.7 billion tenge, the volume of sales – 4.7 trillion tenge (a 9.4 times increase). Despite the fact that the share of individuals in both the structure of purchases and in the structure of sales did not exceed 1%, there is still a high potential for growth in the activity of individuals in the secondary market in future years given the growing volumes of activity of individuals in the primary market in 2021. Thus, in 2021, the volume of operations of individuals in the primary market amounted to 2 billion tenge (an increase of 42 times, the volume in 2020 is 48 million tenge).

Chart 2.19 ***The placement volume of GS with an average maturity increased***

Volumes in the secondary market of RK's GSs by maturities



Source: KASE

In terms of maturity, the share of trading in the secondary market in securities with maturity of up to one year decreased from 53% to 40% in 2021. The largest increase in trading volume is with securities over a horizon of 5 to 10 years (the share of trading with these securities increased over the year from 14 to 22 %).

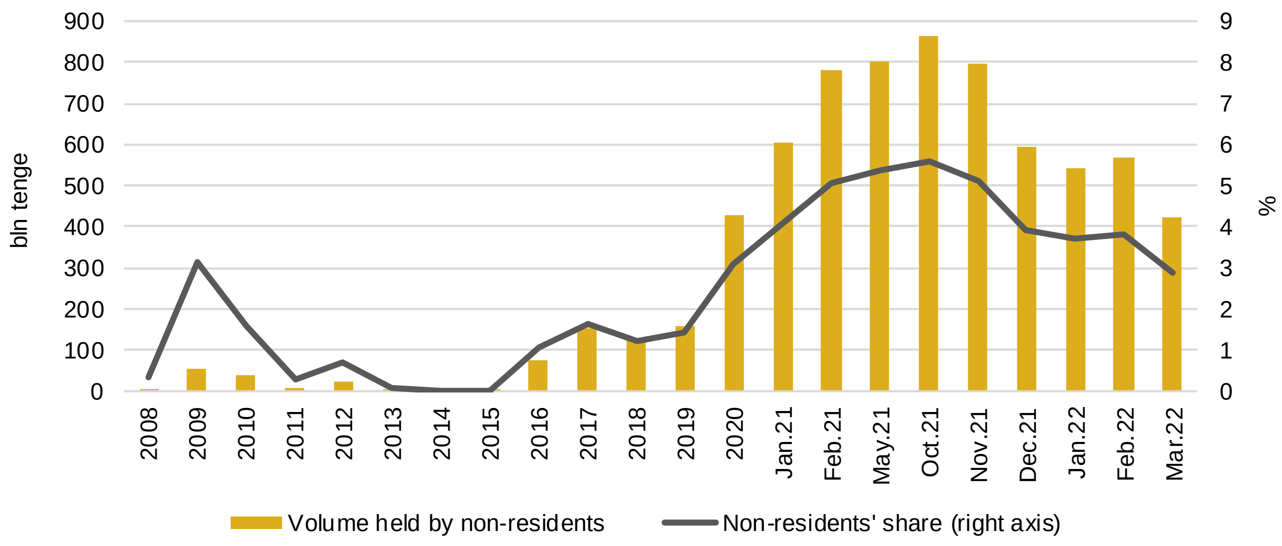
In terms of the efforts to increase attractiveness of the Kazakhstani securities market for foreign investors, 2021 appeared to be quite efficient. As a result, in September 2021, government bonds of Kazakhstan were included in the FTSE Frontier Emerging Markets Government Bond Index. Besides, J.P. Morgan announced in mid-2021 that Kazakhstan's debt market was added to the "under the radar list" for potential inclusion of government securities of the Republic of Kazakhstan in the Global Emerging Markets Bond Index (J.P.Morgan GBI-EM).

To simplify access to the government securities market, the process of settlements within the international line with Clearstream from FoP (Free of Payment) to DvP (Delivery versus Payment).

The inclusion of the GS market of the Republic of Kazakhstan in international indices is an evidence of the growing interest and attention of international investors. In order to develop the GS market of the Republic of Kazakhstan, an ongoing effort in this area is required.

Chart 2.20 ***The volume held by non-residents demonstrates a decline after reaching the all-time highs in October 2021***

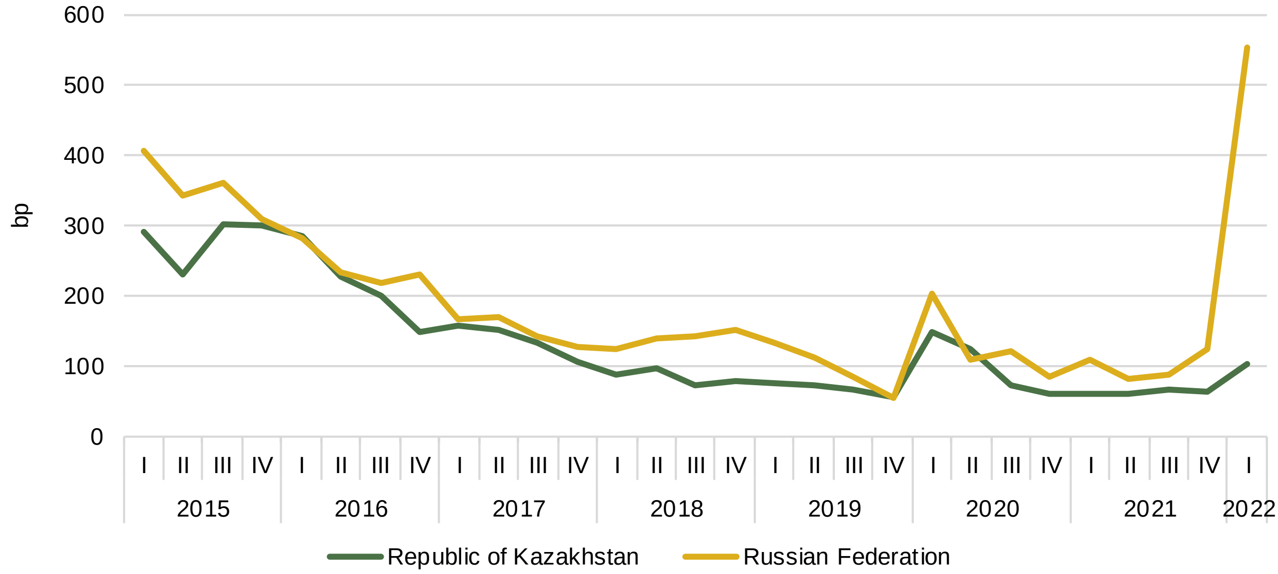
The share of non-residents in the structure of GS of Kazakhstan



Source: *CSD, NBK's computations*

Since 2016, the share of non-resident holders of government securities increased, reaching historical maximums of 5.6% or 863.1 billion tenge in October 2021. However, since October 2021, the share of non-residents has been decreasing. Thus, at April 1, 2022, their share amounted to 2.9% or 424 billion tenge. The expected tightening of the monetary policy by the US Federal Reserve in 2022 will put pressure on the share of non-residents in the future. Thus, in 2018, with the tightening of monetary policy in the US, the share of non-resident holders of government securities went down from 4.5% in March 2018 (the maximum figure in 2018) to 1.05% in November 2018 (the minimum for the year). At the same time, investors' focus on the Russian market may drive an increase in demand in the second half of 2022. Instruments in the tenge may become a proxy of ruble instruments for such investors. In addition, the inclusion of government securities of the Republic of Kazakhstan in the FTSE Frontier Emerging Markets Government Bond Index from April 2022 is likely to support the presence of non-residents in the market due to the realization of technical demand.

Chart 2.21 ***Interest rates of 5-year credit default swaps of Kazakhstan and Russia***



Source: *Bloomberg, NBK's computations*
Note: *1) A quarterly schedule in 2015-2022, in 2022 – as of February 25; 2) as of February 25, 2022, sovereign CDS 5Y RF equaled 553 bp, CDS 5Y RK – 104.3 bp.*

In 2021, CDS 5Y Kazakhstan demonstrated relatively stable dynamics, staying within the range of 59.8 – 69.9 bp. Since January 2022, they have been demonstrating an upward trend: in January they were in the range of 70.5-83.1 bp, in February – 79.8-137.6 bp, in March – 143.3-290.6 bp. CDS 5Y Russia in 2021 were in the range of 77.2-133.2 bp, in January 2022 they showed a growth to 248.08 bp, in February they went up to 917 bp, and in March – up to 3471 bp, which is a historical maximum. CDS 5Y is a reflection of the market's assessment of the risk premium for a financial instrument. Trades in CDS 5Y Russia were suspended for the periods from February 26 to March 13.

In September 2020, the Ministry of Finance launched three issues of ruble-denominated government securities in the amount of 40 billion rubles, which were placed on the Moscow Stock Exchange (39.5 billion rubles) and AIX (0.5 billion rubles), as well as four issues of government securities in the amount of 40 billion rubles in June 2021 (32.24 billion rubles on the Moscow Stock Exchange and 7.76 billion rubles on AIX). A rather high spread relative to the FLB curve in 2021 reflected the discount for the illiquidity of the ruble-denominated GS of the MF RK compared to FLB securities, despite the lower rates of credit default swaps (CDS 5Y) of Kazakhstan. In 2022, the spread between CDS 5Y Kazakhstan and those of the Russian Federation increased.

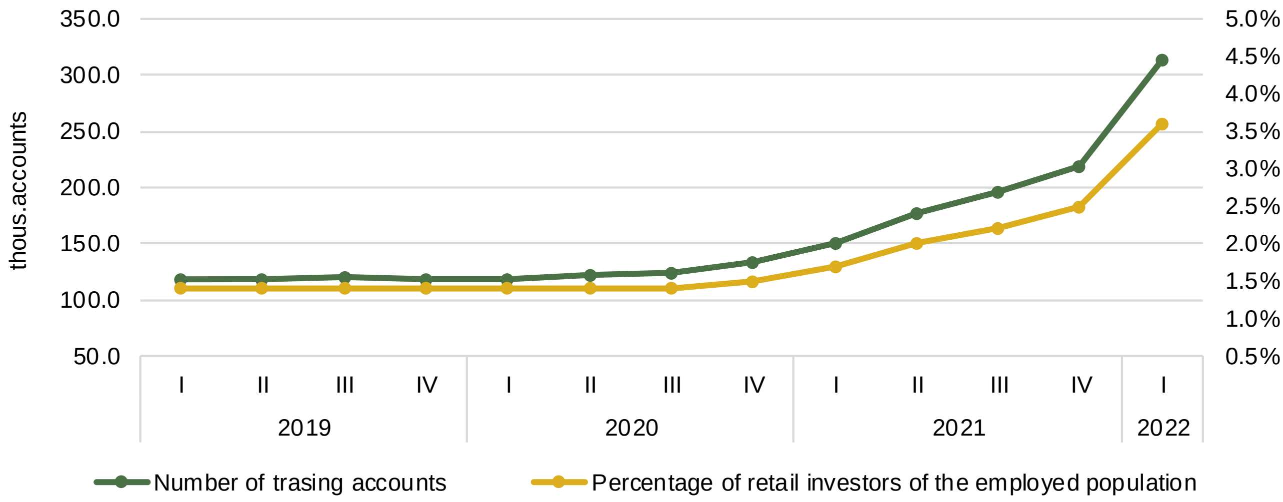
The year 2021 is marked by a sharp increase in retail investment worldwide. In Kazakhstan, there is also an inflow of investments in securities, including government securities. As of January 1, 2022, individuals accounted for 326.9 million tenge (an increase of 12.5 times over the year) in the structure of holders of government securities of the MF RK. This growth trend has a chance to continue taking into account the increasing financial literacy of the people. The source of the inflow of investments can be the market of retail deposits, which amounted to 13.2 trillion tenge at January 1, 2022.

Box 7. Retail Investor Market

In 2021, there was an inflow of retail investors to the market. Thus, in 2021 the number of trading accounts of retail investors registered with the Central Depository increased by 64% and amounted to 218 thousand as of January 1, 2022 *(Chart 2.22).*

Chart 2.22 ***In 2021, the number of retail investors increased***

The number of trading accounts of individuals at the Central Depository

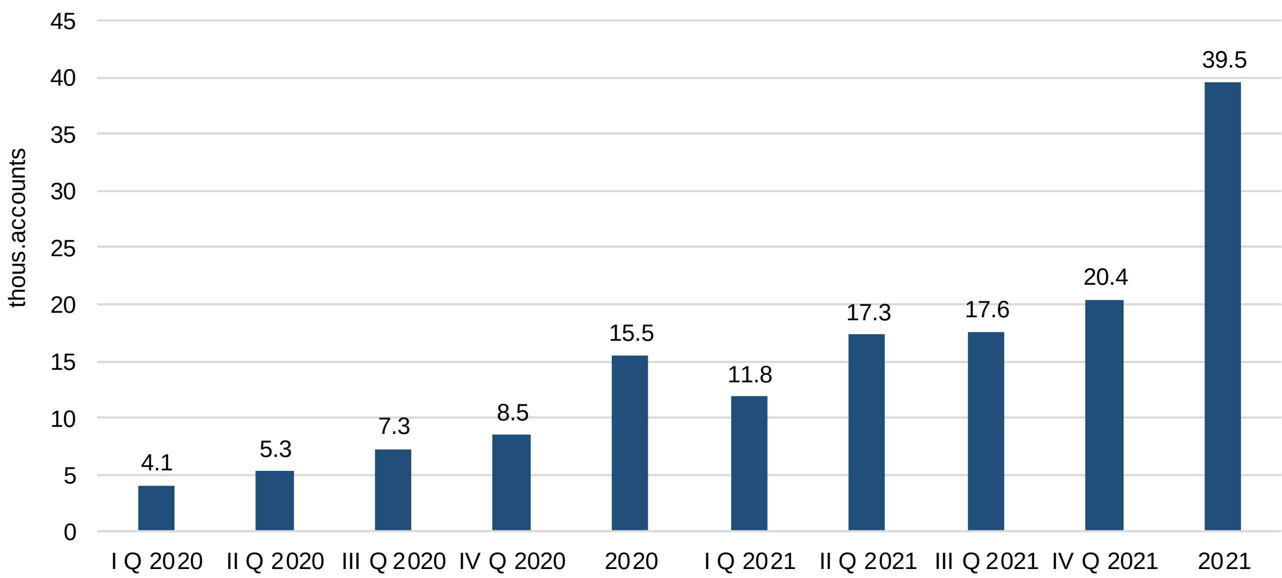


Source: *KASE*

The growth trend continued in the first quarter of 2022, amounting to 313 thousand accounts as of April 1, 2022. 48.1% of all individual owners of brokerage accounts were Kazakhstanis under the age of 35 years old, 35.2% - from 35-54 years old, and 16.6% - over 55 years old. The share of accounts of minors does not exceed 0.1%.

Chart 2.23 ***The number of active accounts of retail investors is increasing***

The number of active trading accounts of individuals with the CD



Note: *1) the criterion for an active trading account is the completion of at least one transaction for the period; 2) the annual number of active accounts is not formed from the sum of quarterly figures, since duplication of accounts is excluded*

In 2021, the number of active trading accounts went up by 154.8% and amounted to 39.5 thous. accounts *(Chart 2.23).*

The growth of the investor base is driven by the reduction of entry barriers to the market, the simplification of the process of opening a brokerage account due to remote identification of the person and the appearance of new digital brokerage applications.

As of January 1, 2022, capitalization of the stock market amounted to 28.8 trillion tenge, having increased by 51% over 2021; the KASE index has been steadily rising since the first quarter, repeating the pattern of global stock markets. On November 18, 2021, the index once again hit a fresh all-time high over the year, exceeding the mark of 3800 points. During 2021, the KASE index showed an increase of 32.6%. The volume of trading in shares in 2021 amounted to 428.4 billion tenge, having increased by 82.4% compared to 2020.

The development of the government securities market, subject to the conditions of transparency and predictability of placement terms and conditions in the primary market, will increase the confidence of market participants. Kazakhstan's government securities market as an instrument of deficit financing can contribute to the accumulation of sovereign assets by reducing transfers from the National Fund of the Republic of Kazakhstan, as well as lower the country's exposure to market risks by reducing the share of debt in foreign currency.

Apart from those, one of the necessary conditions for liquidity enhancement is to develop the market investor framework.

III. Residential Real Estate Market

In 2021, there was a significant increase in the value of real estate in both the primary and secondary markets. The average number of completed sale transactions per month almost doubled compared to 2020. Given a price hike and the increased demand for real estate, the cost of renting a comfortable housing went up by 17.5% in 2022 compared to 2021. Liquidity in the real estate market increased, as evidenced by a larger number of transactions in the secondary market.

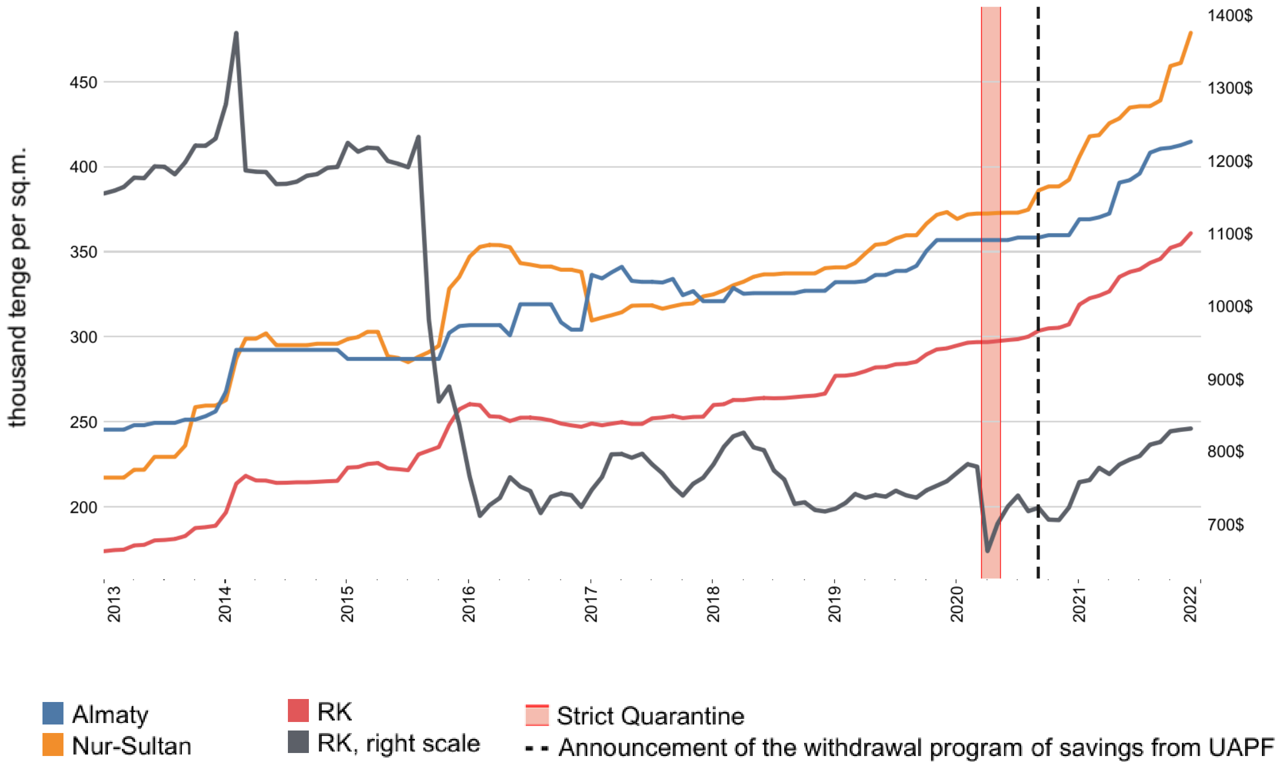
A significant increase in the number of transactions is mainly driven by government initiatives to improve the living conditions of the people. The socially-focused government programs stimulate the demand but distort market pricing in mortgage lending, crowd out the mortgage lending at market rates, and make the real estate market more dependent on further subsidies. Availability of the remaining concessional lending programs has a positive effect on the consumer demand of the population, which purchases the first housing or improves the conditions of existing housing.

3.1 Price Dynamics in the Real Estate Market

In December 2021, compared to the same period of the last year, the resale prices of comfortable housing had risen by 34.3%, sales of new homes – by 16.6%. Rental payment for comfortable housing increased by 17.5%. At the end of 2021, the price of 1 sq.m of primary housing in Kazakhstan reached 361 thousand tenge, in Almaty – 415 thousand tenge, and in the capital – 480 thousand tenge. At the same time, the dynamics of sales in both the primary and secondary markets is growing.

Chart 3.1 ***During 2021, average prices in the primary real estate market increased significantly both in the national currency and in foreign currency***

Average price of 1 sq.m of primary housing in Kazakhstan

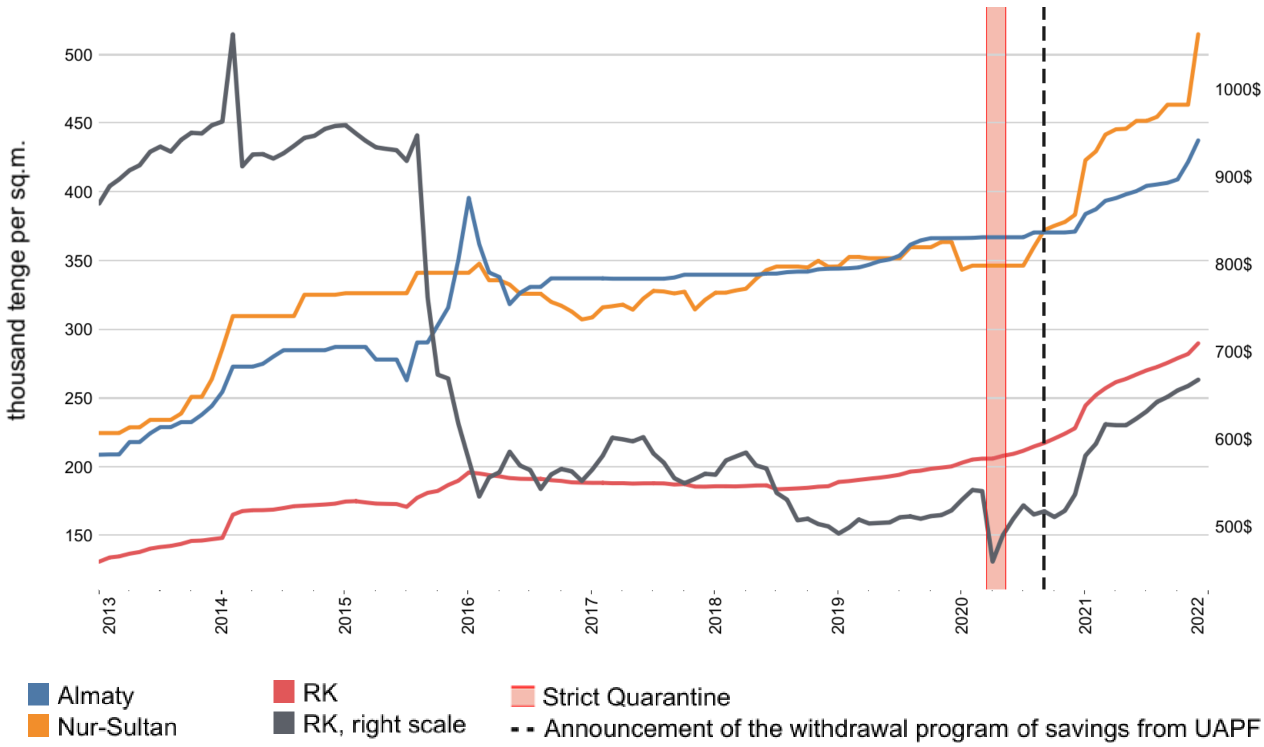


Source: *ASPR BNS RK, NBK's computations*

Real estate prices in the cities of Astana and Almaty in the secondary market are slightly higher than in the primary market, whereas in the country as a whole the price of primary housing is significantly higher than in the secondary market.

Chart 3.2 ***During 2021, average prices in the secondary real estate market increased significantly both in the national currency and in foreign currency***

Average price of 1 sq.m of secondary housing in Kazakhstan



Source: *ASPR BNS RK, NBK's computations*

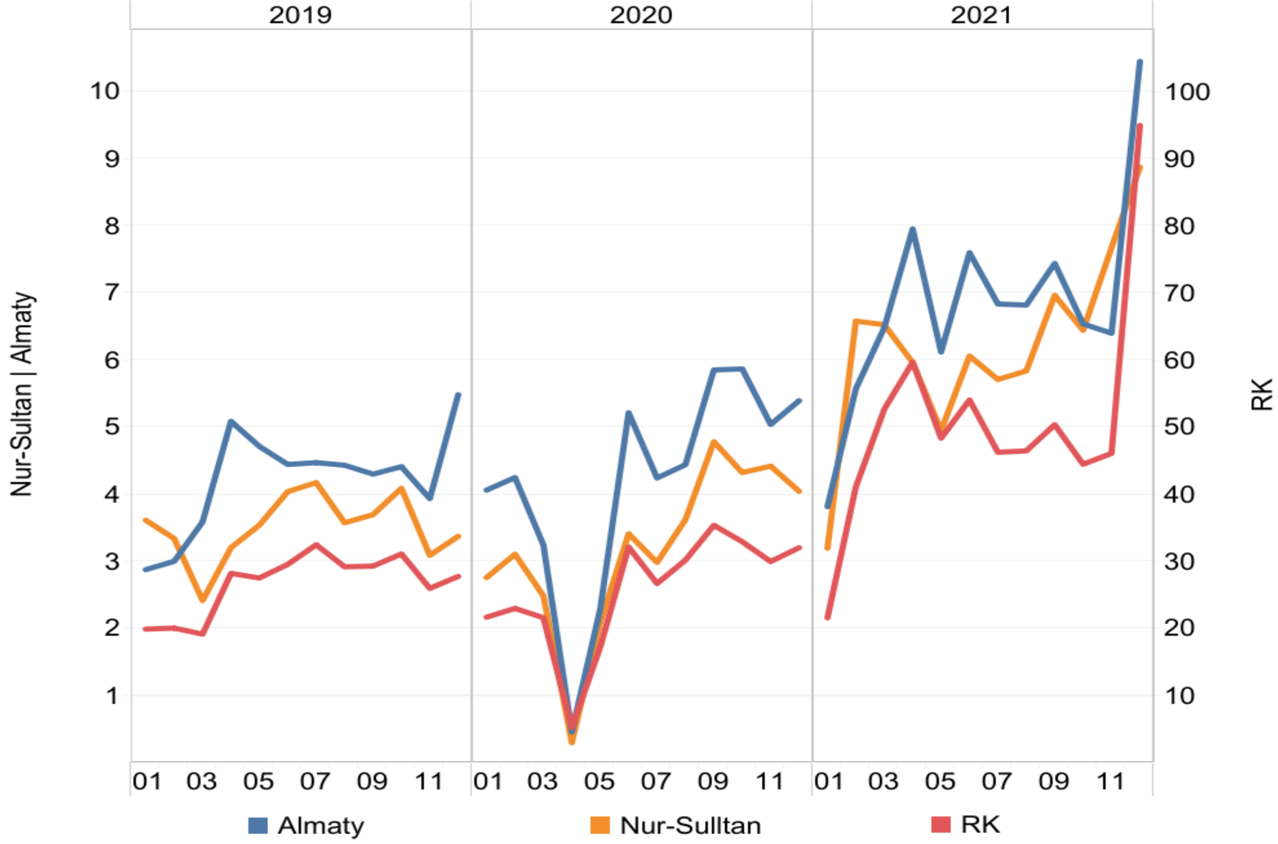
The real estate market is becoming more liquid, as evidenced by the increase in the number of transactions in the secondary market. Compared to 2020, in 2021 the average number of completed sale transactions per month almost doubled from 26 thousand to 50 thousand.

A significant increase in the number of transactions was stemming from the initiative providing the possibility of early withdrawal of a part of retirement savings that exceed the thresholds from the Unified Accumulative Pension Fund to improve housing conditions, and from an abundance of concessional programs for the purchase of housing in January 2021. However, the number of transactions fell dramatically during the imposition of strict quarantine measures because of the COVID-19 pandemic in March 2020.

Moreover, due to the announced increase in the threshold for savings withdrawal from 2022, the number of completed transactions in December 2021 increased significantly in all regions, reaching about 95 thousand transactions across the country.

Chart 3.3 ***There are sharp spikes in the number of transactions in February and in December 2021, with an overall significant growth of transactions compared to 2019-2020***

Dynamics of purchase and sale transactions in the real estate market



3.2 Residential Construction

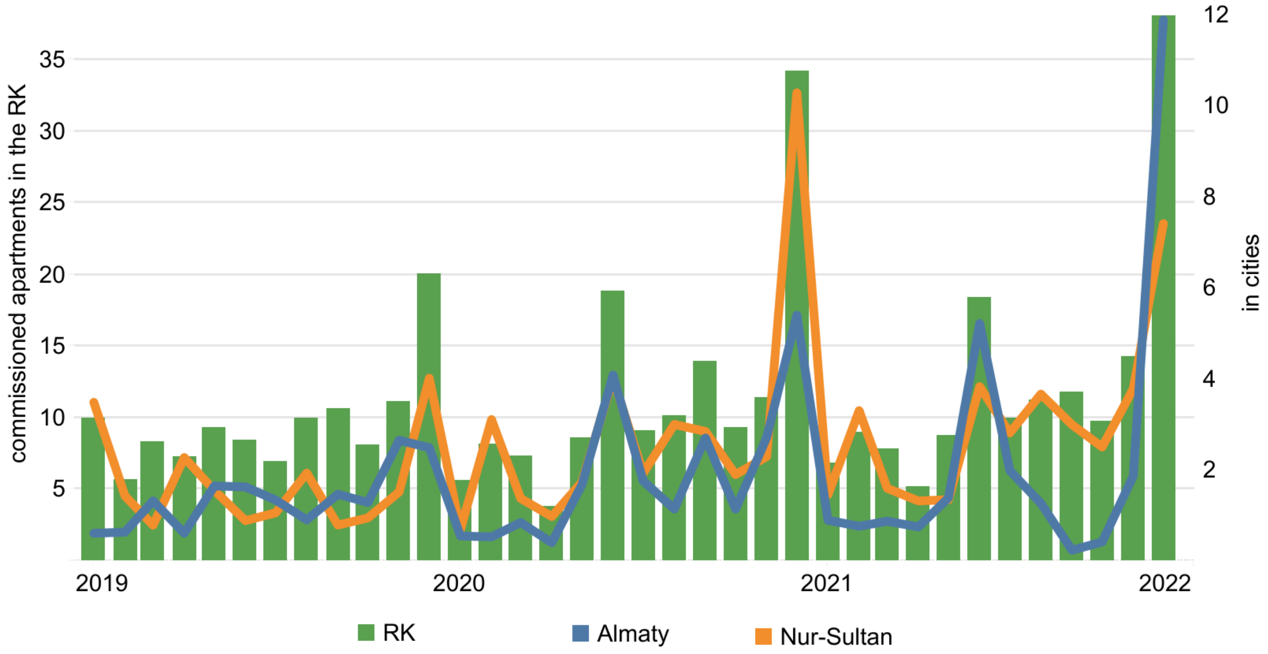
In January-December 2021, about 2.4 trillion tenge were directed to residential construction, which is by 19.1% greater than in 2020. Around 17 million sq.m. of the total area of residential buildings were put into operation, which is by 11.4% more than in 2020, respectively. More than a third of the total commissioned residential area falls on the cities of Astana and Almaty, 18.8% and 15.4%, respectively. The Mangistau region ranks third with 7.08%. Over the past 2 years, the amount of residential area commissioned has increased dramatically, despite a significant reduction against the backdrop of the pandemic in March 2020.

Compared to the 2020 data, average actual construction costs per square meter of total residential area* <excluding specialized and other residential buildings> in January-December 2021 reached 129.4 thousand tenge per sq.m., thus having increased by 5.97%, including the housing built by the population – up to 133.7 thousand tenge per sq.m. and 1.44%, respectively.

Of the total number of residential buildings, about 42 thousand individual and 1.7 thousand apartment buildings were put into operation. Organizations of all forms of ownership built 151 thousand apartments. More than 42% of apartments are in the cities of Astana and Almaty, about 36 and 27.5 thousand apartments, respectively.

Chart 3.4 ***Starting from December 2019, there is a semi-annual seasonality of the increasing number of commissioned apartments across the country***

Dynamics of the number of commissioned apartments in residential buildings, in thous.



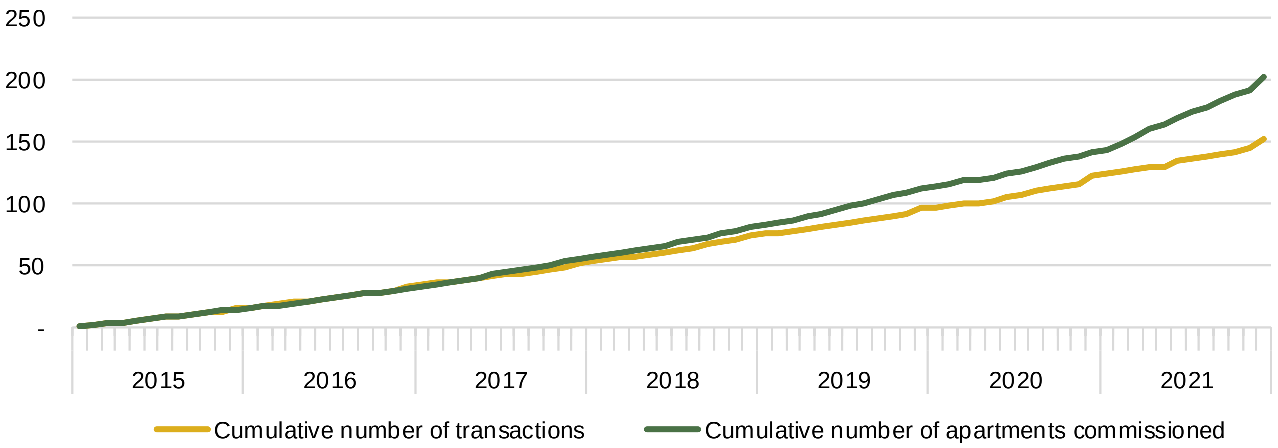
Source: *ASPR BNS RK*

To analyze the balance in the residential real estate market, we studied the dynamics of demand for and supply of housing in apartment buildings. The accumulation of the number of transactions since the beginning of 2015 is used as a demand metric. Similarly, the supply metric is measured by the accumulation of new housing space in apartment buildings since the beginning of 2015.

Until the end of 2018, growth in the number of transactions was accompanied by a commensurate increase in the commissioned area, which kept the balance of supply and demand. However, since 2019, the divergence in supply and demand metrics has been increasing. By the end of 2021, the demand metric increased to 202, while the supply metric reached only 167.

Chart 3.5 ***Starting from 2019, there has been an imbalance in demand and supply in the real estate market***

Accumulation of the number of transactions and a commissioned area of apartments in terms of January 2015

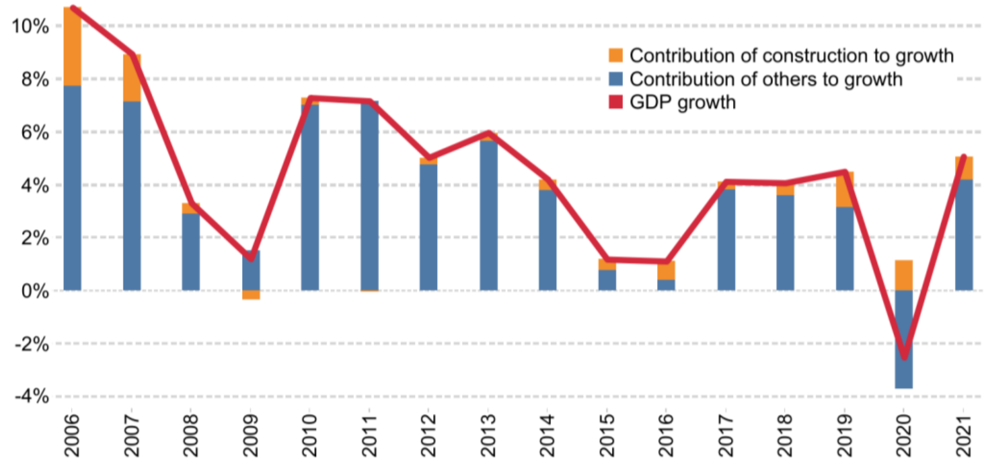


Source: *ASPR BNS RK*

The real GDP growth in 2021 amounted to 4.1% and reached the levels of 2017-2019. Since 2019, the construction sector has been making a tangible contribution to the real GDP growth and accounts for about 1%. The COVID-19 pandemic did not have such a strong adverse effect on the construction sector as on other sectors of the economy, which slowed down the drop in real GDP to 2.5% in 2020. At the same time, an observable contribution of the construction sector has increased significantly since 2009 but does not reach the pre-crisis figures of 2006 and 2007.

Chart 3.6 ***The construction sector's contribution slightly decreased from 1.2% to 0.9% after negative external shocks***

Contribution to the real GDP growth

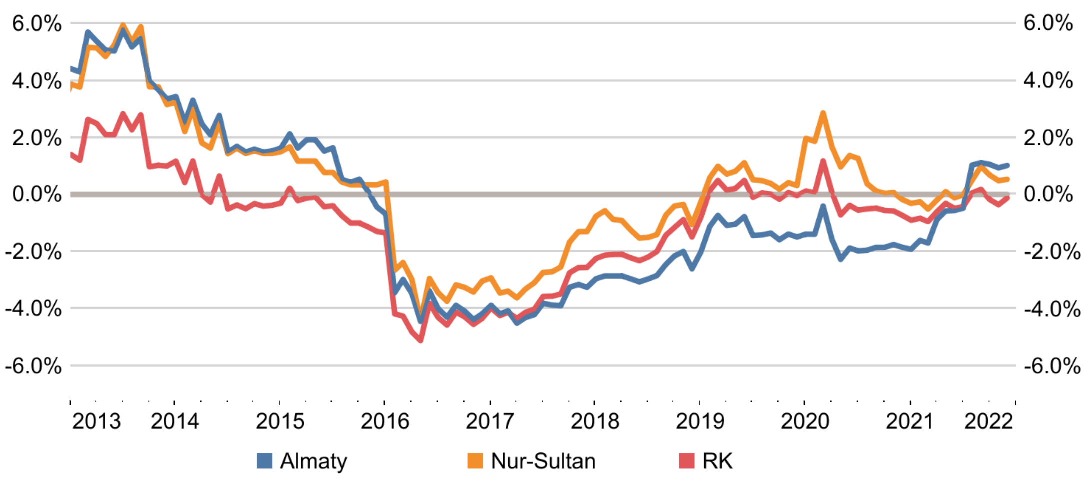


Source: *ASPR BNS RK*

The rental yield of housing in Kazakhstan significantly exceeded the deposit rates in 2013 and 2014, so the difference in yield in Kazakhstan was more than 2%, and in the cities of Astana and Almaty reached 6%. Since 2016, the real estate market in Kazakhstan has become less profitable compared to long-term deposits and has been recovering from external shocks for a very long time. The main reason was a sharp increase in deposit rates, from about 9.5% to 13%.

Chart 3.7 ***Investment attractiveness of residential real estate in Kazakhstan is recovering at a slow pace***

The difference between rental yield and the weighted average interest rate on deposits of individuals in largest cities by the volume of the residential real estate commissioning



Source: *ASPR BNS RK, NBK's computations*
Note: *Expenses related to utilities were not taken into account when calculating rental yield*

Rental yields of housing across the country and in the city of Astana have recovered and exceeded long-term deposit rates prior to the onset of the COVID-19 pandemic. Since the second half of 2021, the rental yield of housing in Almaty and Astana has surpassed the return on long-term deposits, but the difference remains insignificant and is less than 1%.

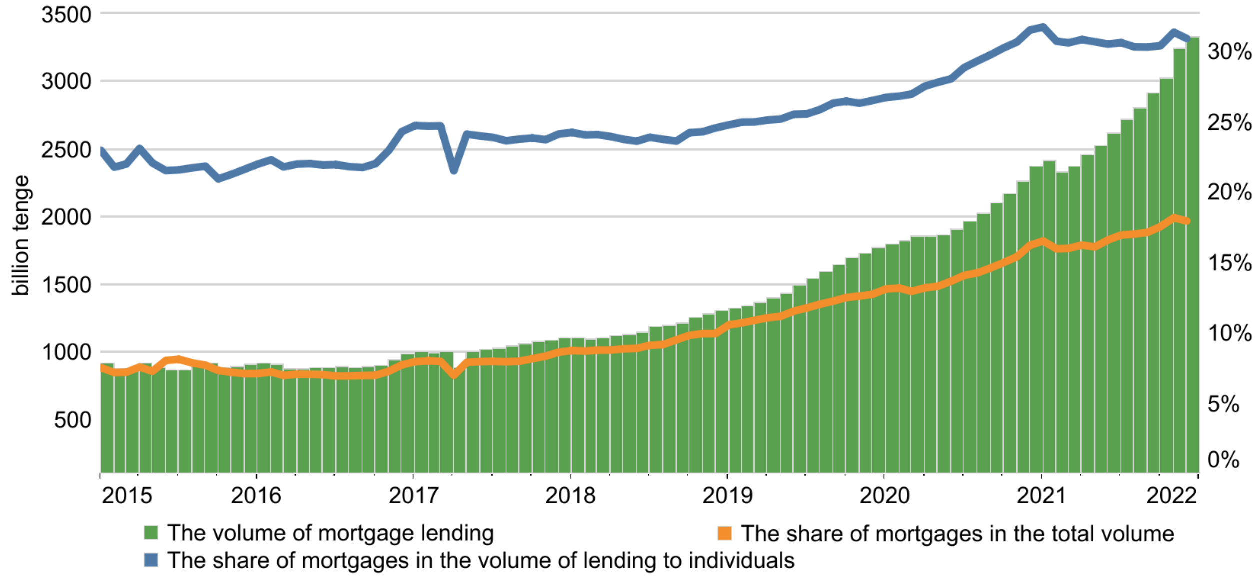
3.3 Mortgage Lending

By the end of 2021, the share of mortgage lending in the total share of loans reached an all-time high of 18%, while the total amount of mortgage lending continues to grow. Stabilization of the share of mortgage loans to individuals in total loans is due to higher growth rates of consumer lending, and, thus, a higher level of lending to individuals compared to corporate loans.

Since concessional government housing programs were under way and the initiative for using the people's retirement savings to improve housing conditions was implemented, the volume of mortgage loans in 2021 reached 3,322.1 trillion tenge, which is more than 3.3 times higher than in 2015. At the same time, the share of mortgage lending in total retail lending increased from 22% in 2015 to 31% by the end of 2021.

Chart 3.8 ***The share of mortgage lending in the total volume of loans to individuals has stabilized at 31%, whereas in absolute terms the total volume of mortgage lending is growing***

The development pattern of mortgage lending in terms of total loans to individuals in Kazakhstan

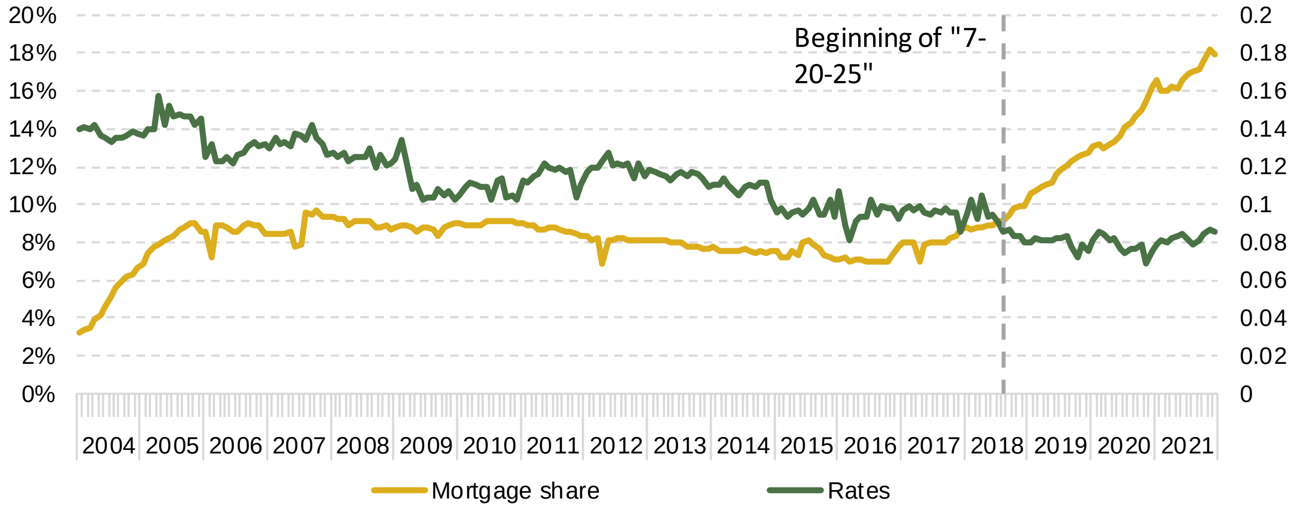


Source: *ASPR BNS RK, NBK's computations*

There has been a sharp increase in the share of mortgage loans since the end of 2017, from 10% to 18% by the end of 2021. The fall in rates over the same period from 10.5% to 8.5%, while reaching the lowest value of 6.9% in November 2021, contributed to the growth of the share of mortgage loans in the portfolio of STB loans.

Chart 3.9 ***Reduction of interest rates on mortgage loans led to the growth of mortgage lending***

The share of mortgage loans in the loan portfolio of STBs; Weighted average interest rates on provided mortgage loans;



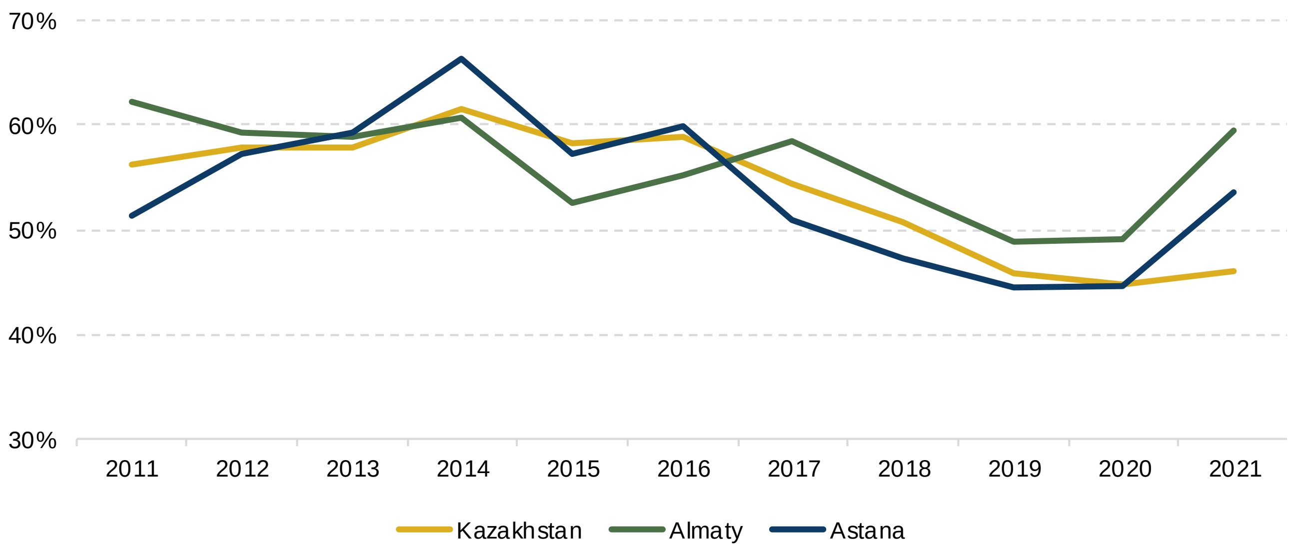
Source: *STBs' reports*
Note: *Weighted average interest rates include both the rates on market loans and concessional mortgage loans*

At the same time, over the past 2 years, given the launch of concessional government mortgage lending programs, mortgage loan rates went down to their historical lows, which has an adverse effect on the market-based mortgage loans and drives them out.

Nevertheless, the ratio of mortgage payment on housing in both the primary and secondary markets to household disposable income remains quite high in 2021, exceeding 50% of household income in Astana and 60% for Almaty. The most affordable housing in 2021 is secondary housing in other regions of Kazakhstan, where the ratio of mortgage payment to disposable income does not exceed 40%.

Chart 3.10 ***The ratio of mortgage payment to household disposable income in the primary market in 2021 is in the range of 45-60%, depending on the region***

Primary housing



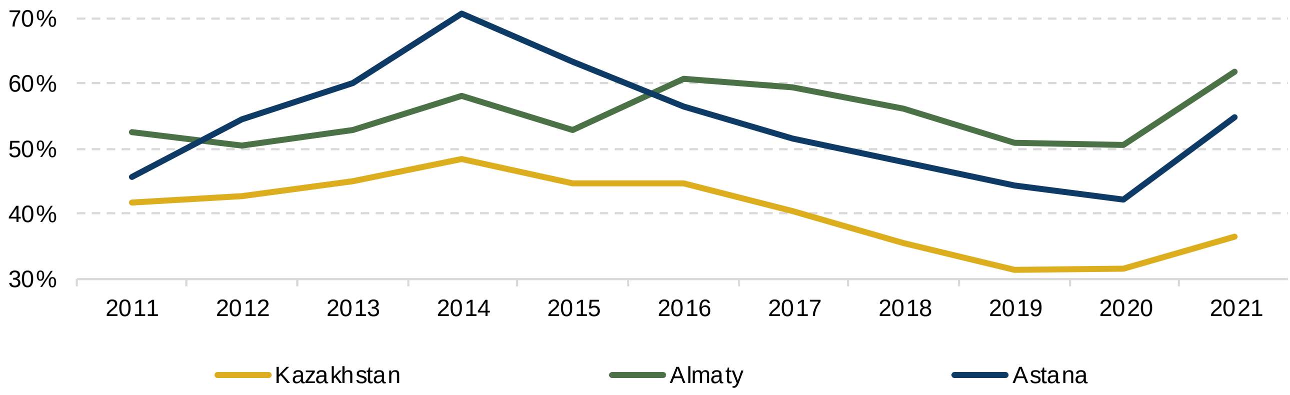
Source: *STBs' reports, ASPR BNS RK, NBK's computations*

Note: *Mortgage payment was calculated as average housing prices of 54 sq.m., down payment 30%, average rates for second-tier banks, for a period of 20 years. Disposable income is calculated as households' nominal money income less taxes, payments and other payouts, current transfers to other households, and loan and debt repayments*

It is worth mentioning that between 2018 and 2020, the ratio of mortgage payments to disposable income decreased significantly in the primary market, and did not reach 50% in all cities. A similar trend was observed in the secondary market, where the ratio of mortgage payments to disposable income in all cities did not exceed 51%.

Chart 3.11 ***Mortgage payment to household disposable income in the secondary market in 2021 in Astana and Almaty is much higher than across the country and stays within 55-65%***

Secondary housing

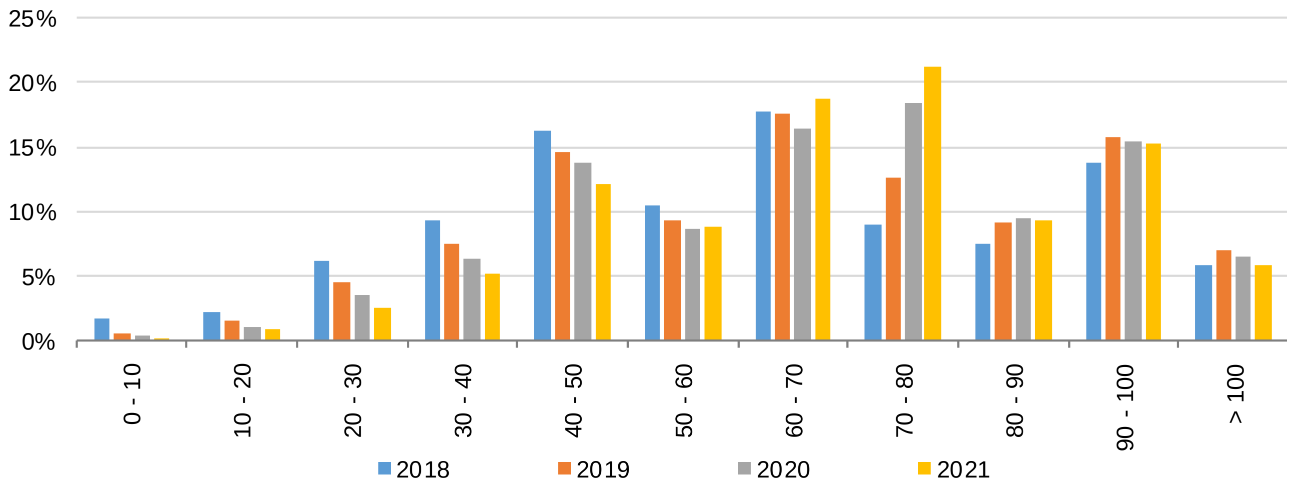


Source: *STBs' reports*

A significant increase in concessional mortgage loans, with a low level of down payment, affected the STBs portfolio and made it more risky for banks. The number of mortgage loans with an LTV in the range of 70-80%, from 2018 to 2021, increased by 12.16%, reaching 21.13%, while the number of mortgages with an LTV below 60% cumulatively fell by more than 16.39%.

Chart 3.12 ***Based on performance in 2021, the share of loan with a low down payment increased. The percentage of mortgage loans with LTV above 60% exceeds 70%***

Distribution of mortgage loans by the LTV level in the STBs' portfolio



Source: *STBs' reports*
Note: *Loan-to-Value – the ratio of the loan amount to the estimated value of collateral. Mortgage loans with a single collateral were used for the calculation*

Despite the lowering of mortgage rates due to the implementation of concessional mortgage programs, the concomitant increase in prices in the real estate market may reduce the affordability of housing for the population. High growth rates of mortgage lending carry potential risks to financial stability and may lead to *an increased debt burden on the population.*

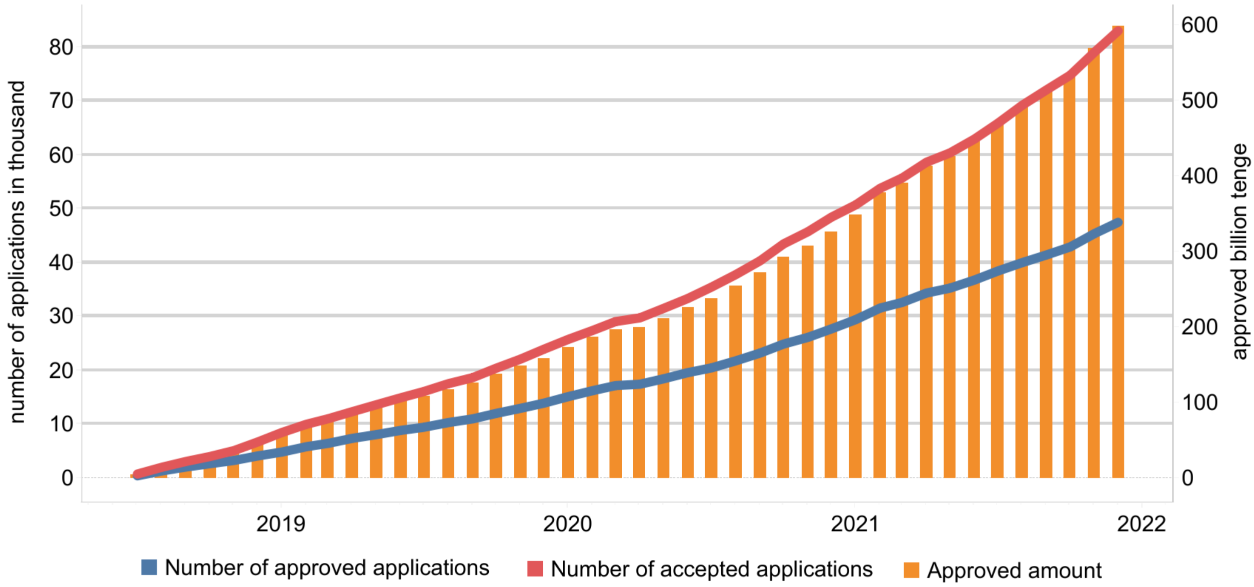
3.4 Government Programs

Government concessional lending programs allow obtaining a mortgage loan at a rate below the market. At the same time, the “Baspana Hit” program enables to purchase housing at a higher price with a maximum limit of 35 million tenge in the primary market and 25 million tenge in the secondary market, while the “7-20-25” program does not provide an opportunity to purchase housing in the secondary market and has a maximum limit of 25 million tenge.

Furthermore, the ratio of mortgage payments to household income under the “7-20-25” program is 32% countrywide, which is 8% lower compared to the “Baspana Hit” program. This difference stems from a lower interest rate under the “7-20-25” program, 7% to 11.5%, and a longer loan term, 25 years versus 15 years. By the end of 2021, more than 83 thousand applications were received under the “7-20-25” program, of which 47 thousand applications for 598 billion tenge were approved. At the same time, more than 144 thousand applications were submitted under the “Baspana Hit” program, of which 77 thousand applications for 738 billion tenge were approved.

Chart 3.13 ***The demand for the “7-20-25” concessional lending program remains heightened in 2021***

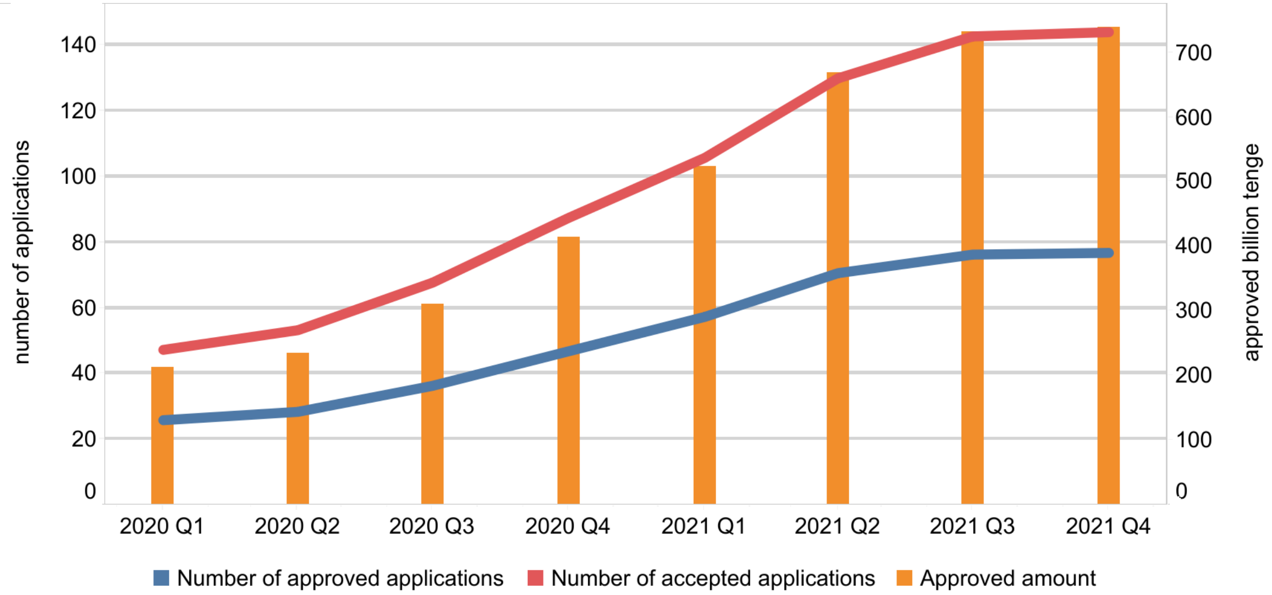
Dynamics of the total quantity of applications under the “7-20-25” program by months



Source: *KSF*

Chart 3.14 ***"Baspana Hit" concessional lending program exceeded the target volume of 600 billion tenge and was wound up***

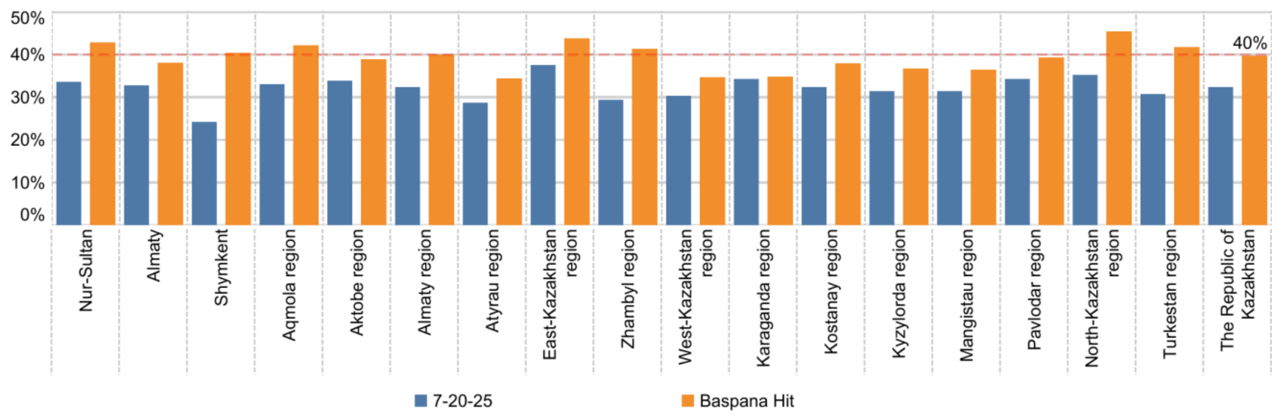
Dynamics of the total quantity of applications under the "Baspana Hit" program by quarters



Source: *KSF*

A concessional mortgage program requires a down payment of at least 20% of the apartment's cost, thereby reducing the risks for both the recipient of the loan and the lender. At the same time, the LTV under the "7-20-25" program is 5% higher than under the "Baspana Hit" program, and reaches 77% countrywide. The average down payment under the "Baspana Hit" program is 28%, which offsets higher interest rates and shorter loan tenors.

Chart 3.15 ***The share of mortgage payments under the "Baspana Hit" program exceeds 40% of the population's income in the cities of Astana, North and East Kazakhstan regions, Akmola, Turkestan and Zhambyl regions.***

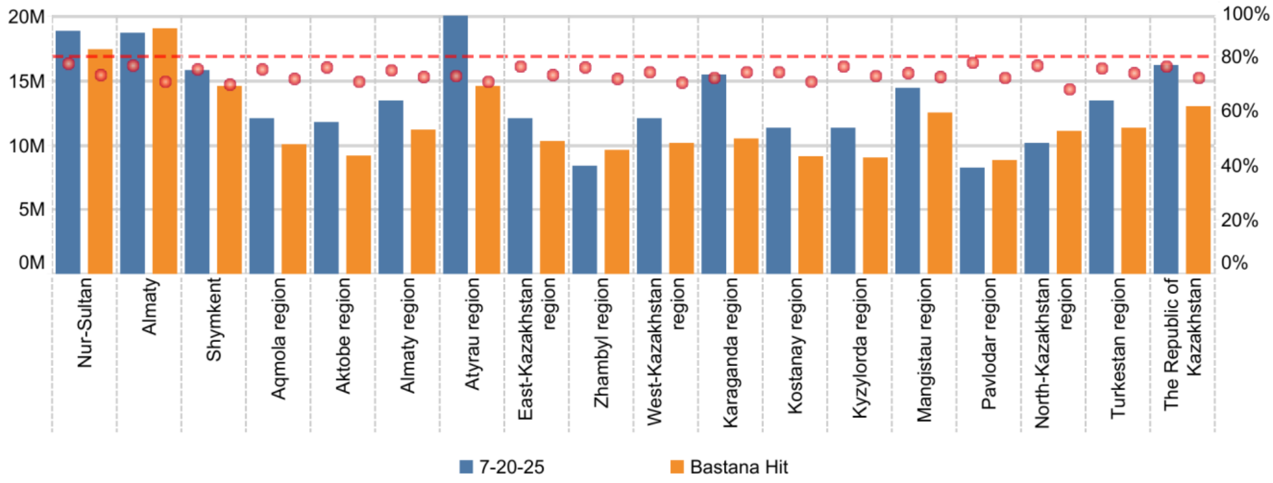


Source: *KSF*
Note: *Debt-Service-to-Income Ratio – Monthly mortgage payment to average household income*

In general, under the "7-20-25" program, more expensive housing is acquired than under the "Baspana Hit" program. Thus, the opportunity to buy more expensive housing under the program is offset by a more profitable mortgage loan under the "7-20-25" program.

Chart 3.16 **The most expensive residential property under the government programs is purchased in the cities of Almaty, Astana, and Atyrau region. Whereas the most affordable housing is acquired in Pavlodar, Zhambyl, Kyzylorda and Kostanai regions**

Average cost of housing, in mln. tenge, LTV (right scale)

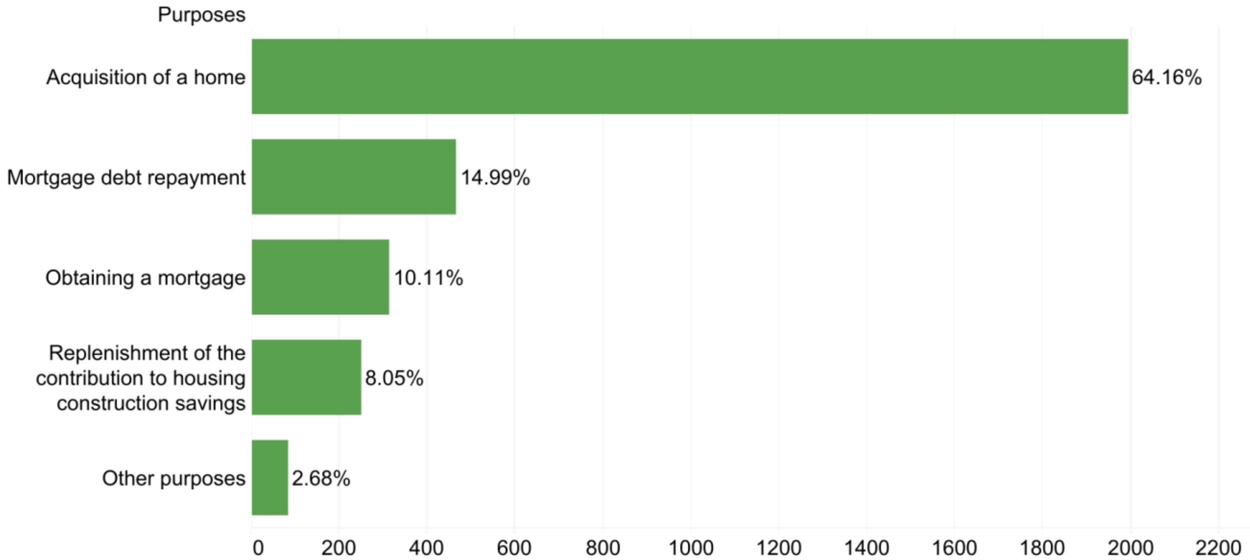


Source: *KSF*

One of the main drivers of prices in the real estate market was the possibility of withdrawing retirement savings to improve the living conditions of people. *<At April 20, 2022, over 1.3 million applications for more than 3.1 trillion tenge had been approved. >*

Chart 3.17 **About 2 trillion tenge from the UAPF was used for home purchases, accounting for more than 64% of all one-time payouts of retirement savings**

Distribution of the amount of one-time payouts of retirement savings, by purposes, mln. tenge



Source: *UAPF data at 20.04.2022*

More than 467,000 applications have been approved for the purchase of real estate in the amount of about 2 trillion tenge. About 435 thousand applications for more than 460 billion tenge were issued for the full repayment of mortgage loans, while more than 100 thousand applications in the amount of 314 billion tenge were approved for a down payment on a mortgage. Less than 12% of the total amount of approved applications was spent on replenishment of savings accounts and other purposes.

IV. Credit Risks of the Banking Sector

4.1 Loan Portfolio Quality

At the end of 2021, the quality of the bank loan portfolio improved markedly – the level of non-performing loans reached a record low of 3.3% as a result of reduction in accumulated distressed loans, including due to the winding up of the least sound banks.

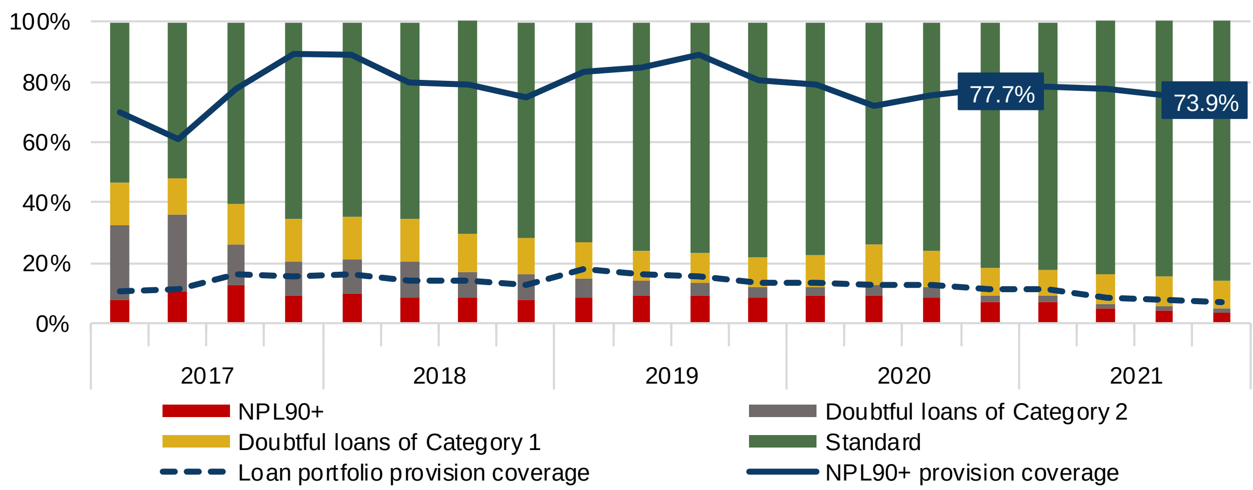
Improvement in asset quality is observed in both the corporate and retail portfolios, while alternative quality metrics for the corporate sector remain elevated, indicating that the risks of downgrading quality of the corporate portfolio remain.

In 2021, the concentration of largest borrowers in the loan portfolio of banks continued to decline. Historically, high reliance on large borrowers and the deterioration of their quality led to significant credit losses, and, therefore, to bank insolvencies. The level of non-performing loans in the portfolio of largest borrowers of banks liquidated in 2021 was over 80% at the time of liquidation.

In 2021, the volume of distressed loans including the NPL90+ and doubtful loans, according to the National Bank's estimate[33], reduced from 18.6% to 14.3% *(Chart 4.1)*. In particular, the share of NPL90+ decreased from 6.9% to a record-low 3.3%, the share of doubtful loans – from 11.7% to 10.9%. In 2021, the loan loss provision coverage ratio in the loan portfolio in the system decreased from 11.6% to 7.0%, including a reduction in the loan loss provision coverage of NPL90+ from 77.7% to 73.9%, mainly due to the write-off of non-performing loans of corporate entities by big banks.

Chart 4.1 ***The loan portfolio quality improved owing to rehabilitation of the banking sector from insolvent banks and the write-offs of accumulated distressed loans***

Loan portfolio structure



Source: *STB reports, Credit Register, National Bank's assessment*
Note: *1) NPL90+ – non-performing loans according to banks' reports; doubtful loans - loans with the signs of low repayment according to the National Bank's assessment, excluding NPL90+; 2) The Chart is constructed based on the regulatory reports of banks, including the updated data for preceding years*

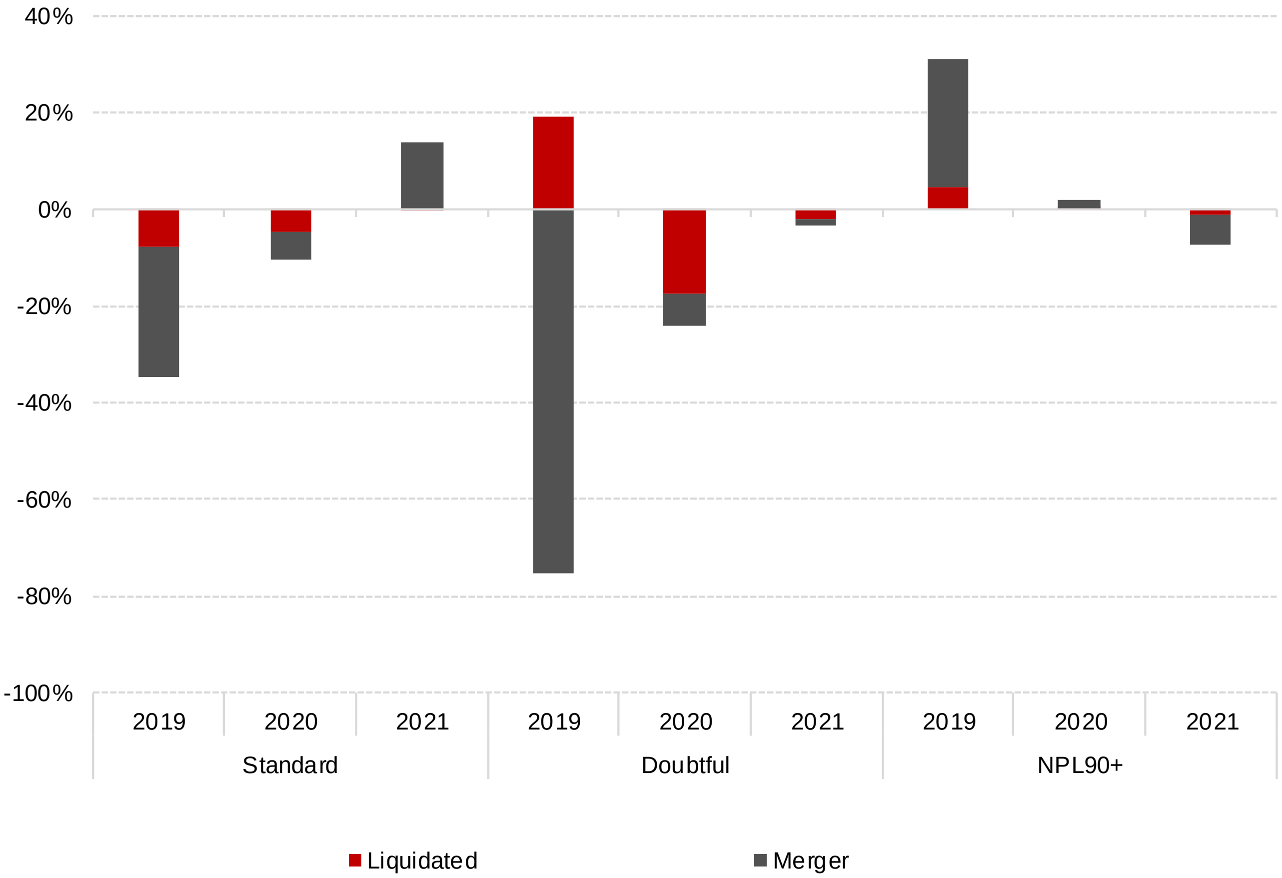
[33] For the purposes of credit risk analysis, loan quality indicators were used (excluding REPO transactions and loans provided to other banks) calculated by the National Bank based on the data from the Credit Register at the level of an individual loan and updated taking into account information for 2021. So, the following notations are used: NPL90+ - loans according to the reports of banks past due more than 90 days; doubtful loans (categories 1, 2) - loans, according to the National Bank, with signs of non-repayment, for which there are no cash flows on the principal debt and there is a high accumulated accrued interest; doubtful loans of the 2nd category have signs of lower quality; problem loans - the total volume of NPL90+ and doubtful; standard loans – loans not referred to the above

In 2021, the loan portfolio quality was improving both due to reduction in loans of insolvent banks removed from the system ("AsiaCredit Bank" JSC, "Capital Bank Kazakhstan" JSC) and the accumulated distressed loans resolved by some banks *(Chart 4.2)*.

In addition, in the first half of 2021, one bank (a subsidiary of the "National Bank of Pakistan in Kazakhstan") filed an application for a voluntary liquidation.

Chart 4.2 ***Improvement in the loan portfolio quality took place due to a contraction in the volume of distressed loans as a result of completion of an effort to clean up balance sheets from NPLs***

Contribution to the change in indicators

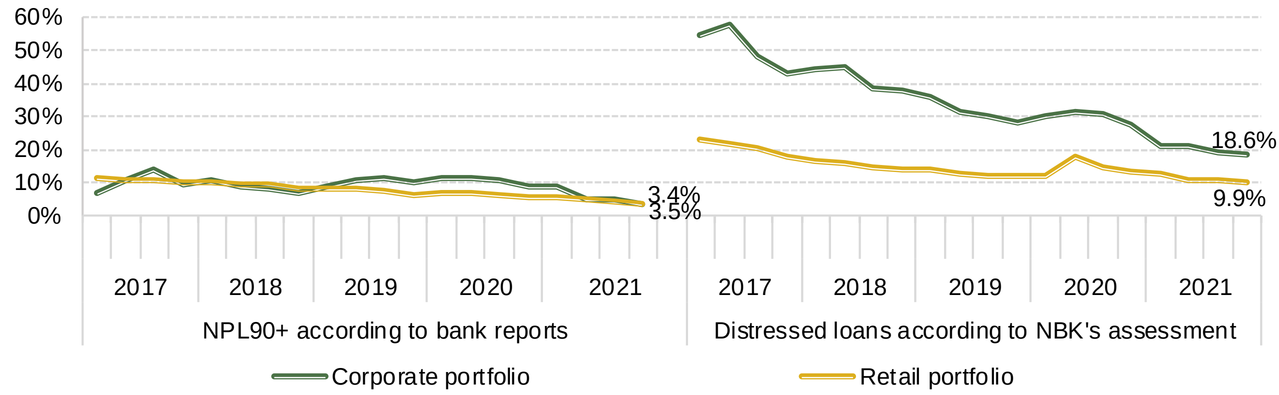


Source: *Credit Register, National Bank's assessment*
Note: *Liquidated (data is presented as of the reporting date, which was available at the time of license revocation) – banks deprived of licenses in 2019-2021: "Tengri Bank" JSC (18.09.2020), "AsiaCredit Bank" JSC (12.02. 2021), JSC SB "National Bank of Pakistan" in Kazakhstan" (05.05.2021), "Capital Bank Kazakhstan" JSC (25.06.2021); Merger – in 2019, "First Heartland Jysan Bank" JSC was founded through the merger of "Tsesnabank" JSC and "First Heartland Bank" JSC, which acquired "ATFBank" JSC at the end of 2020, its voluntary reorganization procedure was completed in 2021*

In 2021, the level of non-performing loans reduced in all segments of bank lending. At the same time, the retail portfolio quality remains high – 3.5% NPL 90+ (6.4% - the share of doubtful loans, according to the National Bank's assessment). In turn, despite a significant level of distressed loans in the corporate segment (18.6%), according to the 2021 performance, the share of NPL90+ corporate loans reported was 3.4%, reaching its lowest level in the last five years *(Chart 4.3).*

Chart 4.3 ***The quality of corporate and retail loans improved significantly at the end of 2021***

Share of distressed loans

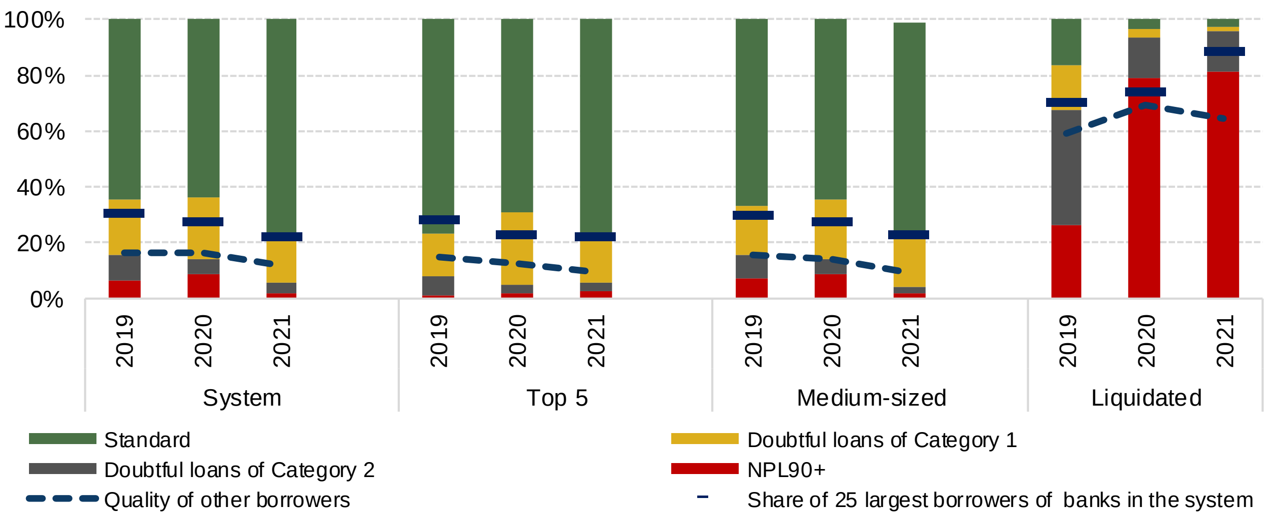


Source: *STB reports, Credit Register, National Bank's assessment*
Note: *NPL90+ – non-performing loans as reported by banks; problem loans – loans with the signs of low repayment, according to the National Bank's assessment, including NPL90+*

Due to the institutional changes that took place in the banking sector in the course of its rehabilitation, the loan quality of 25 largest borrowers broken down by banks improved considerably based on the 2021 performance *(Chart 4.4)*. At the end of 2021, the share of distressed loans made up 23.5% of their total debt, having decreased by 12.9 pp compared to the preceding year. The concentration of largest borrowers in the bank loan portfolios has also been decreasing. At the end of 2021, the percentage of loans of 25 largest borrowers of each bank in the banking system went down from 27.5% to 22.8%.

Chart 4.4 ***The quality of largest borrowers improved but is still lower compared to other borrowers***

Loan portfolio structure of 25 largest borrowers of banks



Source: *Credit Register, National Bank's assessment*
Note: *1) The analysis was carried out on the 25 largest borrowers of the loan portfolio in the corporate and retail portfolios of each bank. 2) Groups of banks were computed based on the size of the loan portfolio as at the end of each corresponding reporting period: for 2019 – as of 01/01/2020; for 2020 – as of 01.01.2021; for 2021 – as of 01.01.2022. 3) Medium- top 10 banks; Liquidated (data is presented as of the reporting date, which was available at the time of license revocation) – banks deprived of licenses in 2019-2021: "Tengri Bank" JSC (18.09.2020) "AsiaCredit Bank" JSC (12.02. 2021), JSC SB "National Bank of Pakistan" in Kazakhstan" (05.05.2021), "Capital Bank Kazakhstan" JSC (25.06.2021). 4) The quality of other borrowers – the share of distressed loans in the portfolio of borrowers not included in the 25 largest borrowers*

The largest reduction in distressed loans was observed in the group of medium-sized banks. Thus, based on the 2021 performance, the share of distressed loans of 25 largest borrowers of medium-sized banks amounted to 21.9%, having decreased by 13.8 pp, and the percentage of NPL90+ went down from 8.6% to 2.2%.

At end-2021, a high reliance on largest borrowers was observed at insolvent banks. At the most recent date of regulatory reporting, the share of distressed loans of 25 largest borrowers in the loan portfolio of liquidated banks accounted for 97.5%, including NPL90+ – 81.4%.

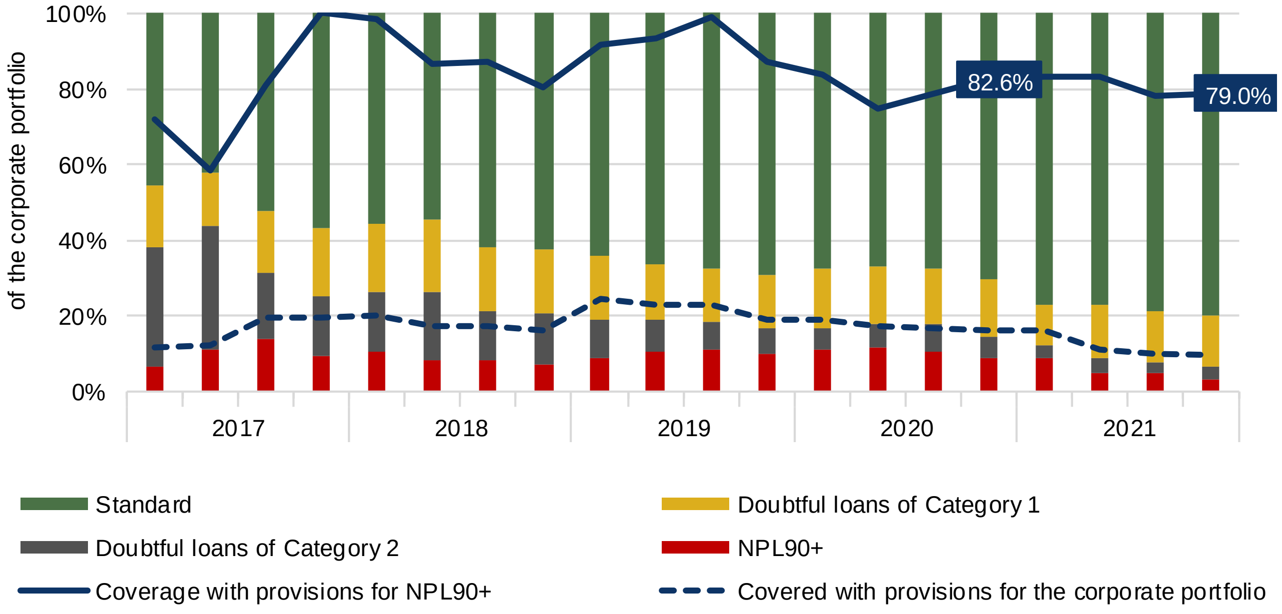
4.2 Quality of the Corporate Portfolio

In 2021, the trend towards improving the quality of the corporate loan portfolio continued. The reduction in distressed loans mainly resulted from the cleaning up the banks' balance sheets of distressed loans accumulated in prior periods. The level of distressed loans, as before, is concentrated in the non-tradable sectors of the economy, especially in the sectors of trade and construction. The corporate portfolio in foreign currency shows signs of deterioration – non-performing loans in the SME segment portfolio increased, however, the share of this portfolio is insignificant.

Despite restrictions to counteract the spread of COVID-19 in 2021, the corporate portfolio showed growth (issuance of loans increased by 20.3% in 2021 against a decrease of 0.8% in 2020, which was partially smoothed out as a result of cleaning up non-performing corporate loans of the balance sheets by large banks. These measures helped to improve the loan portfolio quality owing to the reduction in the volume of problem corporate loans from 23.2% to 20.1% by decreasing the share of NPL90+ from 8.6% to 3.4%, despite an increase in the share of doubtful loans from 14.6 % to 16.7%. Coverage of NPL90+ with provisions slightly decreased in 2021 from 82.6% to 79.0%, partially due to bank liquidations and mergers *(Chart 4.5)*.

Chart 4.5 ***The quality of the corporate portfolio keeps improving. The share of NPL90+ reached its all-time low of 3.4%***

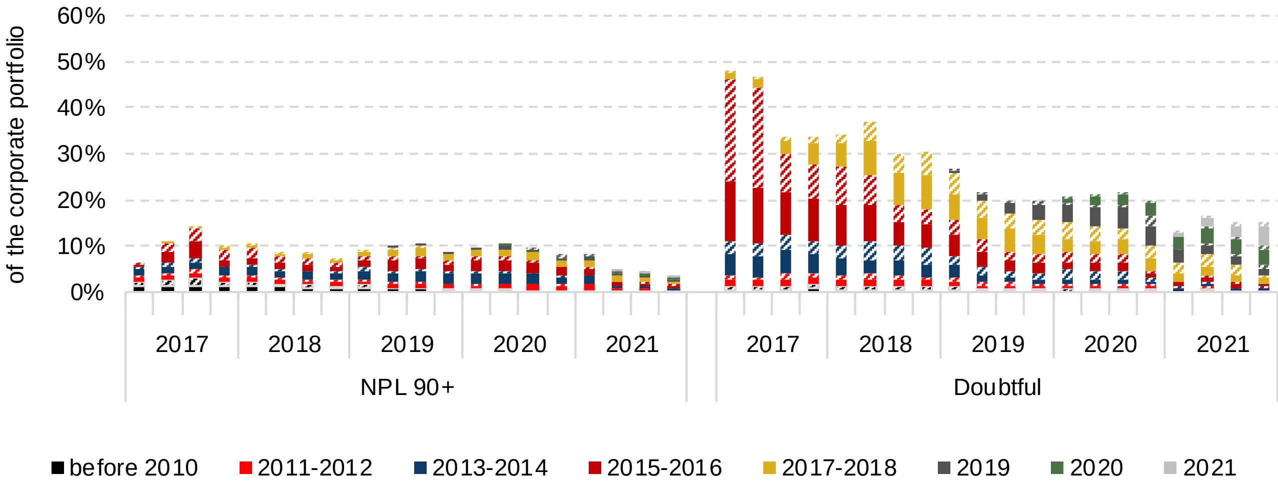
Corporate portfolio structure



Source: *STB reports, Credit Register, National Bank's assessment*
Note: *1) NPL 90+ - non-performing loans as reported by banks; doubtful loans – loans with the signs of low repayment probability according to the National Bank's assessment, excluding NPL90+; 2) The Chart is constructed on the basis of bank reports, including the updated data for preceding years*

In the structure of the portfolio of distressed corporate loans, the largest volume accounted for NPL90+ loans issued in tenge in the period between 2017 and 2018 (0.5%), and doubtful loans issued in tenge in 2020 and 2021 (3.2% and 4.0%, respectively) due to the clearing of the portfolio of non-performing loans and the implementation of anti-crisis measures to mitigate the negative impact of the COVID-19 pandemic *(Chart 4.6).*

Chart 4.6 ***The share of distressed corporate loans of the past years contracted significantly***



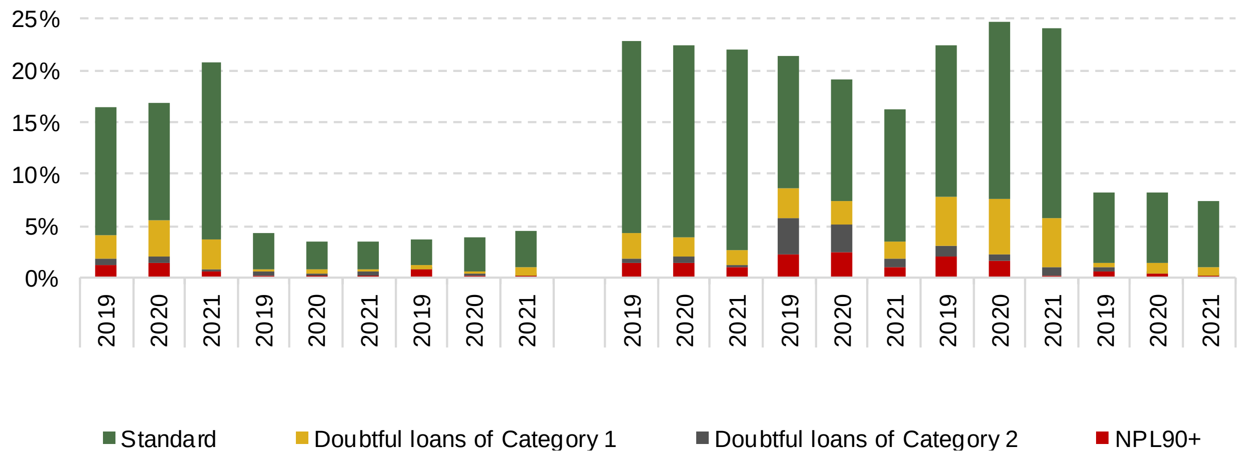
Source: *Credit Register, National Bank's assessment*
Note: *Pattern fill corresponds to loans issued in foreign currency*

On a sector-by-sector basis, the smallest share of distressed loans falls on the tradable sector (the manufacturing and mining industries and agriculture). A significant improvement in the quality of the corporate portfolio was furthered by an increase in the volume of loans provided to the manufacturing industry, which led to a reduction in the share of distressed loans from 5.6% to 3.7% as at the end of 2021 *(Chart 4.7)*.

In addition, the level of distressed loans has almost halved from 7.4% to 3.6% since the beginning of 2021 (the share of NPL90+ decreased from 2.4% to 1.0%) in the construction and real estate sectors. The quality of loans in the services, trade, transport and communications sectors remains low, despite a reduction in the share of distressed loans – by 1.8 pp, 1.2 pp and 0.3 pp, respectively.

Chart 4.7 ***The concentration of distressed loans in the corporate portfolio remains high in the non-tradable sectors***

Share in the corporate portfolio



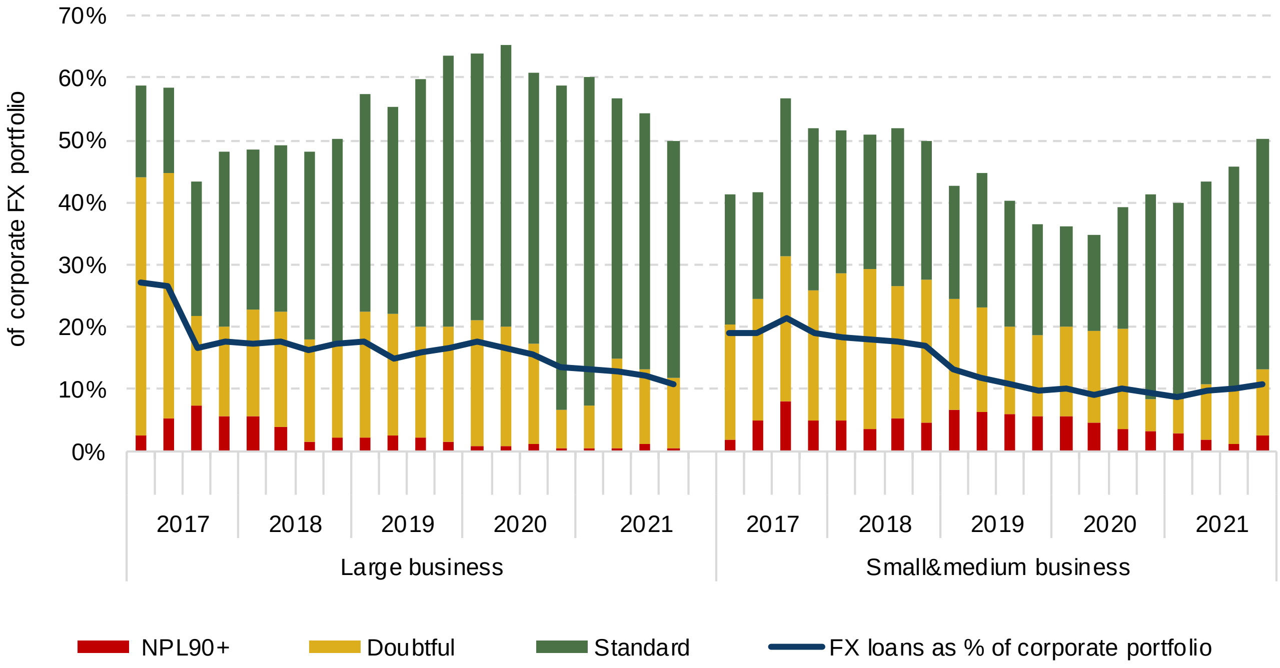
Source: *Credit Register, National Bank's assessment*

At the end of 2021, the share of foreign currency loans decreased slightly, amounting to 21.3% (or 2,344.3 billion tenge) of the corporate portfolio. In the context of business segments, the dynamics of foreign currency corporate loans is not homogenous. Thus, the share of foreign currency loans of large businesses went down by 3 pp to 10.6% of the corporate portfolio, while the share of foreign currency loans to SMEs increased from 9.5% to 10.7%.

According to the National Bank, in the reviewed period, the quality of the foreign currency corporate portfolio slightly weakened. Thus, at the end of 2021, distressed loans in the foreign currency portfolio of large businesses amounted to 11.8%, an increase of 5.2 pp compared to the same period in 2020. At the same time, the quality of the SME's foreign currency portfolio is worse – the share of distressed loans was 13.4%, showing an increase of 5.0 pp compared to the same period of 2020 (Chart 4.8).

Chart 4.8 ***The quality of the corporate foreign currency loan portfolio in the large business segment is still better compared to that of the SME***

Foreign currency portfolio



Source: *Credit Register, National Bank's assessment*

4.3 The Impact of COVID-19 on the Corporate Portfolio Quality

In 2021, in order to continue supporting SMEs from the most affected sectors of the economy during the COVID-19 pandemic, the third package of anti-crisis measures was implemented, which re-included the deferral of loan service payments. Payment deferrals under the third support measure were less in demand among SMEs in comparison with the previous packages. The small business segment was the most interested in getting a loan deferral. In the context of regulatory easing regarding the recognition of impairment by banks in the classification of assets for loans that received a deferral, deterioration in their quality was observed.

In order to prevent deterioration in the financial condition of borrowers experiencing financial difficulties, the effort to support borrowers in the affected sectors of the economy was under way in 2021 and also included deferral of loan payments. Specifics of payment deferrals under the third anti-crisis package of measures in the banking sector are described in Box 8.

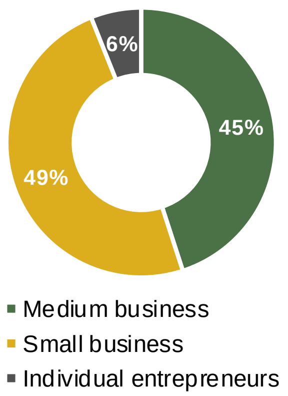
To assess the impact of COVID-19 on the loan portfolio quality, the National Bank has analyzed the corporate portfolio of banks[34] in the context of those borrowers who got a deferral on loans for the period from 01.03.2020 to 01.07.2021[35] ("the reviewed period"). Similarly to 2020, the analysis was carried out in terms of the loan debt amount (based on the principal debt amount and not the amount of deferred payments) and the number of contracts.

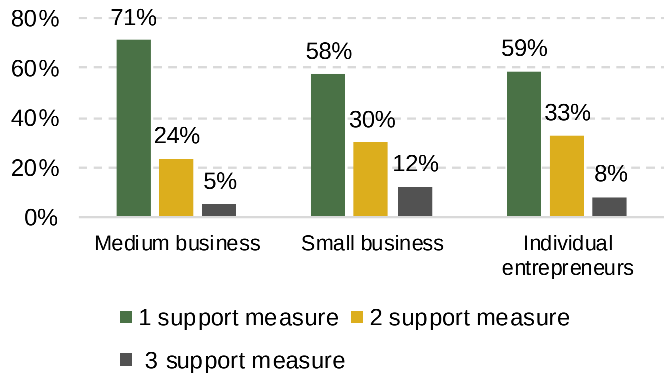
According to the information from banks, during the reviewed period, about 15 thousand corporate entities used deferred payments on loans. The volume of the loan portfolio of SMEs and individual entrepreneurs affected by deferred payments amounted to 1.4 trillion tenge; as of July 1, 2021, it accounted for 31.4% of the loan portfolio in this segment.

During the period when the three support measure packages were in effect, the largest demand for deferrals was from small businesses, both in terms of the principal debt amount (49%) and the number of contracts (64%) *(Chart 4.9)*.

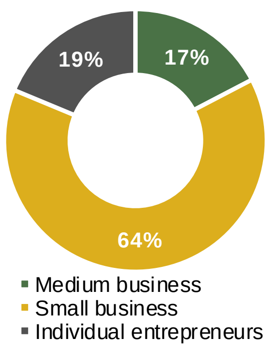
Chart 4.9 ***The small business is the major recipient of loan deferrals***

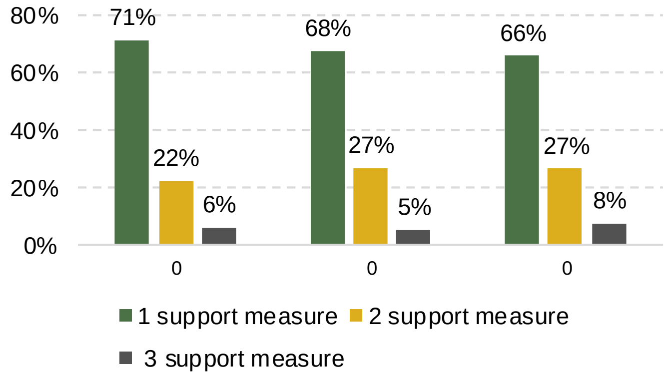
Share of loans by the principal debt amount, broken down by segment





Share of loans by the number of contracts, broken down by segment





Source: *National Bank's assessment based on the data from banks*
Note: *The deferral period is 01.03.2020 – 01.07.2021*

Getting a loan deferral was in demand mainly during the period of restrictive quarantine measures. Thus, out of the total number of deferrals during the reviewed period, the 1st support measure accounted for 64% in terms of the principal debt amount and 68%

[34] The analysis of corporate loans with deferred payments was carried out in the reviewed period excluding banks that left the system, as well as microfinance institutions, for which the demand for deferred payments from borrowers was insignificant
[35] The analysis was performed on the basis of information received from banks regarding those borrowers who received loan deferrals during the period of the first support measure package (from 03/16/2020 to 06/15/2020), the 2nd support measure (from 06/16/2020 to 10/01/2020) and the 3rd support measure (from 04/01/2021 to 06/30/2021)

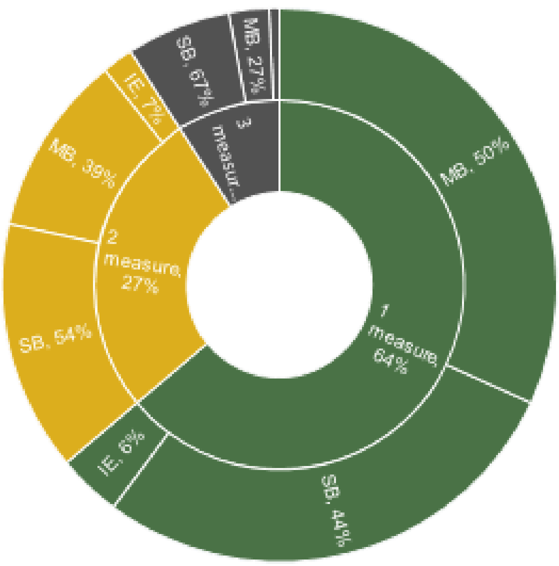
in terms of the number of contracts. Deferrals under the 2nd and 3rd support measures were less demanded – their shares in the principal debt amount accounted for 27% and 9%, and in terms of the number of contracts – 26% and 6%, respectively *(Chart 4.10)*.

Deferrals by categories of business entities in terms of the principal debt amount and the number of contracts are distributed unevenly. Thus, the bulk of the debt on loans with deferred payments was in the segment of medium-sized businesses and during the period of the 1st support measure it accounted for 50%, decreasing in the course of the 2nd and 3rd support measure implementation to 39% and 27%, respectively. The share of individual entrepreneurs under each measure was no more than 7%, the share of debt in the small business segment increased, accounting for 44%, 54% and 68% following the results of each measure, respectively.

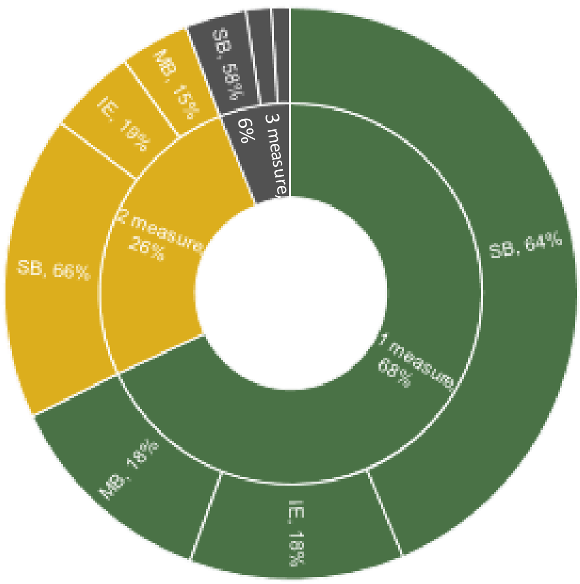
At the same time, a significant share of *loan agreements* fell on the small business segment, which amounted to 64% during implementation of the first measure, and to 66% and 58% during implementation of the second and the third measures, respectively. The share of loan agreements of medium-sized businesses in each measure remained practically unchanged, while the segment of individual entrepreneurs was gradually growing, and its share under the first measure was 18%; under the second measure – 19% and under the third measure – 24%.

Chart 4.10 ***Payment deferral was in demand primarily during the period of the state of emergency and was concentrated in the medium-sized business in terms of the debt amount and in the small business – in terms of the number of contracts***

Distribution of loans by principal debt in terms of measures



Distribution of loans by the number of contracts in terms of measures

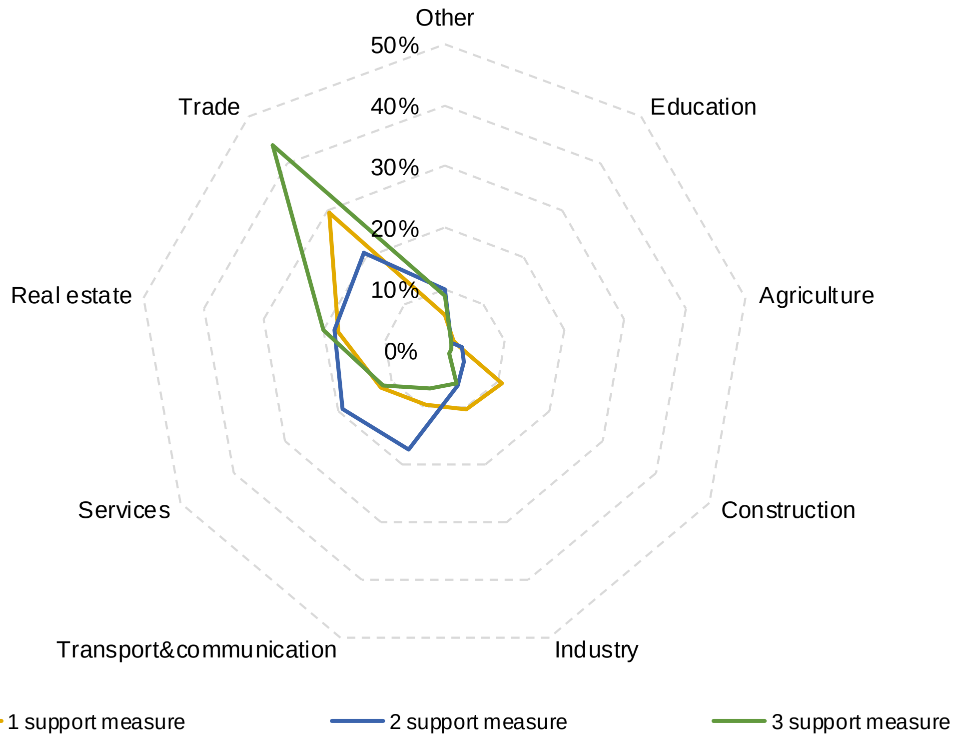


Source: *National Bank's assessment based on the data from banks*
Note: *The deferral period is 01.03.2020 – 01.07.2021*

In terms of the sector structure of the corporate portfolio, a significant share of deferred loans during the period of the 1st and 2nd support measures were concentrated in the sectors of trade – 29% and 21%, real estate – 17.6% and 18.3%, services – 12% and 19%, respectively. During the period of the 3rd support measure, the share of loans in the trade sector increased to 44% of all deferred loans; on the contrary, the share of loans in the construction industry decreased, amounting to 1% only (during the period of the first and second support measures, the share of the sector was 11% and 4%, respectively). The lowest demand for deferrals was observed in the sectors of agriculture and education, where the percentage of deferred loans did not exceed 2% *(Chart 4.11)*.

Chart 4.11 ***Payment deferrals were most demanded in trade and real estate sectors***

Share of loans by the principal debt amount in terms of sectors



Source: *Credit Register, National Bank's assessment based on the data from banks*
Note: *1) The industry's share of deferred loans is calculated within each measure, i.e. each measure corresponds to 100%. 2) Trade shall mean wholesale and retail trade, repair of cars and motorcycles; Real estate – operations with real estate; Services – accommodation and catering services, health care and social services, provision of other types of services; Transport and communication – transport and warehousing, information and communication; Industry – manufacturing, mining and quarrying; Other – activities not included in the above groups*

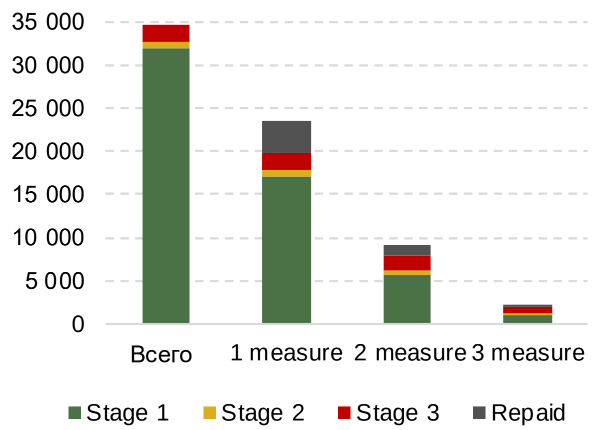
It is worth mentioning that, as part of the third package of anti-crisis measures, regulatory easing was extended to banks in terms of excluding the feature of deferral from the criteria for automatic loan impairment when creating provisions, provided that banks have a positive assessment of the likelihood of timely repayment by the borrower of obligations under the loan agreement after the end of the deferral period.

In the meantime, as restrictive measures had been eased, *the number of contracts* for which payment deferrals were granted, decreased. The share of loans covered by the 3rd measure was 6% of the loans that received a deferral as a result of the three support measures *(Chart 4.12, A)*.

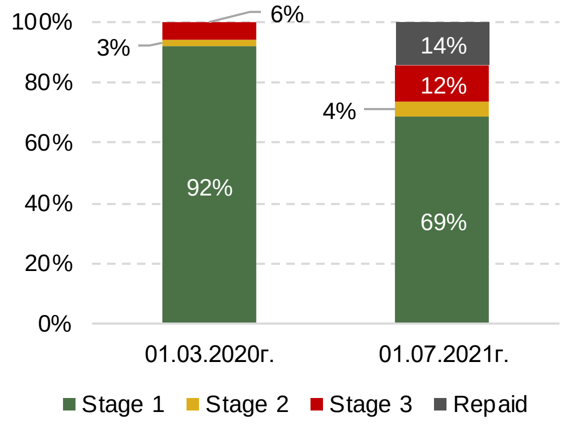
The number of loans with deferred payments decreased during the reviewed period. The share of loans at the 1st stage went down by 23 pp, whereas the share of loans under the 2nd and 3rd stages increased by 2 pp and 7 pp, respectively *(Chart 4.12, Б)*.

Chart 4.12 ***The quality of corporate loans that received payment deferrals downgraded***

A) Number of contracts, pcs.



B) Share of loans in terms of the number of contracts, %



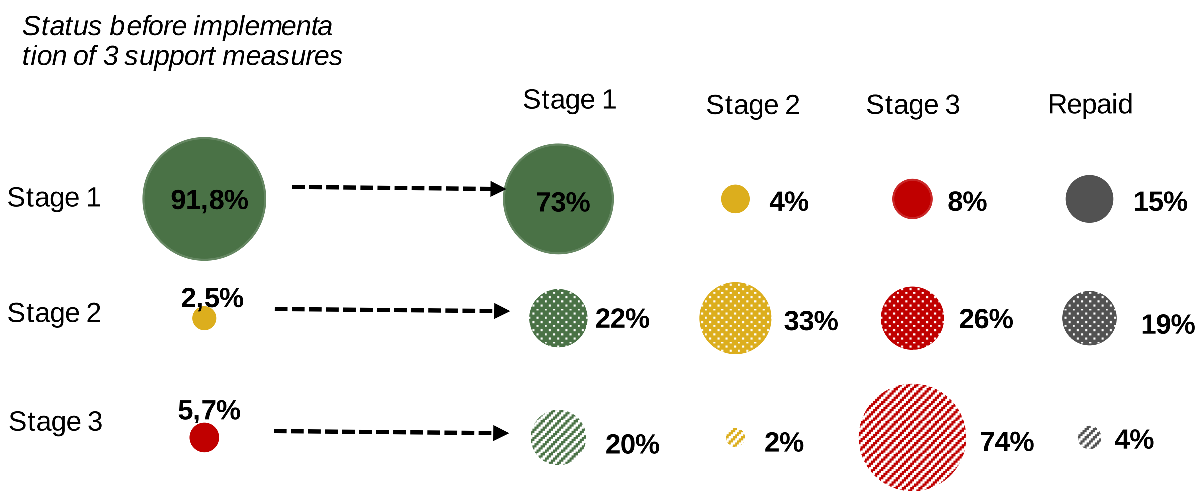
Source: *National Bank's assessment based on data from banks*
Note: *Total – the number of contracts for which a deferral was granted in the period from 16.03.2020 to 01.07.2021; The quantity of contracts were distributed according to measures: at 01.07.2020 (1 measure), 01.10.2020 (2 measure), 01.07.2021 (3 measure)*

Source: *National Bank's assessment based on data from banks*
Note: *01.03.2020 – statuses of the loan contracts impairment under IFRS before obtaining the deferral, 01.07.2021 – statuses of loan contracts after obtaining a deferral*

Migration of loans between the stages of impairment by the number of contracts showed that the share of stage 1 loans that were deferred decreased to 73% during the deferral period due to reclassification of loans to stage 2 (4%) and stage 3 (8%) or repayment (15%) *(Chart 4.13)*. The share of stage 2 loans was insignificant (2.5%), of which 26% moved to stage 3. At the same time, loans were migrating from stage 3 to stage 1 (20%) due to the improvement of existing loans of those borrowers who repaid loans classified as stage 3 loans.

Chart 4.13 ***A larger portion of loan agreements of SMEs retained their quality during the term of support measures***

The share of loans in terms of the number of contracts

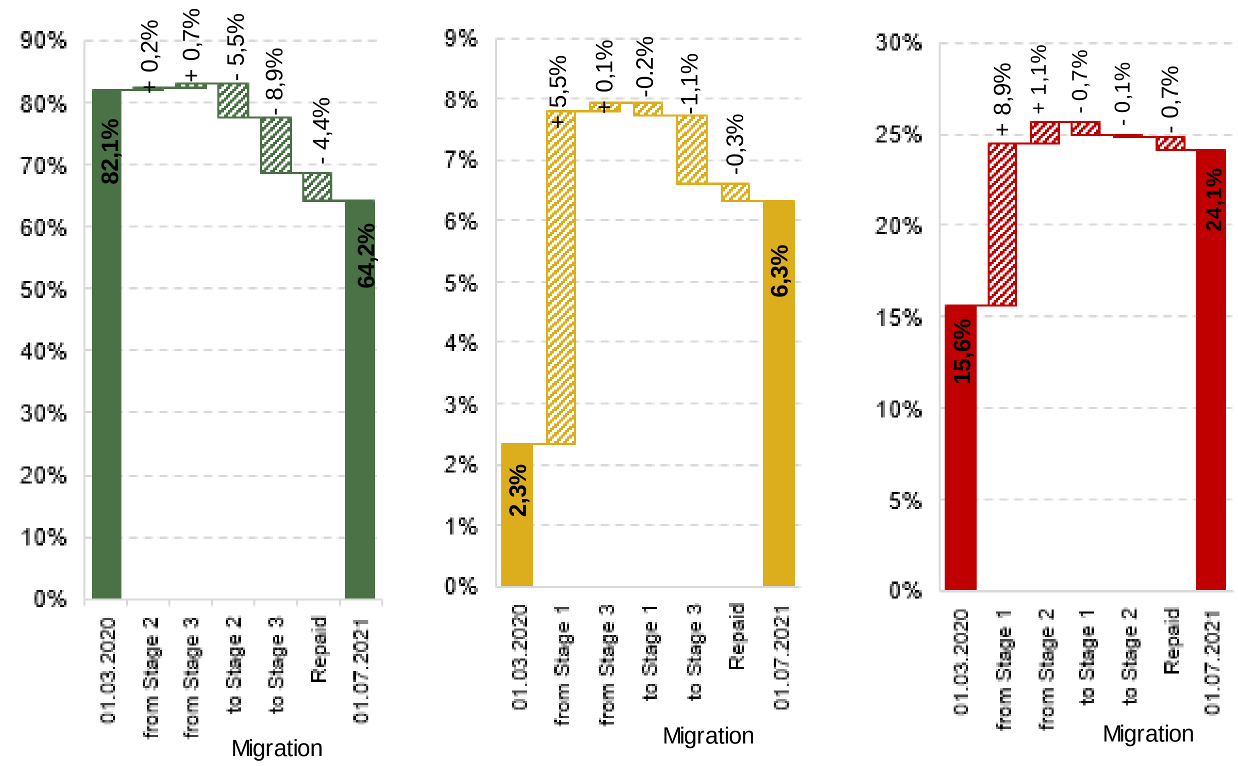


Source: *National Bank's assessment based on the data from banks*
Note: *The area of the bubble is proportional to the share of loans calculated based on the quantity of contracts by impairment stage*

The decline in the loan quality was also discernable by the volume of loan debt of deferred loans following the results of the three support measures. Thus, the share of stage 1 loans decreased by 18 pp (from 82.1% to 64.2%) due to reclassification of loans to stage 2 (net 5.3%) and stage 3 (net 8.2%), or repayment (4.4%) *(Chart 4.14).* The share of stage 2 loans increased by 4 pp to 6.3% of the sample. The share of stage 3 loans increased from 15.6% to 24.1%, mainly, due to the migration of loans from stage 1 during the deferral period.

Chart 4.14 **Decline in the quality of corporate loans is driven by migration of loans to stage 3**

The change in the share of corporate loans in terms of the principal debt amount



Source: *National Bank's assessment based on the data provided by banks*
Note: *Loan impairment statuses under IFRS at March 1, 2020 account for 100% of the sample*

Box 8. Specifics of Payment Deferrals within the Frame of the Third Anti-Crisis Measures Package in the Banking Sector

In 2021, after the expiration of temporary measures, the Agency, within the framework of the third package, extended some anti-crisis measures to combat the consequences of the spread of coronavirus.

In particular, in order to prevent deterioration in the financial condition of borrowers experiencing financial difficulties, from April 1 to June 30, 2021, small and medium-sized businesses, including individual entrepreneurs, were granted deferrals on loan payments for the period from 30 to 90 days at the choice of an SME unless a different period was specified in the borrower's application and the decision of the credit institution[36].

[36] Order of the Chairperson of the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market dated April 9, 2021 No. 127 "On approval of the Procedure for Granting Loan Deferrals to Small and Medium-Sized Businesses"

The deferral was granted without signing additional agreements by SMEs by establishing new loan payment schedules in the form of an even distribution of deferred payments until the end of the loan tenor or extending the loan tenor for the deferral period.

The main difference between the third support measure and the previous two was that the deferral was granted by the second-tier banks and microfinance organizations depending on the categories of business entities, that is, a differentiated procedure for granting a deferral was applied.

Thus, *for micro and small businesses (including individual entrepreneurs)*, a deferral was granted on the basis of a borrower's application when the entity was operating in the affected sectors of the economy, while medium-sized businesses were granted a deferral on an individual basis based on the borrower's application and documents confirming the deterioration in financial condition due to restrictive quarantine measures.

At the same time, in accordance with regulatory easing, *medium-sized businesses (including individual entrepreneurs)* could be granted payment deferrals and not be recognized by credit institutions as experiencing financial difficulties, if, based on an assessment of actual financial performance of the counterparty, it was expected that the borrowers' cash flows would sufficient to cover contractual obligations on loans.

Assessment of the borrowers' financial condition included an analysis of the borrowers' actual income and the impact of imposed restrictive quarantine measures on the borrowers' business activities, including reduction in the consumer demand for goods, works and/or services of borrowers, disruption of the supply chains of goods and/or services, failures to pay on time for goods, works and/or services.

Thus, receiving a deferral was not a reason for deterioration in the borrowers' credit history; therefore, credit organizations did not send negative information about borrowers to credit bureaus. This measure allowed corporate borrowers to reduce their debt burden during the period of the support measure, and enabled credit institutions to ensure a smooth process of recognizing deterioration in the quality of loan portfolios.

As regards *the retail portfolio*, since the onset of the pandemic, payment deferrals have been granted to individuals on a single occasion from March 16 to June 15 2020, which allowed retail clients to reduce their debt burden and go through a difficult period without significant losses. Stabilization support measures to the retail portfolio were implemented in a timely manner and led to mitigation in social tension of the population and minimization in the short term of credit risks associated with the epidemiological situation in the country. Due to the change in the behavior of retail customers owing to their increased business activity (taking into account the deferred effect), there was no need to re-implement measures to grant payment deferrals in 2021 (for more details, see sub-section 5.2 Impact of COVID-19 on the loan portfolio quality in the FSR 2020).

4.4. Retail Portfolio

Recovery of the purchasing power of the population in the post-pandemic period and the widespread use of digital solutions in providing banking services to the population had a positive impact on the growth of the retail loan portfolio. The quality of the retail portfolio has improved in almost all segments. The main factors for the good quality of the retail portfolio include high volumes of mortgage and consumer loans, short-term consumer loans – in 2021, the level of non-performing loans was 3.6%. At the same time, the credit risk in the retail portfolio can still lead to a decline in real income and a growing debt burden on the population.

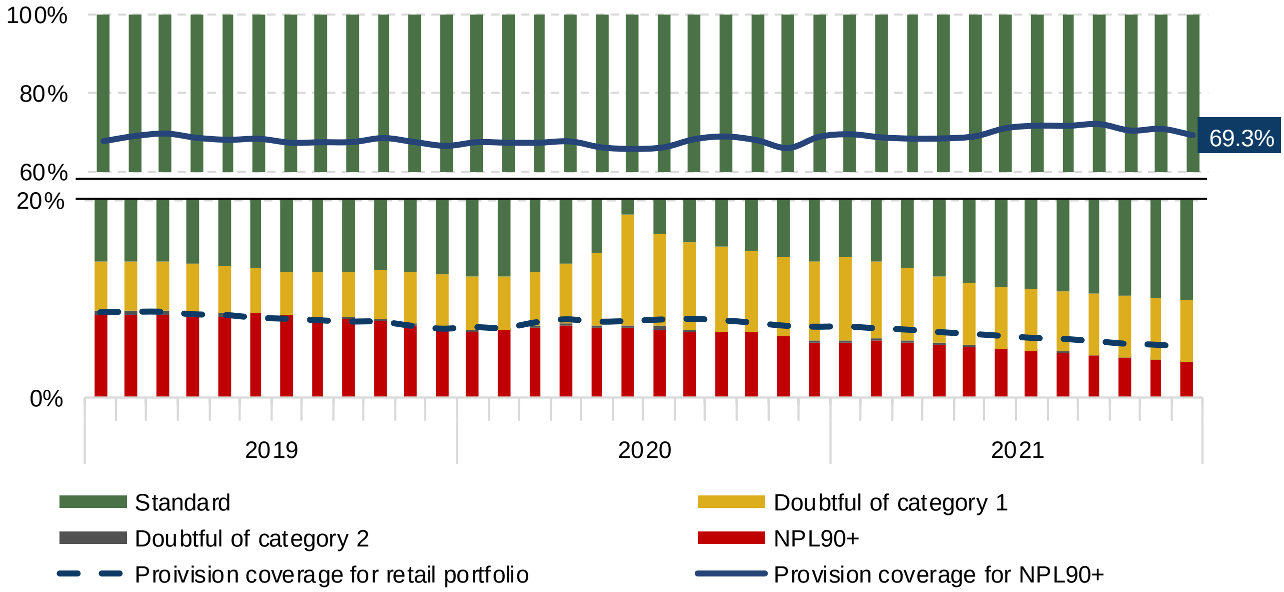
In 2021, banks had been actively building up their retail portfolio. The portfolio grew by more than 40% at the end of the year (the growth accounted for 12.6% at the end of 2020). Thus, the share of loans of individuals in the loan portfolio exceeded the share of the corporate portfolio and amounted to 52% (47% at the end of 2020). A rapid growth of the retail portfolio continued due to the expansion of unsecured consumer lending and mortgage loans. In particular, at the end of 2021, unsecured consumer loans (53% of the retail portfolio) and residential mortgage loans (25%) prevail in the retail portfolio.

The quality of the retail loan portfolio remains above the corporate portfolio quality and has continued to improve since 2019. The factors contributing to a reduction in the level of distressed loans in the retail portfolio include an active portfolio growth and the removal of insolvent banks from the system (the share of distressed loans of banks that left the system in 2021 was 1.4% of all distressed loans in the system at the beginning of 2021). Thus, the share of distressed loans in 2021 went down from 13.8% to 9.9%. At the same time, the maximum percentage of distressed loans (19%) was observed at the end of June 2020 due to the delay in loan payments during the state of emergency associated with the pandemic.

In 2021 the retail loan loss provisioning decreased from 7.2% to 5.1%. However, in 2021, the loan loss provision coverage ratio for NPL90+ slightly increased from 68.9% to 69.4%, despite a reduced volume of provisions for such loans *(Chart 4.15)*.

Chart 4.15 ***The retail portfolio quality continues to improve due to an active portfolio growth***

Retail portfolio

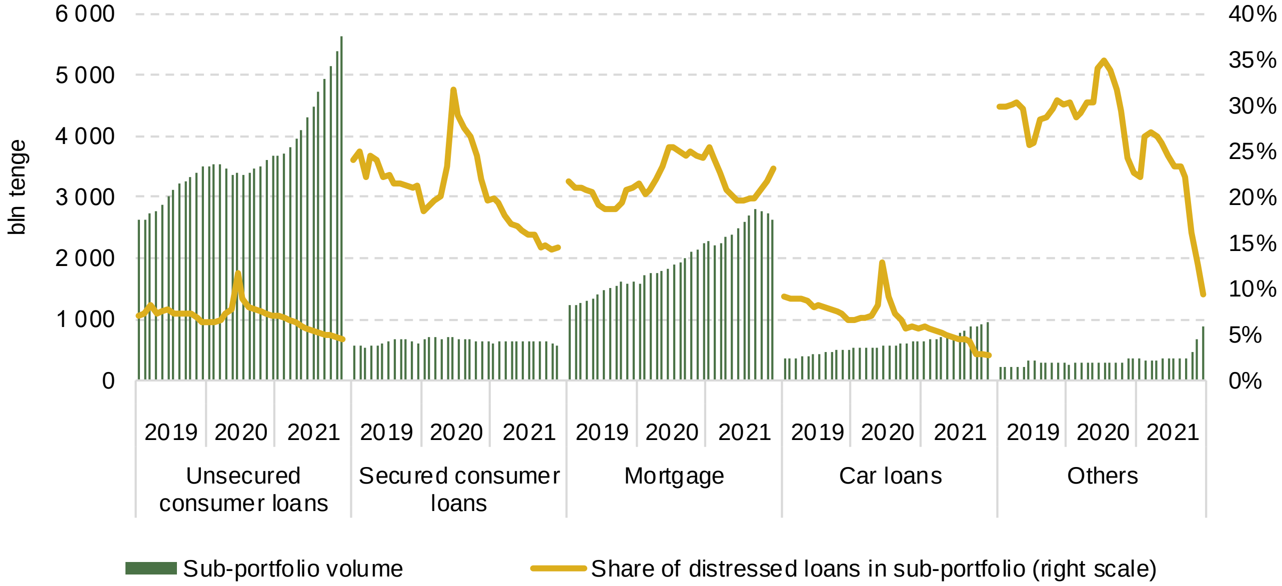


Source: *Credit Register, National Bank's assessment*

Based on the 2021 performance, the loan quality was improving virtually in all segments of retail lending *(Chart 4.16)*. The smallest share of distressed loans is concentrated in the car loan sub-portfolio. This segment showed a reduction in distressed loans by almost half from 5.9% to 2.7% since the beginning of 2021. Unsecured consumer loans retain their high quality – 4.6% of problem loans. The level of distressed loans in the mortgage segment decreased on a year-to-date basis by 1.2 pp to 23.1%, the share of NPL90+ loans in the sub-portfolio also decreased from 1.7% to 0.8%. In the segment of secured consumer loans, problem loans accounted for 14.5% at the end of 2021 (19.6% in 2020).

Chart 4.16 ***The share of distressed loans in all segments of the retail portfolio decreased in 2021***

Retail portfolio



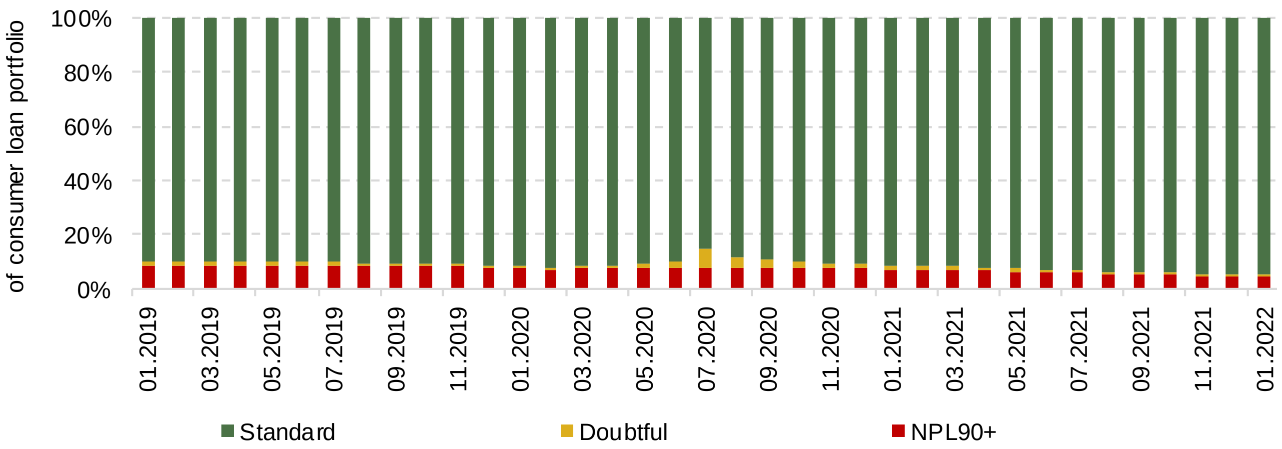
Source: *Credit Register, National Bank's assessment*

4.4.1. Quality of the Consumer Loan Portfolio

The quality of the consumer loan portfolio, which includes segments such as car loans, consumer unsecured loans and secured consumer loans historically remains high. According to the National Bank, the share of distressed loans decreased from 8.4% to 5.1% in 2021 *(Chart 4.17)*. At the same time, the major portion of consumer loans (96.6%) does not have any delays in payments at the end of 2021 due to a rapid growth in volumes, the specifics of this segment and the removal of insolvent banks from the system. The share of distressed consumer loans of liquidated banks in the total portfolio of distressed loans in the system at the beginning of the year was 2.2%. Reduction in distressed loans as a result of liquidated banks – 20%. Despite the fact that the level of credit risk in the portfolio is moderate, it remains sensitive to changes in household income. At the same time, the growing debt burden on the population carries risks to solvency and welfare of the population.

Chart 4.17 ***The consumer loan quality remains high***

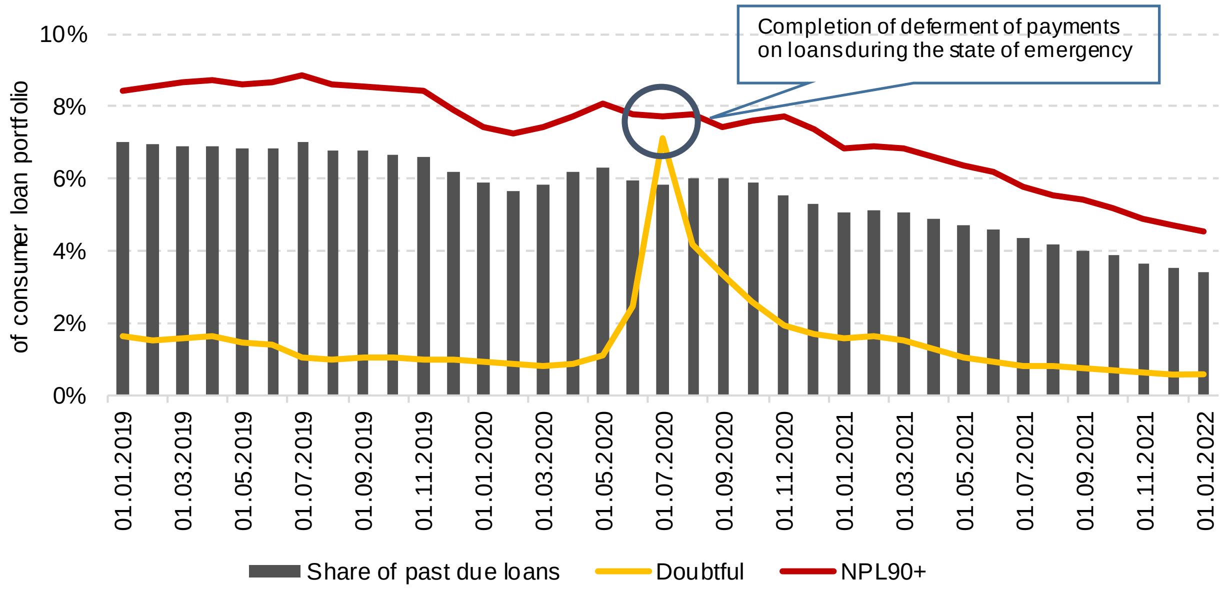
Consumer loan portfolio



Source: *Credit Register, National Bank's assessment*

A low level of doubtful loans (0.6%) in the consumer lending segment potentially speaks for a fuller and timely recognition of credit losses by banks *(Chart 4.18)*. However, the level of secured doubtful consumer loans is higher (2.6%).

Chart 4.18 ***The share of past due consumer loans is decreasing***

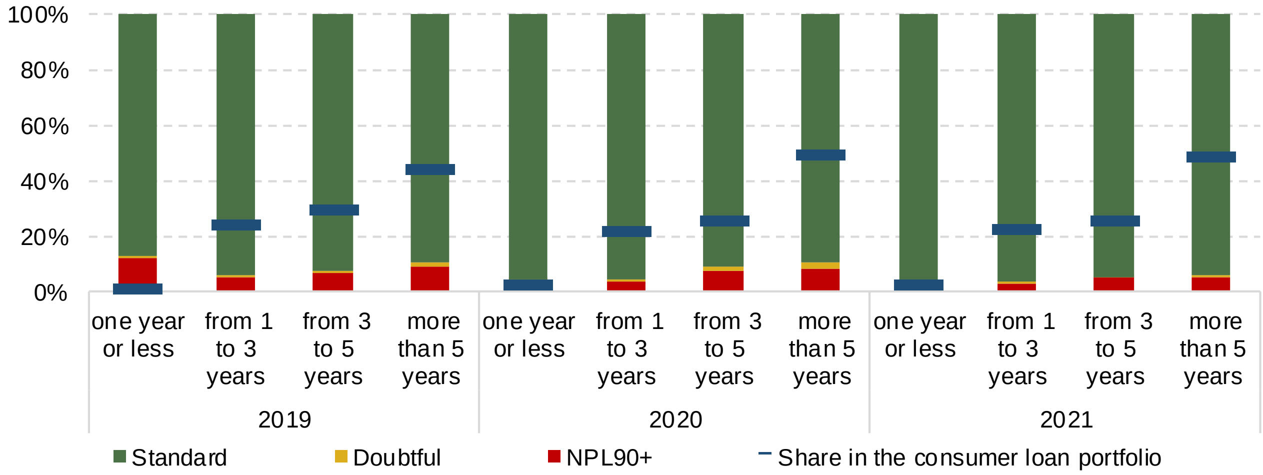


Source: *Credit Register, National Bank's assessment*

There is a correlation between the loan quality and duration. Thus, the level of distressed loans in the consumer loan portfolio is the highest among loans with a tenor over five years – 6%, and for loans with a tenor of less than one year and from one to three years is 3.9% and 3.2% at the end of 2021, respectively *(Chart 4.19)*. The lowest quality was observed among secured consumer loans with a tenor of less than one year (the level of distressed loans is 19%), due to the presence of individual repayment schedules. The provision of loans with individual repayment schedules, in most cases, is the result of poor-quality credit decisions in relation to persons with the features of related party to a bank. The reason for taking high risks on loans issued to a potentially related party is the bank's weak risk management.

Chart 4.19 ***There is a correlation between a loan quality and tenor in the consumer loan portfolio***

Consumer loan portfolio, by loan tenor

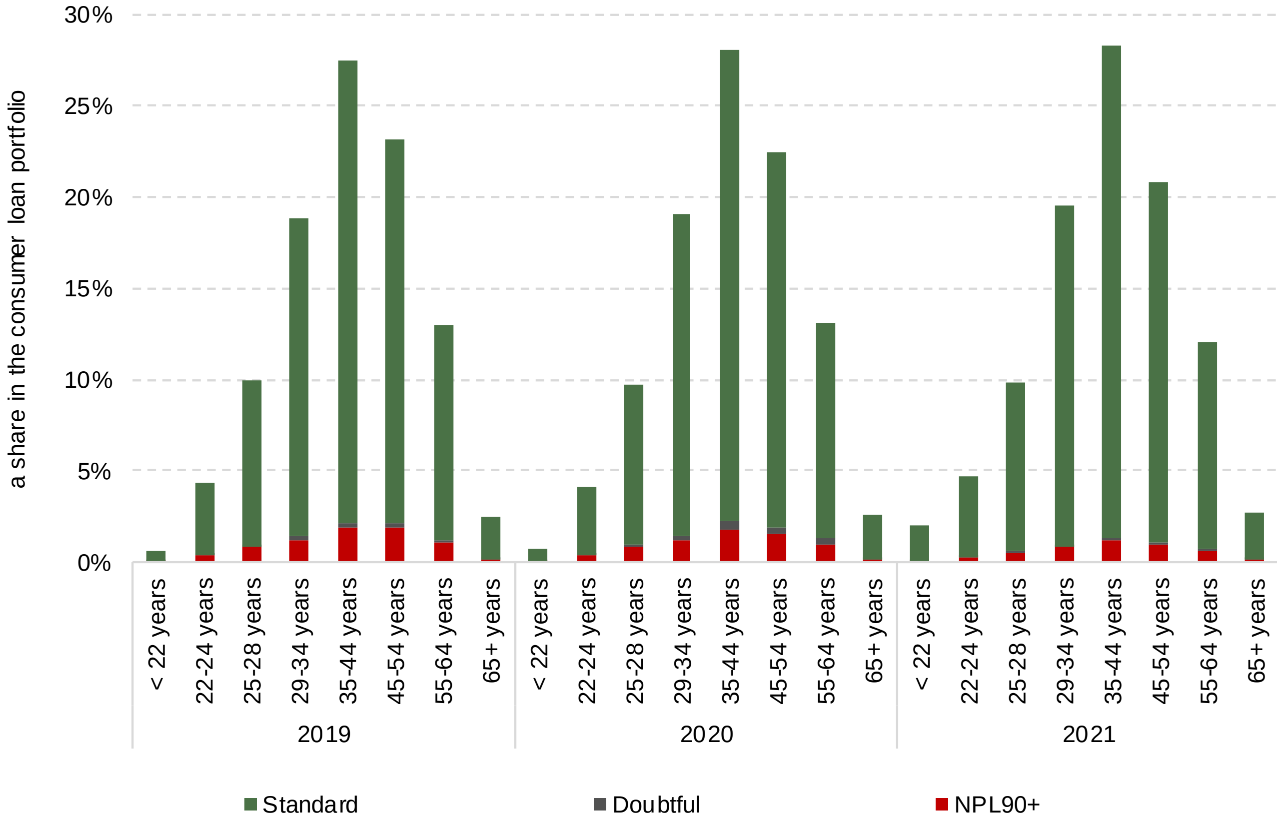


Source: *Credit Register, National Bank's assessment*

In 2021, the loan quality improved in most of age categories. In particular, the share of distressed loans provided to borrowers below 28 years old went down from 9% to 5.5%, 29-55 years old – from 8.2 to 4.9%, and loans to borrowers above 55 years old decreased from 8.7% to 6%. The smallest share of distressed loans was observed in the age category of individuals below 22 years old – 3.1%. The share of distressed loans among other age categories was 5-6% *(Chart 4.20)*.

Chart 4.20 ***The quality of loans improved among most of age categories***

Consumer loan portfolio



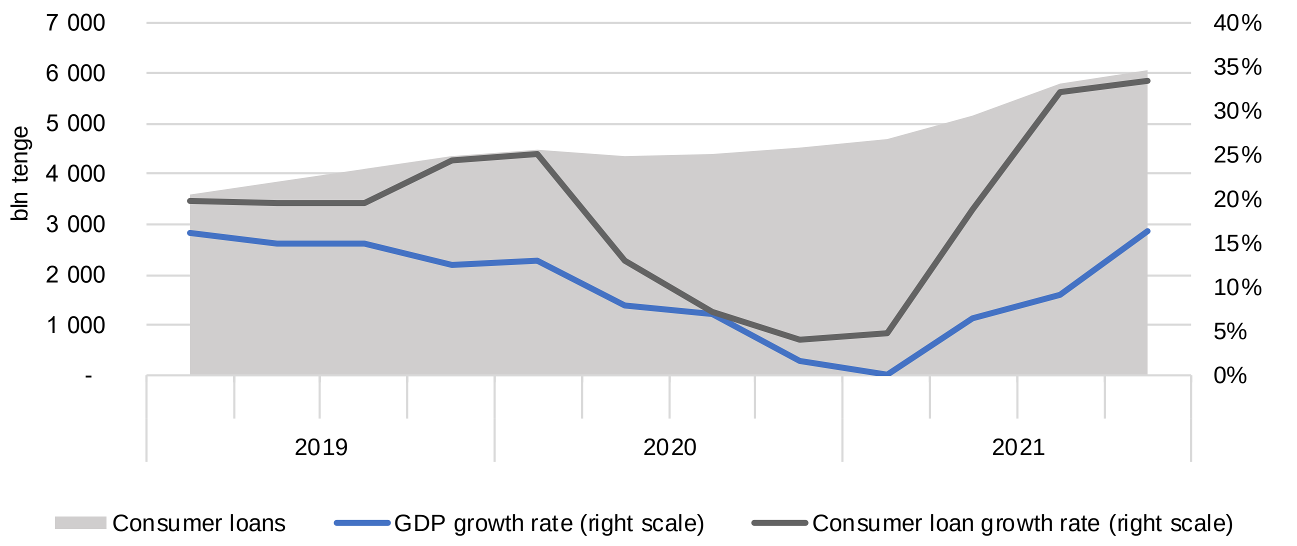
Source: *Credit Register, National Bank's assessment*

Box 9. Consumer Lending

The growth rates of consumer lending went up significantly in 2021. The consumer portfolio increased by 46% (6% in 2020). Consumer unsecured loans served as a growth driver, with their share in the consumer loan portfolio accounting for 78%. The growth of this segment accounted for 54% in 2021.

In 2021, active digitalization of banking services continued. The simplification in obtaining the services (consideration of applications for loans and transactions) for the population has led to an increase in demand for unsecured lending. In addition, an active growth of consumer lending is stemming from the consequences of the corona crisis – pent-up demand, changes in consumer behavior and an excess of the tenge liquidity of banks as a result of government anti-crisis measures during the pandemic. Due to the increased demand and high profitability of this segment, many banks began to focus more actively on retail lending. Thus, there are mobile applications and online services for individuals, but a few lenders have similar products for corporate clients. Besides, one of the factors of attractiveness of consumer unsecured lending for banks is the absence of a large number of high-quality corporate borrowers and a low portfolio concentration.

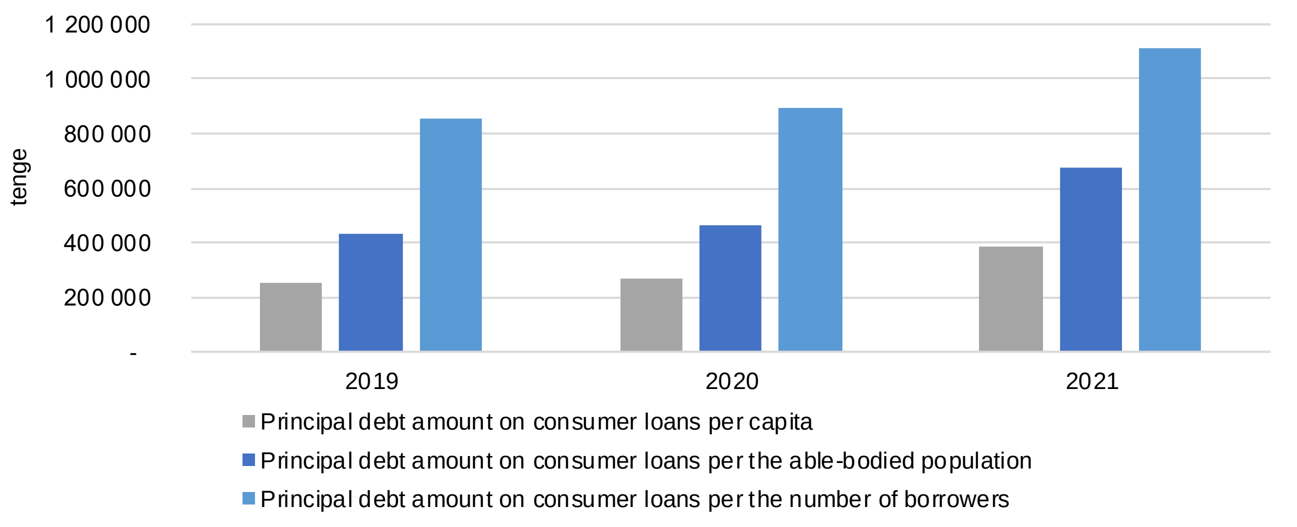
Chart 4.21 ***Growth rates of the consumer loan portfolio are way above the GDP growth rates***



Source: *Credit Register, Banks' reports, National Bank's assessment*

Despite a high quality of the consumer loan portfolio, the portfolio growth was significantly outpacing the GDP growth, which suggests that risks are building up in the consumer lending segment. As at end-2021, the growth in consumer lending to the GDP growth made up 8.3% (in the third quarter of 2021).

Chart 4.22 ***In 2021, the principal debt on consumer loans per capita grew significantly***

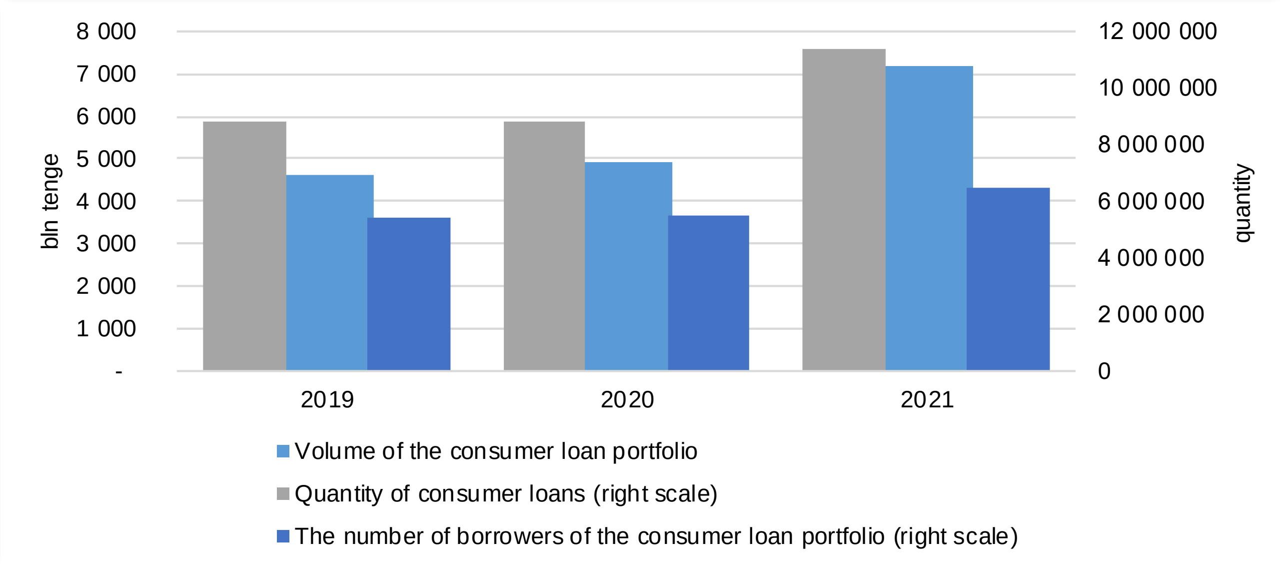


Source: *Credit Register, ASPR BNS RK, National Bank's assessment*

The growth of the consumer loan portfolio is also incommensurable with the growth of the able-bodied population and the population as a whole. Thus, the growth in the amount of principal debt on consumer loans per the number of borrowers, per capita and per working-age population at the end of 2021 amounted to 24%, 44% and 46%, respectively (5%, 5% and 6% in 2020).

Moreover, the number of loans per borrower in 2021 increased from 1.6 to 1.8 due to a dramatic increase in the number of loans (29%). The number of borrowers also demonstrated a sizeable growth compared to a year earlier, 17% versus 1%, respectively.

Chart 4.23 ***In 2021, the principal debt on consumer loans per capita increased significantly***



Source: *Credit Register, National Bank's assessment*

Note: *Loans issued as part of one loan agreement are reported as a single loan*

The growing debt burden and the socio-economic situation of the population require more vigilant monitoring of consumer lending to limit risks and ensure sustainable development of the segment. Previously, a number of measures were implemented to manage the growth and risks of consumer lending. Thus,

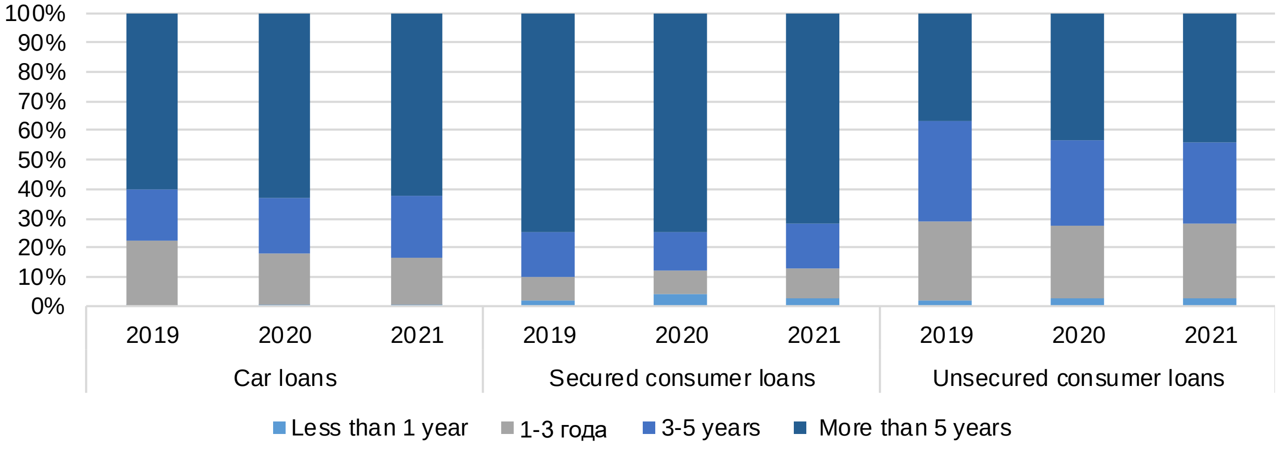
- when issuing a loan, all borrower's payments on all unrepaid loans should not exceed 50% of his/her monthly income;
- no cancellation penalty and fee accruals on all unsecured loans after the 90 days past due;
- a prohibition to provide loans to individuals whose income is below the minimum subsistence rate;
- the number of minors in the family should be taken into account when calculating the debt burden ratio;
- no interest accrual on the capitalized overdue interest;
- requirements to bank capital adequacy ratio have been raised as regards the increase in the degree of risk on consumer loans from 150% to 300%;
- maximum limits of effective annual interest rates on loans to individuals were lowered (interest rates on secured bank loans were lowered by 16 pp (from 56% to 40%), rates on unsecured bank loans were retained at 56%, and rates on residential mortgage loans were lowered by 31 pp (from 56% to 25%));
- in 2021, the rehabilitation framework was introduced to prevent the distressed debt from growing.

The loan term for consumer loans has not undergone significant changes. Thus, nearly a half of the consumer lending portfolio consists of loans with a tenor of over five years and one-to-three year loans account for 23% of the portfolio.

Longer-term loans (5+ years) are concentrated in the consumer loan segment and car loans – 71% and 62% of the portfolio, respectively. Despite the specifics of unsecured consumer loans, as at the end of 2021, loans with a tenor of less than three years account for 28% in this segment.

With a rather long duration of loans in the consumer lending portfolio, the portfolio turnover ratio is significant. Thus, 50% of the consumer loan portfolio at the end of 2021 was issued during the same year.

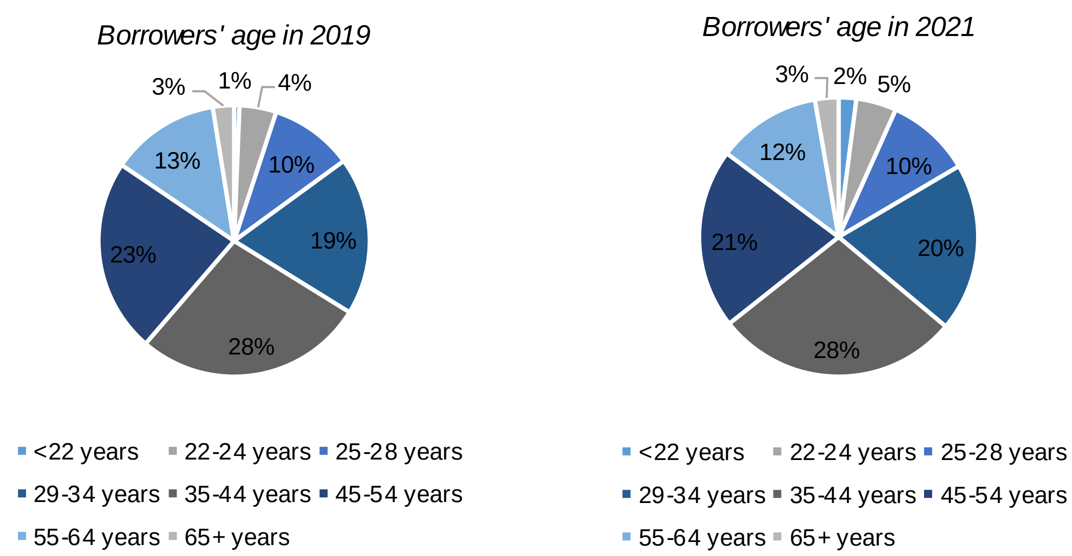
Chart 4.24 ***The contract term of consumer loans has not undergone significant changes***



Source: *Credit Register, National Bank's assessment*

There have been no significant changes in the age distribution of borrowers of the consumer portfolio. The share of the portfolio of borrowers under 24 years old increased from in 2019 to 7% in 2021 due to a reduction in the share of older borrowers (45+ years) from 39% to 36%.

Chart 4.25 ***There have been no significant changes in the age distribution of borrowers of the consumer portfolio***

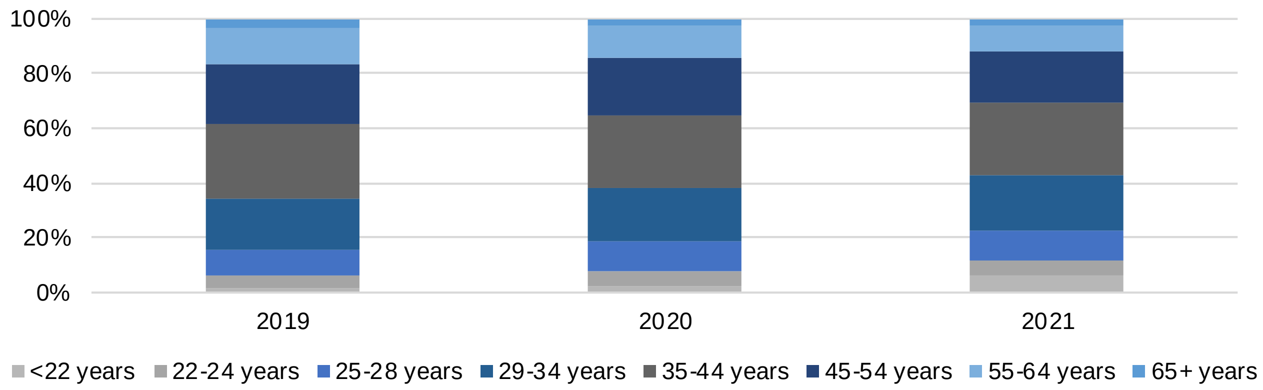


Source: *Credit Register, National Bank's assessment*

Nonetheless, there is a trend towards rejuvenation of the consumer lending portfolio as regards new (issued) loans. The younger generation has become more active in getting loans at the second-tier banks. Thus, the share of the portfolio of borrowers below 28 years old has increased from 16% to 23% over two years. The most sizable growth was demonstrated by the age group below 22 years old. The growth was from 1% to 6% as at the end of 2019 and 2021, respectively.

Chart 4.26 ***… there is a trend towards rejuvenation of borrowers as regards new loans***

New consumer loans portfolio



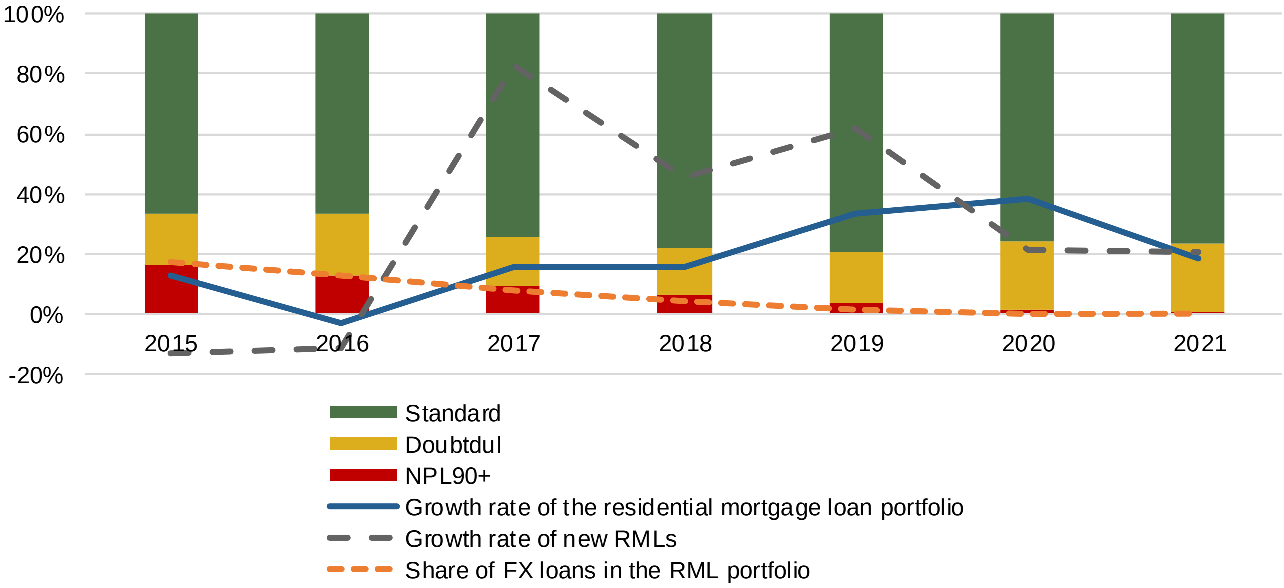
Source: *Credit Register, National Bank's assessment*

In view of the significant growth and changing consumer lending market, the existing and planned regulatory measures will be aimed at preventing the growth of household debt burden and excessive credit risks taken by banks.

4.4.2. Credit Risk of Residential Mortgage Loans

The growth in the residential mortgage loan portfolio slowed down in 2021 and accounted to 18.2% (38.3% in 2020). A slowdown in the portfolio growth was partly due to the drawdown and closure of one of the main government mortgage programs, "Baspana Hit", and the possibility of using a part of retirement savings to pay off debt on residential mortgage loans. Thus, in February 2021, the volume of the residential mortgage loan (RML) portfolio contracted, and the January values were regained by the end of March 2021. The rate of issuance of new RMLs remained at the level of 2020 and amounted to 20.8% in 2021 compared to 21% growth in the lockdown year of 2020 *(Chart 4.27)*.

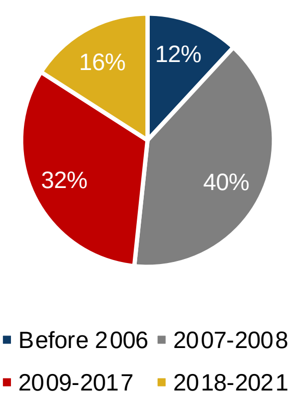
Chart 4.27 ***The level of NPL90+ the residential mortgage loan portfolio reached a 6-year record-low level***



Source: *Credit Register, National Bank's assessment*
Note*: The Financial Stability Report for 2021 uses a more conservative approach in assessing the quality of residential mortgage loans compared to the 2020 FSR*

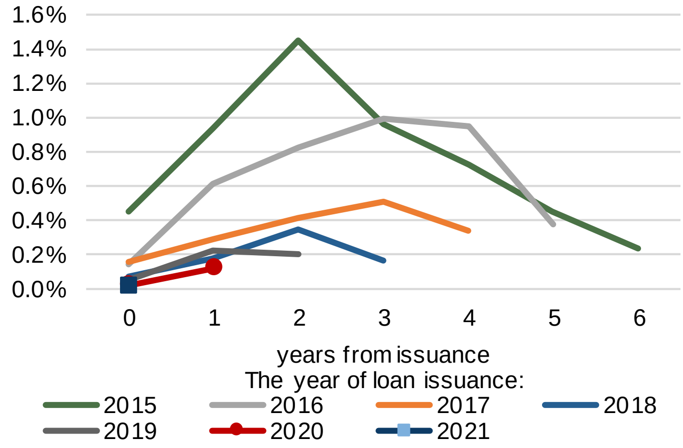
The quality of the residential mortgage loan portfolio kept improving. The level of NPL90+ reached a 6-year record-low level – 0.85%. Loans issued in 2007-2008 prevail in the structure of NPL90+ *Chart 4.28)*. The share of loans issued this year accounts for 1.1% in the NPL90+ portfolio at the year-end 2021 *(Chart 4.29)*.

Chart 4.28 ***Structure of NPL90+ in 2020***



Source: *Credit Register, National Bank's assessment*

Chart 4.29 ***Dynamics of NPL90+ on RMLs***

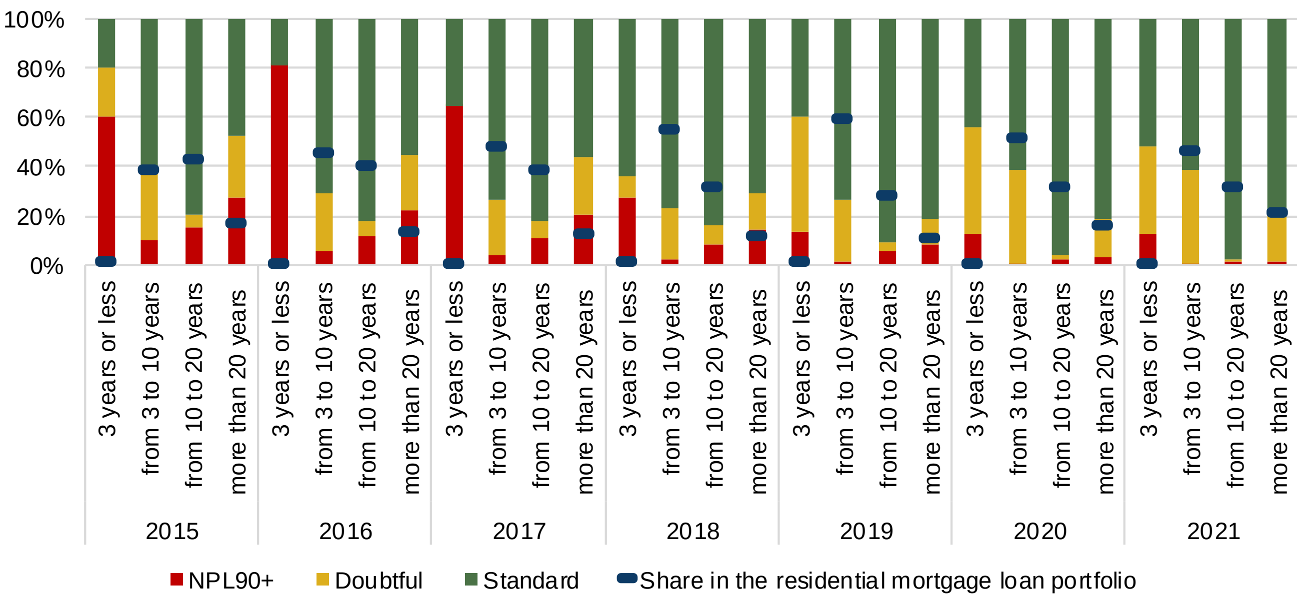


Source: *Credit Register, National Bank's assessment*

The share of longer-term loans in the RML portfolio increased. Thus, the percentage of loans with a duration of more than 20 years increased from 15.9% to 21.6% in 2021 due to a reduction in loans with a term of less than 10 years by 5.8 pp *(Chart 4.30)*. At the same time, the quality of loans with longer maturity is better than that of short ones. In particular, the share of distressed loans with a term of more than 10 years is 9% versus 39% for loans with a term of less than 10 years. The reason for such situation may be a significant amount of payment on a mortgage loan with a shorter time to maturity.

Chart 4.30 ***The quality of RMLs with longer time to maturity is better than that of short ones***

The RML portfolio, by loan term



Source: *Credit Register, National Bank's assessment*

4.5 Macro Stress Testing of Corporate Loan Portfolio Credit Risk

To assess the banking sector stability against possible stress economic scenarios, stress testing of credit risks in the corporate loan portfolio of banks was performed.

The analysis uses the change in the oil price in the base and stress scenarios as a macroeconomic shock, and the price of oil is reduced to $20 per barrel in the stress scenario.

Expected credit losses as a result of shock are estimated based on the developed credit risk model of the real sector and the corporate loan portfolio quality model.

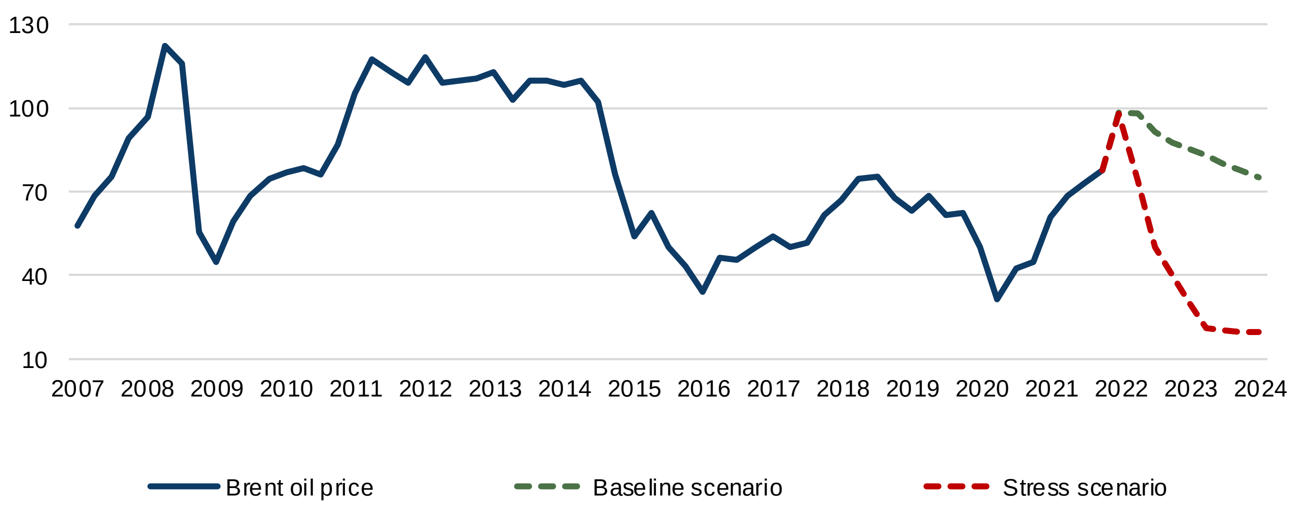
The expected losses for both models are comparable and lead to a reduction in k1 capital adequacy ratio of the banking sector by about 5 pp at the end of the second year in the stress scenario. At the same time, the level of capital adequacy remains above the prescribed ratios, which indicates that banks have a capital buffer to absorb external shocks that lead to deterioration in the corporate portfolio quality.

4.5.1. Macroeconomic Scenarios

Macro scenarios reflect the hypothetical development of the economic situation in order to assess the soundness of banks` and are not official NBK forecasts. For the purposes of macro stress testing, the unified baseline and stress scenarios are used for the entire system. The baseline scenario uses as input baseline scenarios of macroeconomic variables compiled by various experts and institutions. The stress scenario describes a hypothetical crisis and is used to assess the financial system stability in adverse conditions. Brent oil price was used as the main shock-determining variable *(Chart 4.31)*, depending on which the scenario-based paths of the real GDP the exchange rate of the tenge were obtained.

In the baseline scenario, the price of oil is declining to 85 dollars by the end of 2022 and 75 dollars by the end of 2023. Under the stress scenario, the oil price is expected to go down to 40 US dollars per barrel by the end of 2022 and to 20 US dollars per barrel by the end of 2023.

Chart 4.31 ***Dynamics of Brent oil price***

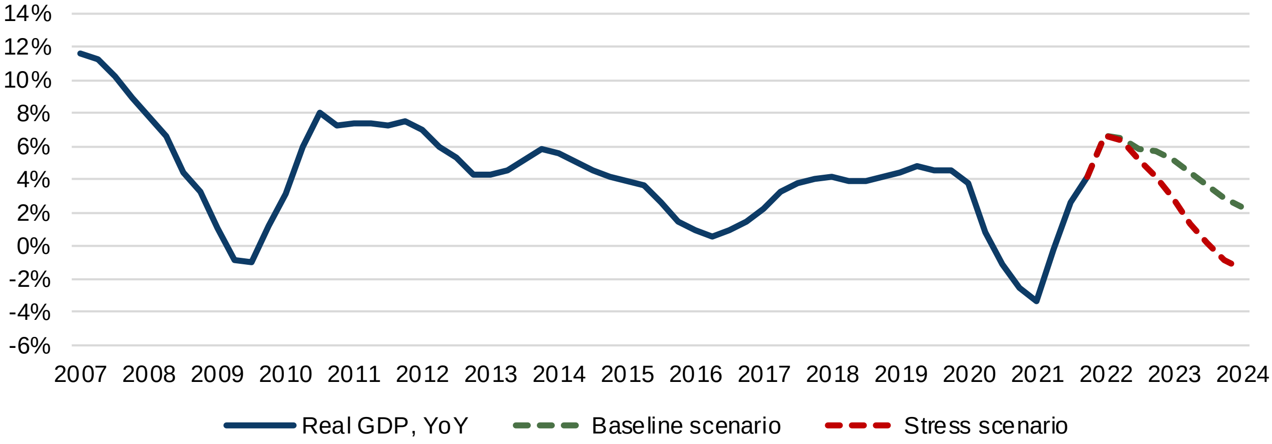


Source: *Bloomberg, NBK's computations*

Under the stress scenario, the drop in oil prices results in a sizable decline in the real GDP to -1.4% (YoY) by the end of 2023 *(Chart 4.32)*.

Chart 4.32 ***Resulting from the shock realization, the real GDP decline will be comparable with the effect of coronavirus pandemic***

GDP growth, YoY



Source: *NBK's computations*

4.5.2. Credit Risk Model for the Real Sector – Assessing the Corporate Portfolio Quality Based on the Enterprise Data

The objective of the development of credit risk model for the real sector is to analyze the potential impact of the financial condition of enterprises on the banking system`s soundness. The vulnerability of real sector entities to various shocks negatively affects financial stability, and, first of all, increases the risks for the banking sector, being the main borrower of credit resources.

Financial statements of the real sector enterprises and the data on loan agreements of corporate entities submitted by banks to the Credit Registry are used to assess the expected credit losses of banks. As part of the first approach, such credit risk metrics as the probability of default and the level of loss given default (the "LGD") were calculated for each sector.

In world practice, structural models of credit risks are widely used, where the probability of a company's default is calculated on the basis of the value of its assets and liabilities. The basic idea is that a company is recognized as defaulted if the total value of its assets is less than the company's debt. During the periods of economic crisis, profit and assets of enterprises decline, liabilities increase, and more firms declare default. Quarterly financial indicators of large and medium-sized enterprises were used to calculate the probability of default in economic sectors. In particular, financial liabilities and interest expenses were used as debt, while assets and earnings before interest and taxes were measured as the value of the business[37]. It is assumed that an economic sector is expected to default if earnings before interest and taxes and assets are less than interest expenses and financial liabilities.

Based on the data in financial statements of enterprises, the maximum level (threshold) of default (ε_t^*), at which point the enterprises will not be able to service their obligations (will default) is determined as:

$$\varepsilon_t^* = \frac{\text{Interest expenses} + \text{Financial liabilities}}{\text{Earnings before interest and taxes } + \text{Assets}} \qquad (1)$$

[37] For the analysis, we used quarterly financial indicators of the profit and loss statement of an enterprise (1-PF report) from 2008 to 2021 (inclusive), provided by the ASPR BNS.

To calculate ε_t^* for each sector of the economy, weighted averages (asset-weighted) of financial indicators of all enterprises belonging to that sector of the economy were used.

The probability of default (PD) for each industry is determined as:

$$PD = Prob(\varepsilon_t < \varepsilon_t^*) = F(\varepsilon_t^*) \quad (2)$$

where F – cumulative function of the distribution of the threshold of default ε_t^*, assuming lognormal distribution.

The percentage of non-repayment in case default (LGD) at end-2021 for each industry is determined as follows:

$$LGD = 1 - \text{Recovery rate} \quad (3)$$

To calculate the recovery rate, the value of collateral reported by banks in the Credit Registry was used, assuming that in the event of default, the bank will be able to compensate losses with the accepted collateral. In calculating the LGD, the value of collateral has been reduced in line with AQR results for 2020. The reduction in total value of collateral after revaluation amounted to 23.8% of the value of actual collateral, while in absolute terms, the most significant revaluation was for commercial and industrial real estate, as well as other types of collateral, by 41% and 39%, respectively.

The panel regression was used to predict future default probabilities during the period of stress. The resulting time series of default probabilities and default rates by industries are used to calculate the expected loss for each industry (EL):

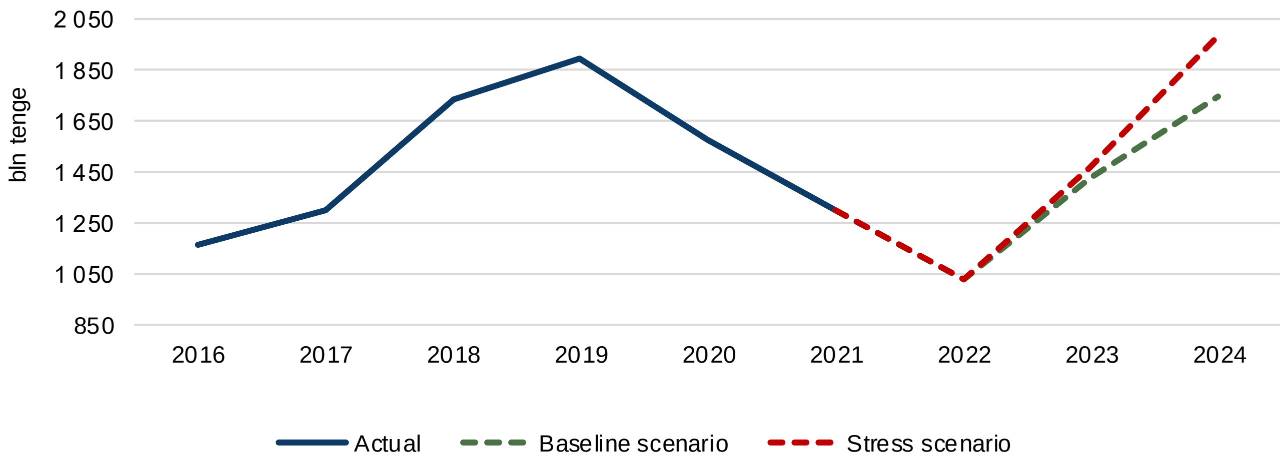
$$EL_{industry} = EAD_{industry} * PD_{industry} * LGD_{industry} \quad (4)$$

$$EL_{total} = \sum EAD_{industry} * PD_{industry} * LGD_{industry} \quad (5)$$

where EAD – is the remaining principal debt on corporate loans in the banks' balance sheets.

As a result, estimated credit losses in the future lead to the creation of additional provisions for banks, which in turn reduces the banks' equity *(Chart 4.33)*.

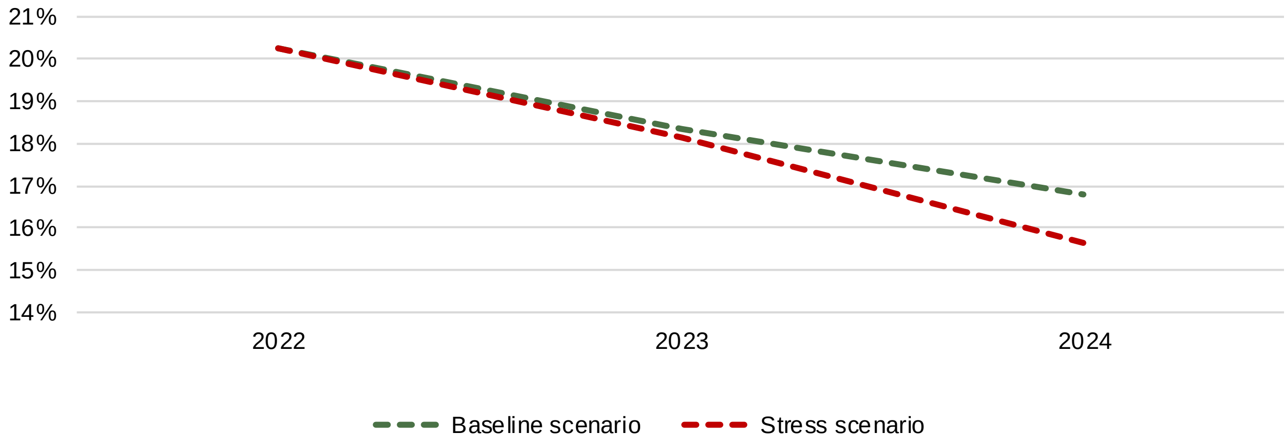
Chart 4.33 ***By the beginning of 2024, ratio of provisions to the size of loan portfolio would increase by 7% in case of the stress scenario and by 4% under the baseline scenario***



Source: *STBs' reports, NBK's computations*

The main assumption of this model is the direct effect of created provisions to the banks' equity, excluding net interest income, which, if taken into account, will somewhat mitigate the negative effect. Despite this conservative assumption, the capital adequacy ratio k1 at the system level will continue to be above the threshold of 8% (excluding additional capital buffers) *(Chart 4.34)*.

Chart 4.34 ***Capital adequacy ratio k1 at the banking system level based on the results of stress testing is high enough both in the baseline scenario and stress scenario***



Source: *STBs' reports, NBK's computations*

4.5.3. Model of the Bank Corporate Portfolio Quality – Assessing the Corporate Portfolio Quality based on the Credit Register Data

The second macro stress testing model is based on the loan quality metrics developed by the National Bank[38]. These metrics allow to identify distressed loans for which there are no signs of repayment on the principal debt and/or accrued interest within a certain period of time.

To develop a model, analytical metrics of loan quality were converted into numerical values in the form of weighted average scores or categories (from 1 to 5) and were assigned to each corporate borrower depending on the amount of its principal debt and the categories of all borrower`s loans. A panel regression was developed to assess the impact of macroeconomic scenarios on loan metrics. As a dependent variable, the model uses a quarterly change in the weighted average (based on the amount of principal debt) score of a corporate borrower, and macroeconomic variables were used as independent variables. The model predicts future categories of loans based on macroeconomic shock scenarios, resulting in migration of the principal debt amounts between categories.

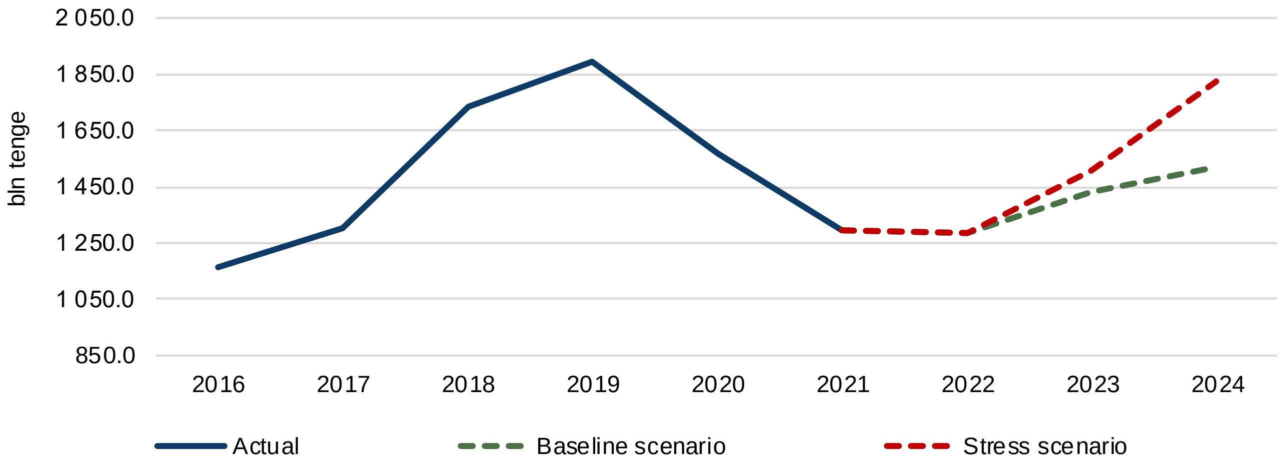
The projected level of provisions is calculated by multiplying the level of provisions in each category by the projected principal amounts, by loan quality category.

$$\text{Total provisions} = \sum EAD_{\text{category},t} * \text{Level of provisions}_{\text{category}}$$

According to estimates, as a result of realization of the stress scenario, the provisions to the loan portfolio ratio will reach 20% by the beginning of 2024 *(Chart 4.35)*, which will lead to a 2.6% reduction in the capital adequacy ratio k1 at the banking system level *(Chart 4.36)*.

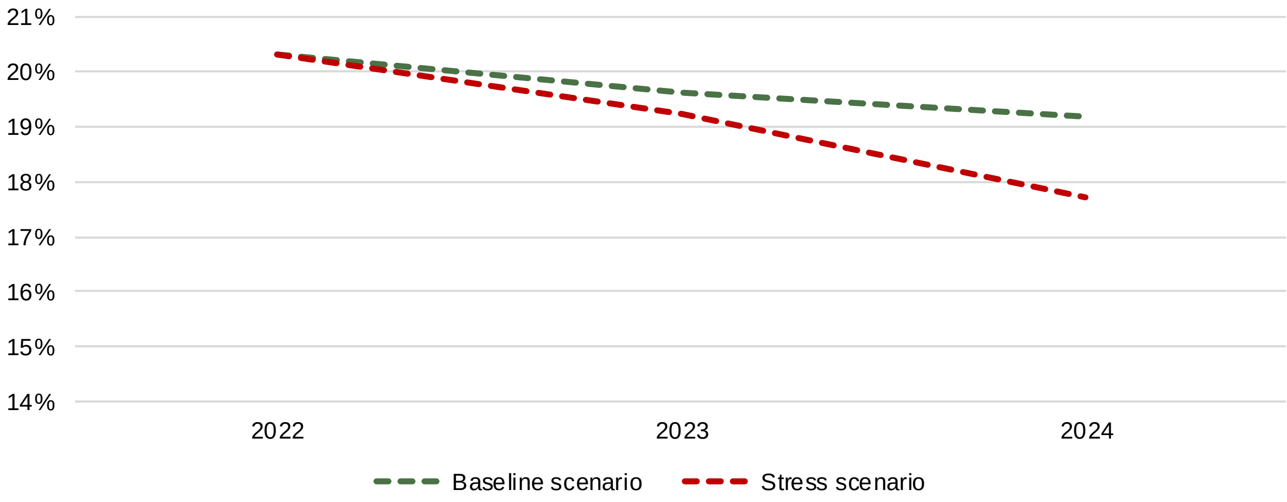
[38] More details about the National Bank's metrics can be found in the paper "Assessing the Loan Portfolio Quality based on the Data at the Loan Level": https://nationalbank.kz/file/download/70974

Chart 4.35 ***By the beginning of 2024, the provisions to loan portfolio ratio would increase by 5% under the stress scenario and by 1% under the baseline scenario***



Source: *STBs' reports, NBK's computations*

Chart 4.36 ***The projected capital adequacy ratio k1 at the banking system level is high enough both in the baseline scenario and the stress scenario***



Source: *STBs' reports, NBK's computation*

V. Liquidity, Funding, Dollarization, Foreign Exchange and Interest Rate Risks

Based on the 2021 performance, the volume of high quality liquid assets decreased slightly; however, the liquidity ratios of most banks were still at sufficient levels and exceeded the required ratios, which indicates that this segment has a low risk level. Despite the decrease in the level of high quality liquid assets, the structure of allocation of the liquidity surplus did not change and was maintained mostly by the notes issued by and deposits opened with the NBK.

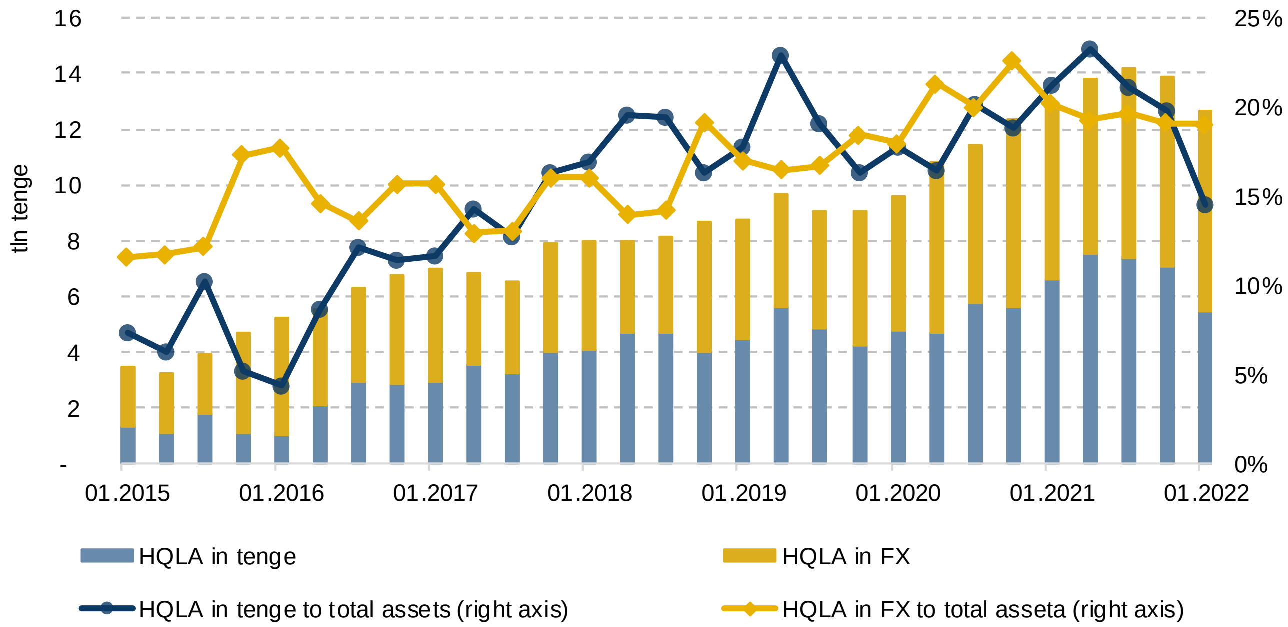
The funding risks persist due to a low share of actual term deposits and a persistently high share of dollarization. Concentration of public funding has declined and the funding base has become more diversified; however, its concentration is still at a high level. Dollarization level keeps declining but its pace is slowing down.

5.1 Liquidity Risks

In 2021, the total volume of high quality liquid assets (HQLA)[39] decreased by 2% or 264 billion tenge compared to the volume at the beginning of the year due to decrease in assets in the national currency (17.2% or 1.1 trillion tenge). In its turn, the volume of HQLA in foreign currency, on the contrary, demonstrated an increase of 13.9% or 873 billion tenge compared to the beginning of the year. As a result, the share of high quality liquid assets in the tenge to total assets became lower than the share of the high quality liquid assets in foreign currency (15% and 19%, respectively) *(Chart 5.1)*.

During the year, the dynamics of HQLA volumes were divergent. In the first half of 2021, the upward trend in the growth of HQLA volumes was observed in the banking sector. In mid-2021, the maximum amount of HQLA was reached, which equaled to about 14.2 trillion tenge or 40.7% of the banking sector assets, having increased by 10% over six months.

Chart 5.1 ***Volumes of the banking sector HQLA decreased by the end of 2021***



Source: *STB reports*
Note: *HQLA include: cash, precious metals, correspondent accounts, interbank deposits and government securities (GS) (excluding encumbered ones). The data is provided as at the end of the quarter*

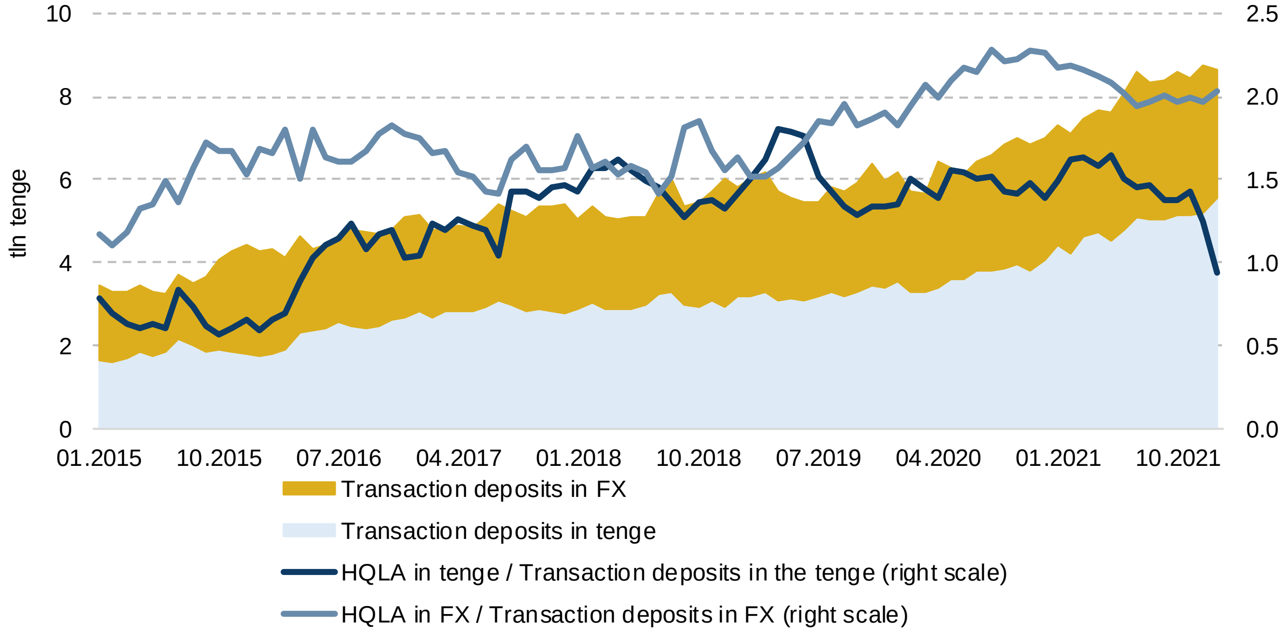
[39] Excluding encumbered HQLA

In the second half of the year, the volume of HQLA decreased by 11%, which negated the growth in the first half of the year. The decrease was due to a 25.6% reduction in the tenge component compared to the volumes at the end of the first half of the year, which could be caused by the outflow of funds as a result of completion of the Program for Concessional Lending to Business Entities, and the corporate events that occurred in some banks. In addition, the concurrent growth of the HQLA currency component in the second half of the year (4.7%) could be a signal of the increased currency expectations and conversion of assets in tenge.

As of January 1, 2022, the amount of banks' liabilities on transaction accounts of individuals in the tenge and corporate entities in the moment exceeded the amount of HQLA in the national currency (0.94). A similar situation took place before (until mid-2016) and is not abnormal. Conceptually, the excessive liquidity is neither an obligatory condition for financial stability nor is desirable from the point of view of the bank efficiency.

As for the volumes of HQLA in foreign currency, the excess of HQLA volumes over the amount of liabilities on foreign currency transaction accounts remained approximately at the previous levels (a 2-time excess) *(Chart 5.2)*.

Chart 5.2 ***HQLA level at the end of 2021 decreased in the moment below potential outflows in the form of transaction accounts***

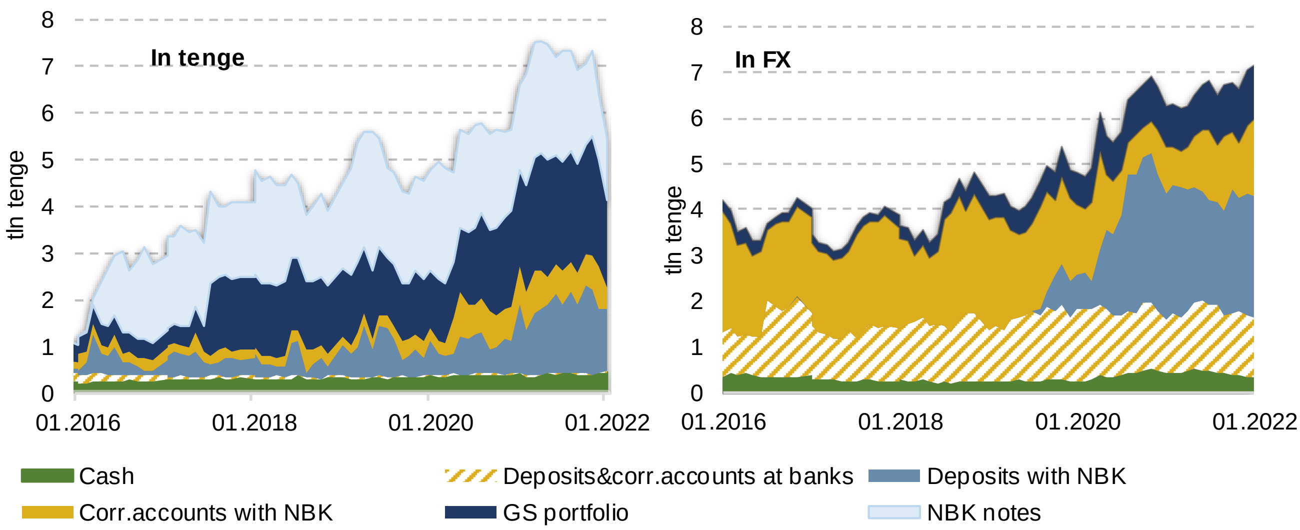


Note: *Transaction accounts include current accounts and demand deposits of individuals and corporate entities, including interbank correspondent accounts*

The main areas of banks' liquidity allocation remained structurally almost unchanged. By the end of 2021, the tenge liquidity of banks was distributed mainly in government securities (33.6%) and the National Bank (notes – 24.7%, deposits – 24.2%), foreign currency – at the National Bank (deposits – 36.7%, and correspondent accounts – 23.9%), as well as deposits and correspondent accounts at other banks (18.6%) and government securities (16.2%).

The main dynamics in volumes of HQLA in the tenge during the year were determined by movements in notes and the GS portfolio, which increased in the first half of the year (by 4.3% and 8.3%, respectively) and decreased in the second half of the year (by 6.9% and 14%, respectively) and moved in opposite directions. The major movements of HQLA in foreign currency in terms of liquidity allocation instruments were recorded on correspondent accounts with the NBK (increase of 8.6% and 2.1% in the first half and second half of the year, respectively), deposits with the NBK (decrease of 7.9% and increase of 5. 4%) and deposits and correspondent accounts with other banks (a 4.6% growth and 2% fall) *(Chart 5.3)*.

Chart 5.3 ***Claims on the NBK prevail in the tenge and foreign currency portions of HQLA***

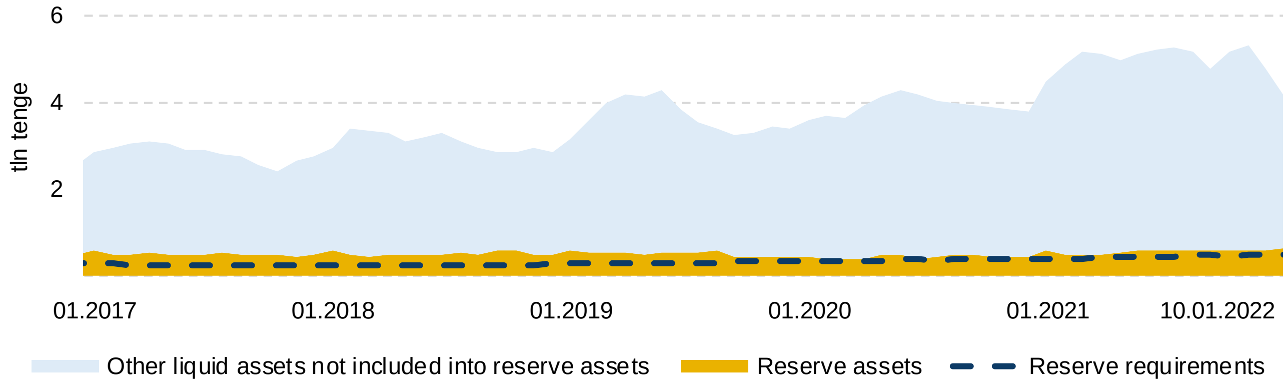


Source: *STB reports*
Note: *HQLA include cash, precious metals, correspondent accounts, interbank deposits and government securities (excluding encumbered). The data is at the end of the month*

Reduction in liquidity surplus in the second half of 2021 did not affect the fulfillment of the minimum reserve requirements by banks. The banks continue to meet minimum reserve requirements with a significant margin. During 2021, the gap between reserve assets and reserve liabilities slightly narrowed (from 1.4 to 1.3 times) *(Chart 5.4)*.

By the end of 2021, the volumes of primary liquidity in the form of cash on hand and funds in the national currency on correspondent accounts with the NBK are 1.9 times higher than the reserve requirements and amount to 925 billion tenge, while the required level is 486 billion tenge. At the same time, the tenge liquidity placed in deposits and notes of the NBK, i.e. assets easily convertible into reserve assets, exceeded reserve requirements by 5.5 times.

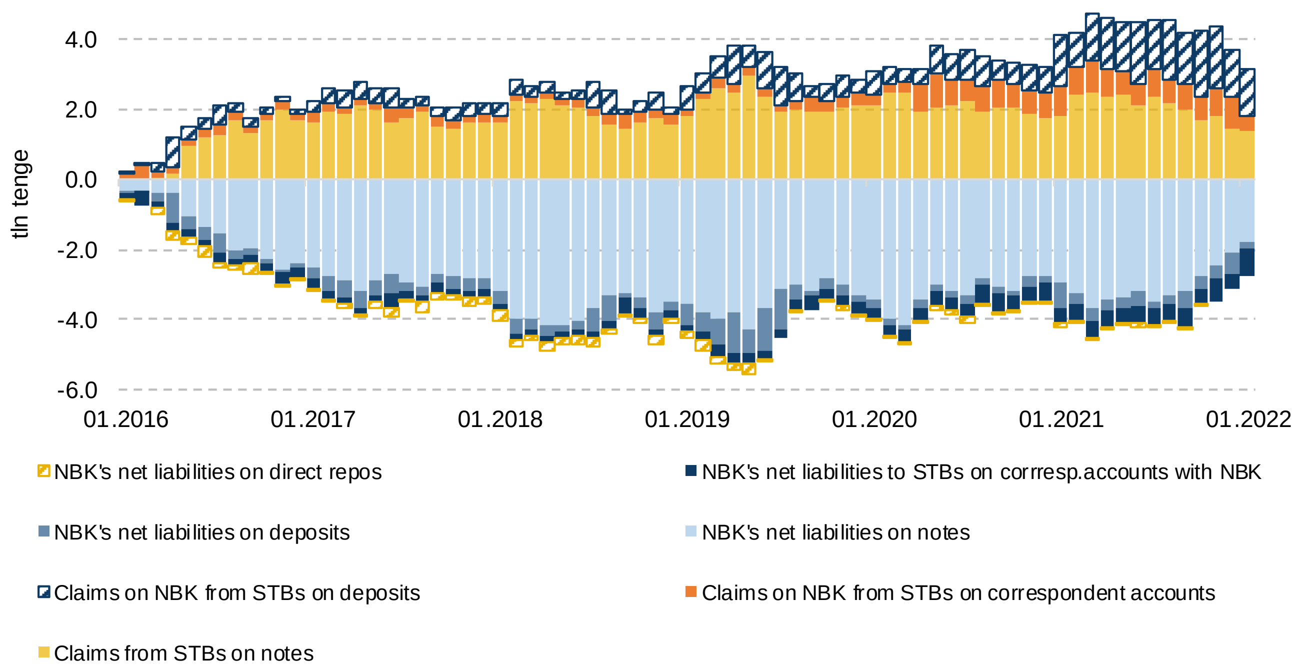
Chart 5.4 ***Starting from 2017, banks meet minimum reserve requirements with a significant margin***



Source: *STB reports*
Note: *Reserve assets are the average balances in national currency on banks' correspondent accounts with the NBK and cash (cash, money in transit, ATMs, terminals) within 50% of the MRR for the period of determination. Reserve requirements are the minimum amount of funds required to be maintained by banks on a correspondent account in the national currency with the NBK. Data on MRR, reserve assets and claims on the NBK are given on average for the period*

Bank claims on the National Bank at the end of 2021 amounted to 3.1 trillion tenge, having declined by 23% over the year *(Chart 5.5)*. The excess of HQLA in the tenge absorbed by the NBK's instruments amounted to more than the half (57.5%) of the overall tenge liquidity in the banking sector.

Chart 5.5 ***Liquidity surplus was withdrawn mainly by notes and deposits with the NBK***

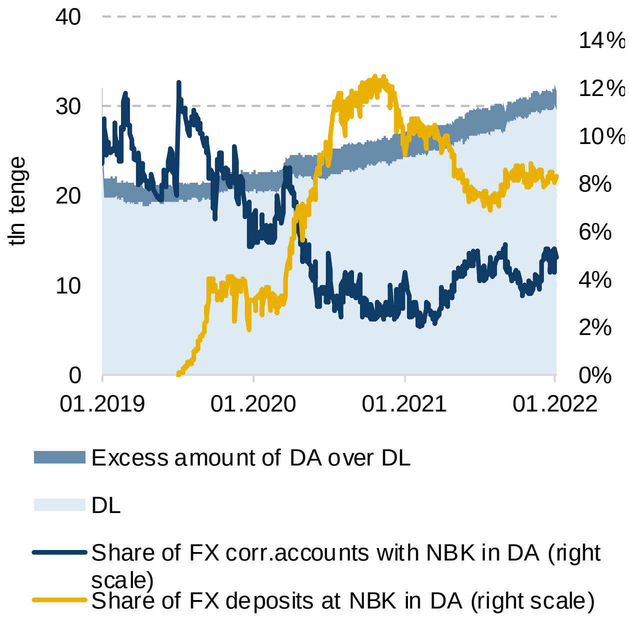


Source: *STB reports, NBK*

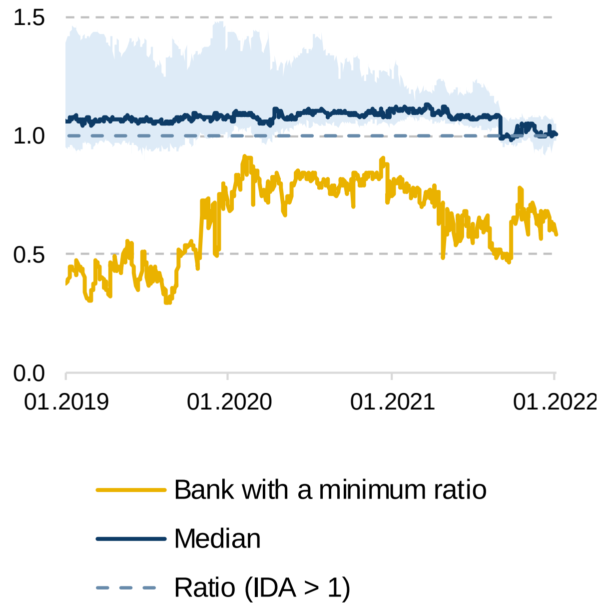
In 2021, domestic liabilities of banks grew faster than domestic assets (17.8% vs. 23.6%) and reached the levels of 32,428 billion tenge and 30,165 billion tenge, respectively. The share of foreign currency deposits in domestic assets decreased by 1.9 pp (up to 8.1%) and, on the contrary, an increase in the share of a more liquid instrument – foreign currency correspondent accounts with the NBK - by 1.6 pp (up to 5.3) *(Chart 5.6A)*.

Chart 5.6

A. Foreign currency correspondent accounts with the NBK make a relatively small part of domestic assets



B. At the same time, funds on foreign currency accounts of most banks have almost no effect over banks' compliance with the IDA

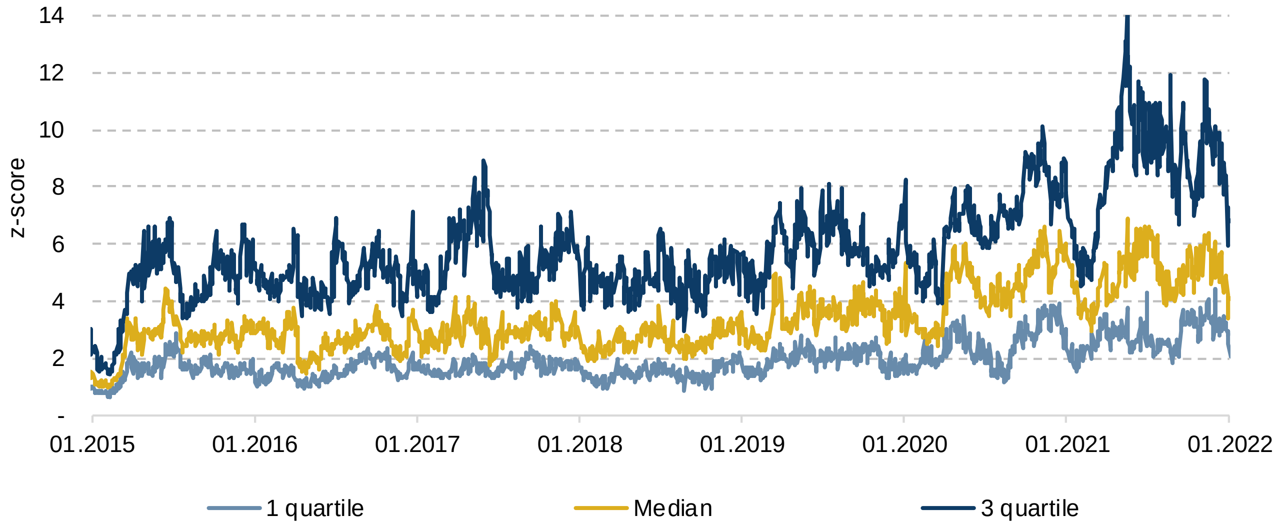


***Note**: DA - domestic assets, DL - domestic liabilities, which are calculated as the sum of average monthly values of the sub-debt, issued bonds, with the exception of Eurobonds, domestic liabilities to residents of Kazakhstan and part of equity. IDA is the ratio of investments in domestic assets (>= 1). Interquartile range includes banks in the 2nd and 3rd quartiles*

Along with the growing popularity of foreign currency deposits with the NBK introduced in mid-2019, their impact on banks' compliance with the IDA requirement is increasing. Deposits with the NBK with their higher returns than correspondent accounts are an alternative for placement of free foreign exchange liquidity abroad. As a result, banks' funds on foreign accounts amounted to only 3.7% of domestic assets, having increased by 9.3% over the year to 1.2 trillion tenge.

In its turn, in 2021 the decrease in the volume of deposits with the NBK, which is a part of domestic assets of the banks, resulted in a narrowing of the interquartile interval for compliance with the IDA standard. Nevertheless, in 2021, most banks continued to comply with the IDA ratio even without taking into account the funds with the NBK's foreign currency correspondent account. At the same time, the reduction in IDA in the banking system in the second half of the year is due to a merger of two large banks *(Chart 5.6Б)*.

Chart 5.7 ***Most of second-tier banks (STB) have sufficient tenge funds to cover one standard deposit deviation***

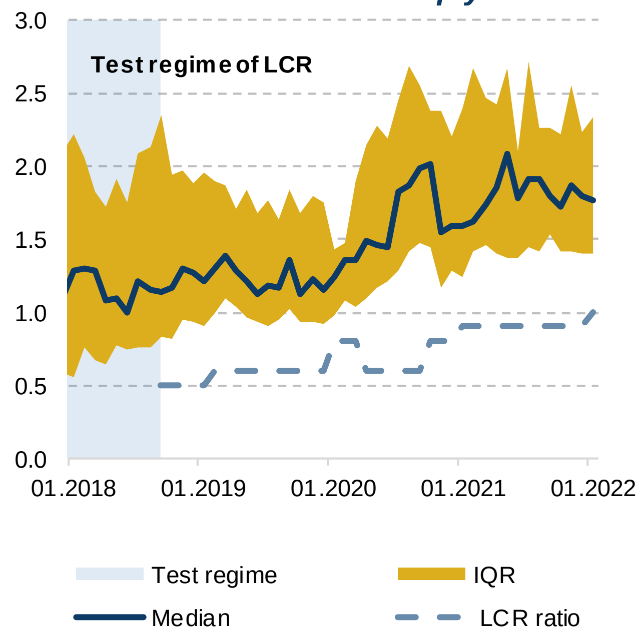


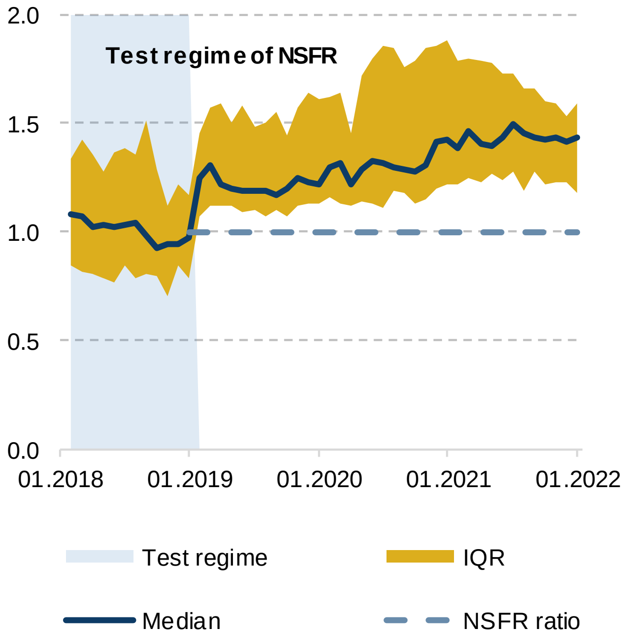
Source*: STB reports*
Note: *The adequacy ratio of basic liquid assets is calculated as the ratio of basic liquid assets of the banks (cash on hand, precious metals, funds in correspondent accounts and deposits with the NBK/STB) and standard deviation of deposits in national currency for 3 months on a per day basis (Z -score). Daily data*

Despite the fall in amount of the tenge-denominated HQLA, analysis of intraday liquidity shows that the banks have sufficient tenge liquidity to cover the one-day standard deviation of the deposit base, which means that banks are able to match the expected demand for borrowed tenge liquidity *(Chart 5.7**Ошибка! Источник ссылки не найден.**)*.

During 2021, most banks complied with the LCR and NSFR ratios, with the exception for two banks whose licenses had been revoked in the first half of 2021. It should be noted that the value of the short-term liquidity coverage ratio (LCR) in 2021 increased from 0.8 to 0.9 as part of a gradual increase in ratios to the level recommended by the Basel Committee on Banking Supervision (1.0 starting from 2022) *(Chart 5.8)*.

Chart 5.8 ***Most banks comply with LCR and NSFR requirements***





Source: *STB reports*

5.2 Funding Risks

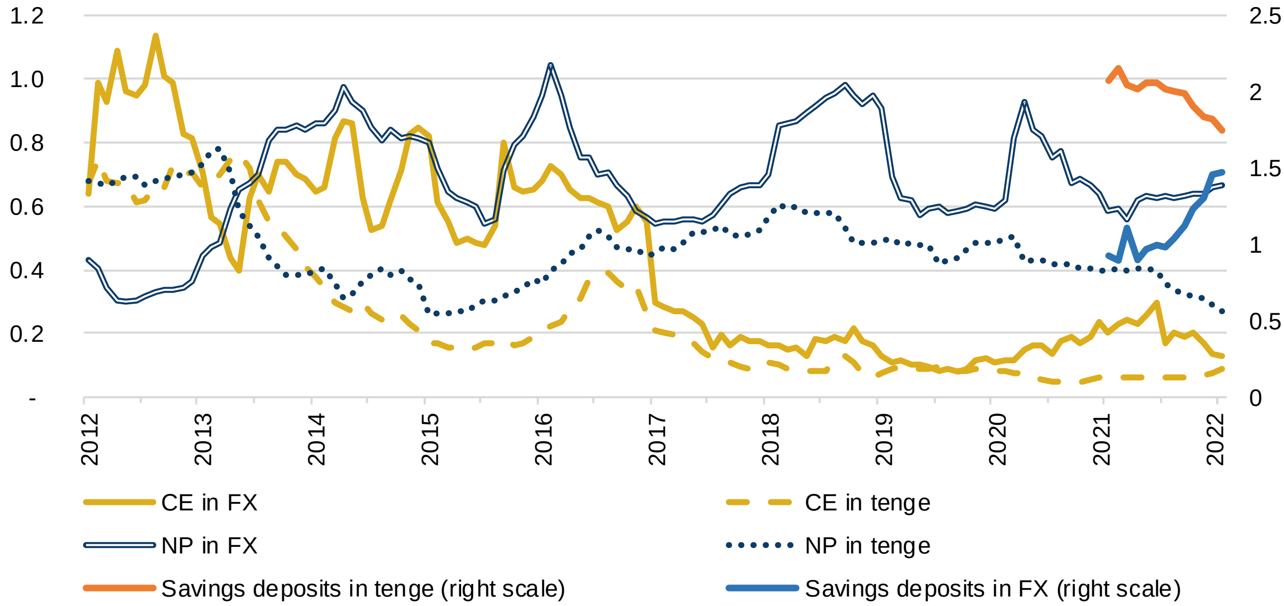
Risks associated with a low share of actual term deposits in the funding structure and a high share of dollarization are persisting. Concentration of public funding has declined and the funding base has become more diversified.

Sustainability of Funding

The financial stability of a bank largely depends on the structure of its resource base, both in terms of the timeframe and cost, which affects the bank's policy regarding the timing of placement of attracted funds into assets.

In 2021, the average maturity of deposits with a contractual term of 1-5 years remains low, especially for deposits in the national currency *(Chart 5.9)*. By the end of 2021, the average life of deposits of individuals with a contractual term of 1-5 years in the tenge was about 3 months, and of corporate deposits – about 1 month.

Chart 5.9 ***The average actual maturity of deposits with a fixed term of 1-5 years is less than a year***



Source: *STB reports*
Note: *The average turnover is determined by the modified formula for the receivables turnover period taking into account the turnover on attracting and withdrawing deposits. The data for the reporting month*

There is an increase in the maturity spread of deposits of individuals by currencies. Deposits of corporate entities, on the contrary, demonstrate shortening of the actual maturity of foreign currency deposits while maintaining the level of the actual maturity of the national currency deposits. Given the nature and purpose of placing funds on corporate deposits, this situation may be a signal that the need of the business in working capital to conduct its core operations has been restored.

Given that deposits account for 79% of banks' liabilities, their stability in terms of maturity is at a low level, which complicates the process of transformation of maturity of borrowed funds into long-term resources.

Significant contribution to enhancing stability of the deposit base is made by the savings deposits introduced by the National Bank jointly with the KDIF in 2018, which provide for increased profitability and a larger amount of the government guarantee, as well as the loss of interest and mandatory notification in case of early withdrawal. Based on the 2021 performance, the average maturity for such deposits with a contractual term of 1-5 years is about 21 and 18 months in the national currency and foreign currency, respectively.

In 2021, the National Bank continued working over improvement of sustainability of the funding base of banks and financial stability in general.

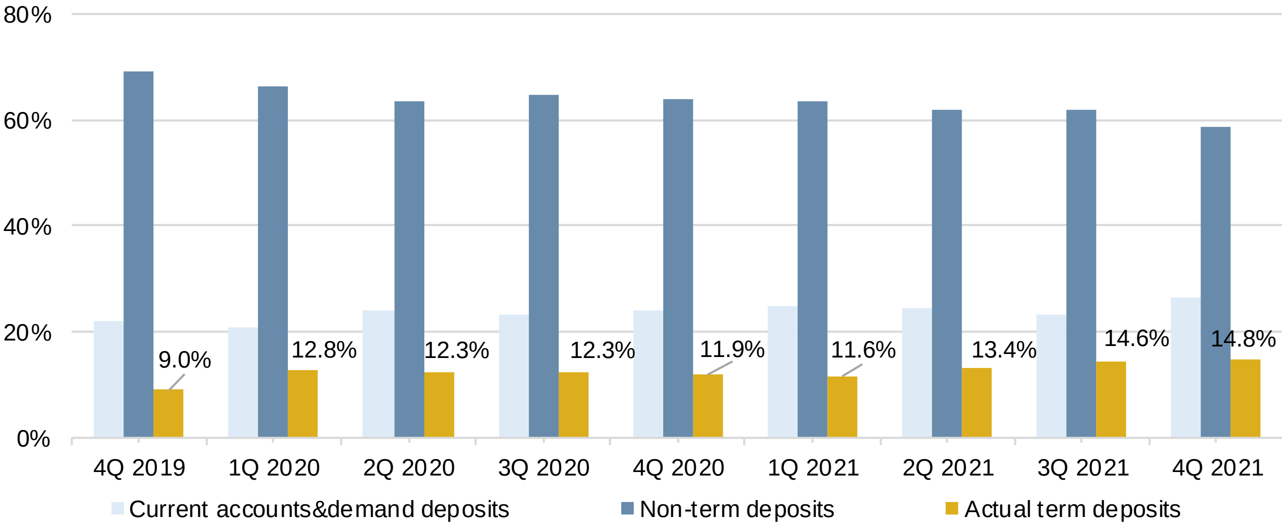
Thus, to determine the amount of contributions of the member banks of the deposit insurance system in accordance with the risk assumed by the KDIF, effective from September 1, 2021, a new model for assessing the financial position of banks was implemented. This model allows identifying deterioration of financial position at an early stage, ahead of revision of ratings by the international rating agencies. As a result of application of the new model, the levels of contributions of the member banks were distributed according to classification groups that correspond to the risks assumed by KDIF, which in turn is consistent with the function of ensuring the adequacy of the special reserve to pay the guaranteed reimbursement.

As part of a guaranteed reimbursement on deposits, a transition was made to a system of online payments to depositors of the banks under liquidation. According to legislative changes, an application to receive a guaranteed reimbursement can be submitted electronically directly to the KDIF, without visiting the branches of an agent bank (a full cycle of the guarantee reimbursement payout process is carried out: from downloading registers of depositors to the payout per se), which is the first system of such kind in the CIS.

Moreover, to enhance confidence in the banking system, payouts of guaranteed reimbursement to depositors of second-tier banks whose licenses had been revoked were organized in record short time. Payouts to depositors of AsiaCredit Bank (February 24, 2021) and Capital Bank (July 3, 2021) started on the 8th and 6th working days from the day the banks were deprived of their licenses.

At the end of 2021, to increase the attractiveness of the tenge deposits, the National Bank initiated an increase of the level of guarantee for savings deposits in the tenge from 15 million tenge to 20 million tenge and, accordingly, the total amount of guarantee for one bank increased up to 20 million tenge.

Chart 5.10 ***Non-term deposits continued the last-year declining trend, while the actual fixed term deposits demonstrated growth, albeit insignificant***



Source: *KDIF*

In 2021, the continued trend of growth of actual fixed term funding was observed as a positive factor in the sustainability of funding. During the year, a share of actual fixed term deposits increased by 2.8 pp (up to 14.8% at the end of the year). At the same time, there was an increase in a share of current accounts and demand deposits by 2.6 pp (26.4% at the end of the year). The share of non-term deposits at the end of the year amounted to 58.8%, having decreased by 5.3 pp per year *(Chart 5.10)*.

Funding Concentration

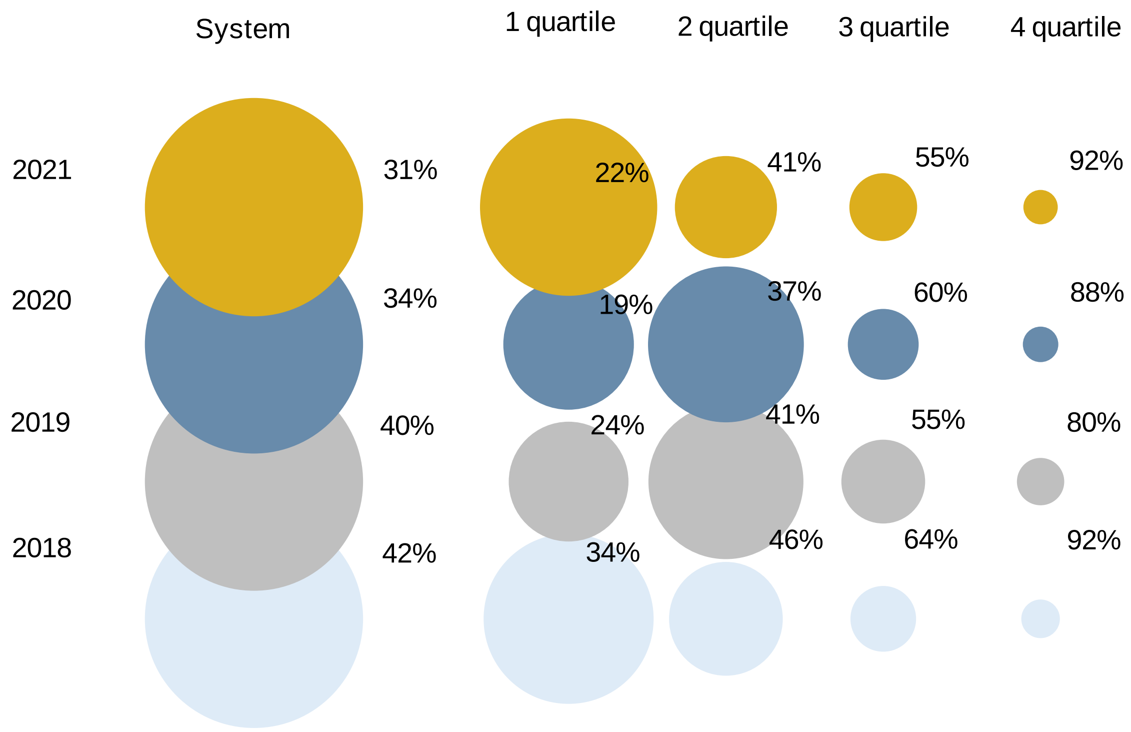
The level of concentration of the largest funding sources in liabilities of the banking sector, as a factor of vulnerability and funding stability, is gradually decreasing. The funding base is becoming more diversified and less vulnerable to withdrawals from the major lenders. Despite this, the concentration risk is still significant.

The share of the largest creditors in total liabilities of the banking sector went down from 42% to 32% *(Chart 5.11)*. Liabilities during the reporting year decreased mainly at the expense of public and quasi-public funding. Liabilities to large retail depositors and non-government corporate entities increased insignificantly

The share of liabilities to the largest creditors in the top banks decreased from 34% at the end of 2018 to 22% as of the reporting date. Small banks remain to be the most exposed to concentration risk. In this group, the share of largest creditors in liabilities averages 92%.

Chart 5.11 ***Traditionally, the largest lenders and depositors are concentrated in large banks, while the highest concentration levels are observed in several small banks***

Share of the bank's largest creditors



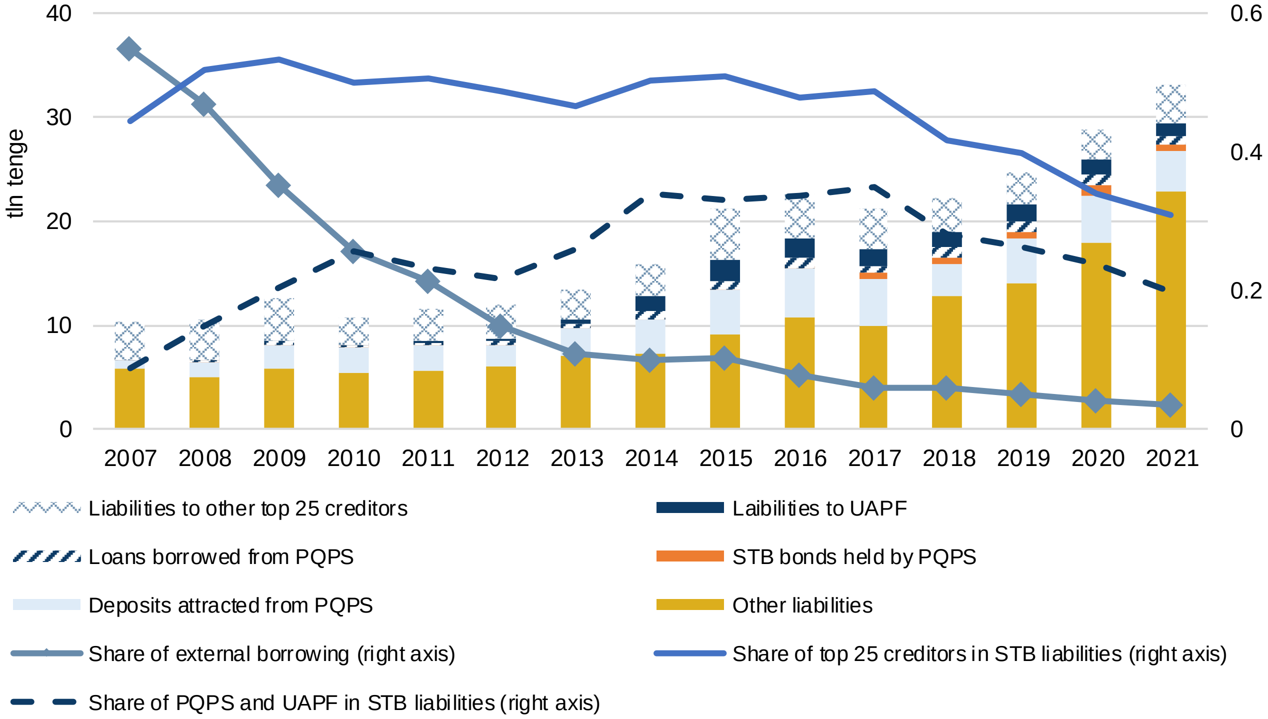
Source: *STB reports*
Note: *The ranking and distribution of quartiles is done according to the share of top 25 creditors for a given bank in the bank's liabilities: 1 quartile - banks with the smallest share of top creditors, 4 quartile - banks with the largest share. The bubble area is proportional to the share of quartile banks' liabilities in sector liabilities. Inside the bubble, the quartile average share of top creditors is indicated*

Dependence on State-Owned Companies

The share of the public and quasi-public sectors in bank funding is declining. If earlier, as a rule, state-owned companies-creditors prevailed, a relative increase in the concentration of large retail depositors and non-government corporate entities in liabilities to the largest creditors (51% vs 49% at the end of 2020) has been observed over the reviewed period.

The trend towards declining the concentration of funding from state-owned companies, which began in 2019, persisted, and in 2021 the share of state-owned companies in total liabilities amounted to 20% *(Chart 5.12)*. A reduction in liabilities to the public and quasi-public sectors is observed for all sources of funding. Other liabilities and liabilities to other largest creditors of the non-public sector increased significantly. The trend of growth of other liabilities is associated with an increase in retail funding – deposits of individuals and corporate entities.

Chart 5.12 ***Since 2018, the share of the largest funding, including from the public sector, has been gradually decreasing***

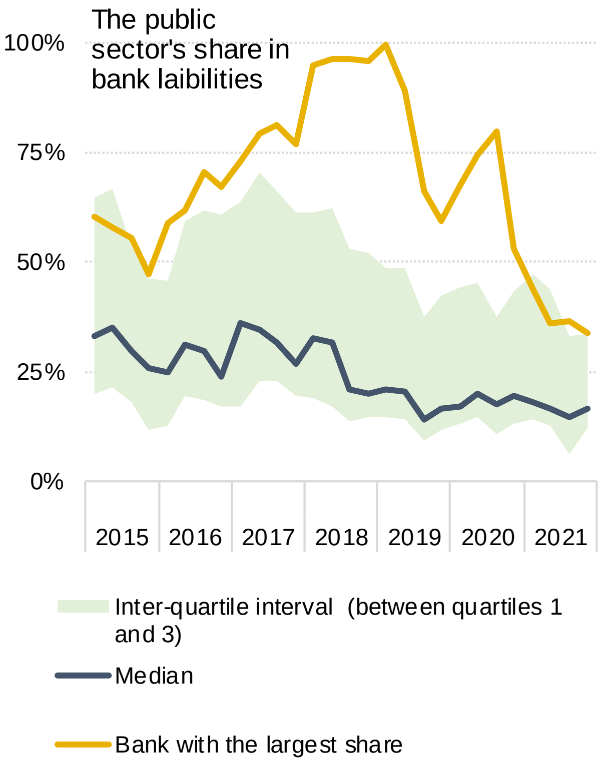


Source: *STB reports, UAPF reporting*
Note: *PQPS - public and quasi-public sector. Liabilities to UAPF include liabilities on deposits and securities. Other liabilities include liabilities to other non-PQPS or major lenders*

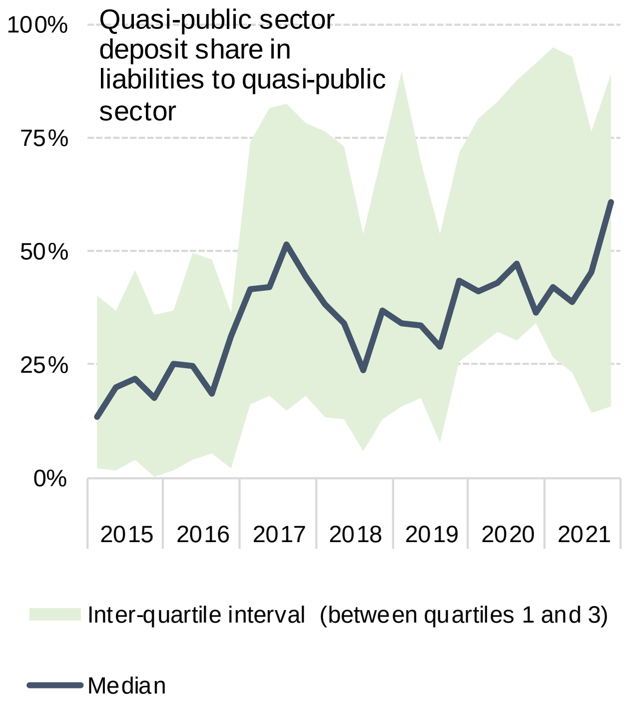
A significant reduction in the dependence of the public sector in funding is also observed in the context of banks. If earlier, in certain periods the share of the public sector in the liabilities of individual banks, mostly small ones, reached 100% *(Chart 5.13A)*, at the end of 2021, the largest share of the public sector in the liabilities of a bank was 34%.

Chart 5.13

A. Funding at the level of banks decreased significantly



B. Funds are raised mainly in the form of non-term deposits



Source: *STB reports, UAPF reports*

The main way to place liabilities of the public and quasi-public sectors are deposits as the most unstable and expensive form of funding, especially during the periods of idiosyncratic or market stresses. The share of deposits in liabilities of the public and quasi-public sector was 73%, of which 48% were denominated in foreign currency. In this regard, the impact of concentration risk on the sustainability of funding, especially from the above sectors, remains *(Chart 5.13B)*.

Issues of expanding the term or fixed deposit base in the total share of liabilities and improving the system of asset and liability management are still relevant.

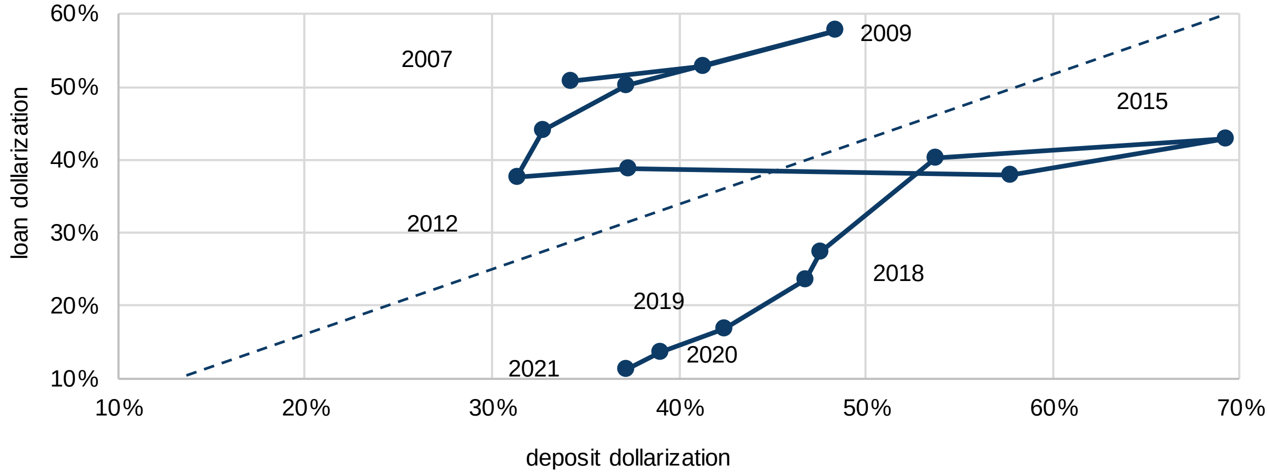
5.3 Dollarization Risks

The level of dollarization continues declining, however, the pace is slowing down. The share of the foreign exchange component in the total volume of loans and deposits during 2021 declined comparably – 3 pp and 2 pp, respectively. The level of dollarization of liabilities was 37% at the end of 2021, and that of the assets – 11%.

Dedollarization is one of the most important factors for the effective implementation of the monetary policy and ensuring a well-balanced development of the financial sector; it has a significant impact on the ability of financial institutions to manage foreign exchange risks. The key conditions for dedollarization include maintaining macroeconomic stability, increasing economic diversification and reducing vulnerability to external shocks.

In 2021, the dedollarization process continued in terms of both deposits and loans. Over the year, the level of dollarization of the STB deposits decreased from 39% to 37% compared to that of 2020, and the level of dollarization of the loan portfolio decreased from 14% to 11%. The pace of dedollarization has been slowing down compared to preceding years *(Chart 5.14)*.

Chart 5.14 ***Dedollarization of loans and deposits is slowing down***

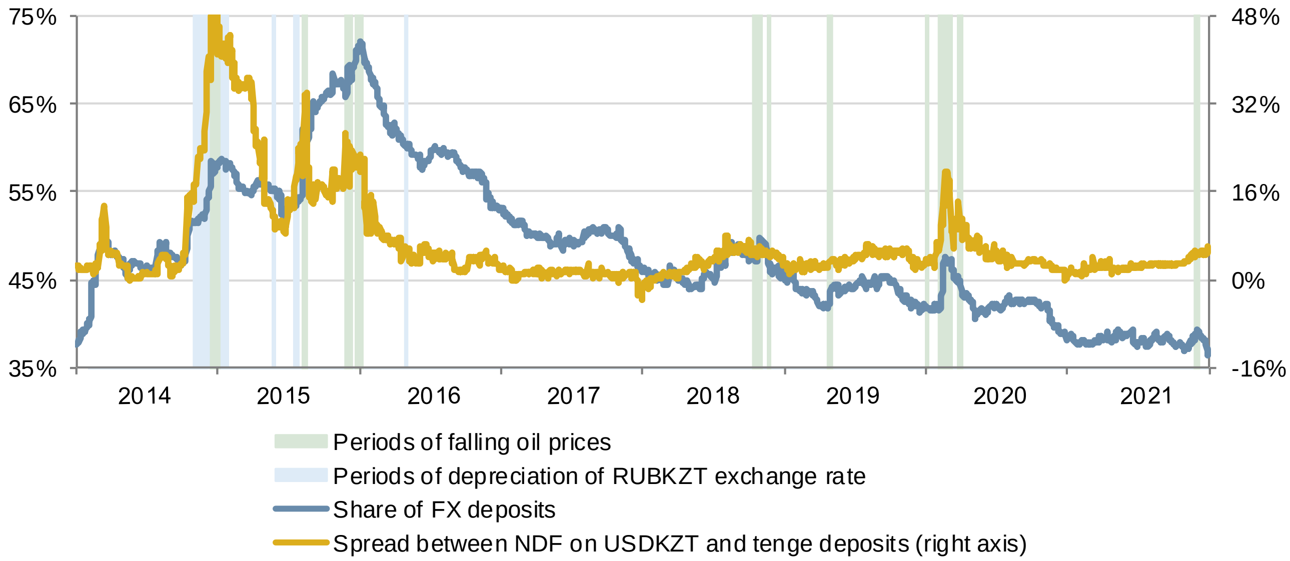


Source: *STB reports*
Note: *Data at the end of the period*

In 2021, there were practically no shocks in the form of a sharp decline in oil prices, which was recurrently observed as one of the determining factors affecting the level of dollarization. The share of foreign currency deposits and the spread between the USD/KZT non-deliverable foreign exchange forward (NDF) and weighted average rates on tenge deposits were at relatively low and stable levels.

A sharp drop in oil prices recorded at the end of 2021 associated with fears of a new wave of the pandemic, raised in the moment expectations of the national currency weakening, which resulted in a slight increase in the spread between the NDF for the USD/KZT pair and the weighted average rates on deposits in tenge, as well as in the growth of the share of foreign currency deposits; however, the latter was short-term and leveled out by the end of the year *(Chart 5.15)*.

Chart 5.15 ***Exchange rate expectations still drive liability dollarization which intensifies during a period of external volatility***

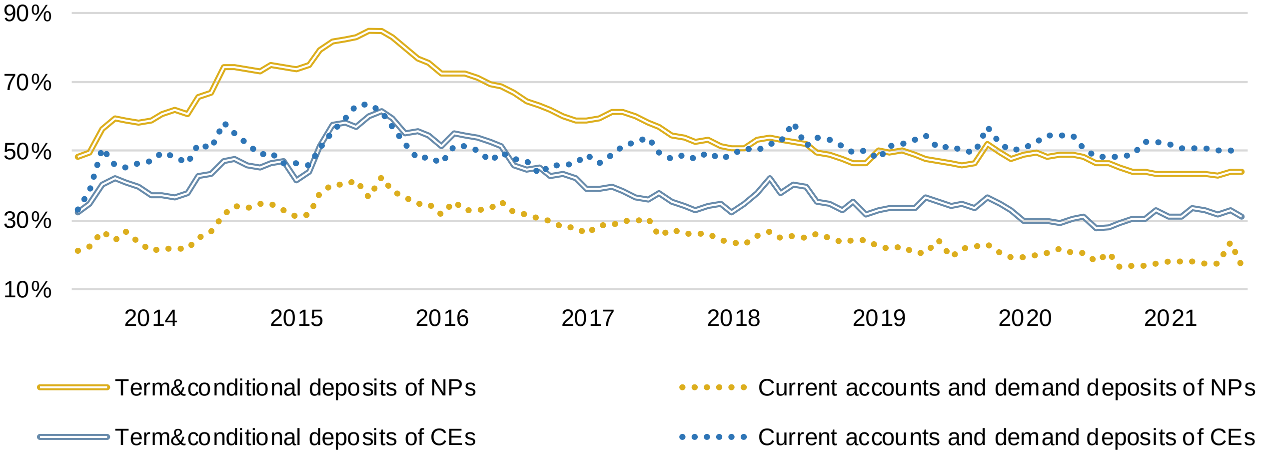


Source: *STB reports*
Note*: RUB/KZT exchange rate depreciation period – significant devaluation of the Russian ruble against the tenge*

On a disaggregated basis by a kind, type and subject of the deposit, traditionally, the highest concentration of currency is observed on current accounts and demand deposits of corporate entities and on fixed-term and conditional deposits of individuals. This trend clearly reflects the depositors' preferences regarding maturity and currency expectations *(Chart 5.16)*.

In 2021, a slight decrease in the level of dollarization was recorded for deposits of individuals (-2 p.p. for term and conditional deposits and -1 p.p. for current accounts and demand deposits). Deposits of corporate entities, on the contrary, have showed insignificant growth due to increased share of foreign currency deposits on term and conditional deposits (+3 p.p.). The level of dollarization of current accounts and demand deposits of corporate entities remained at the prior year level.

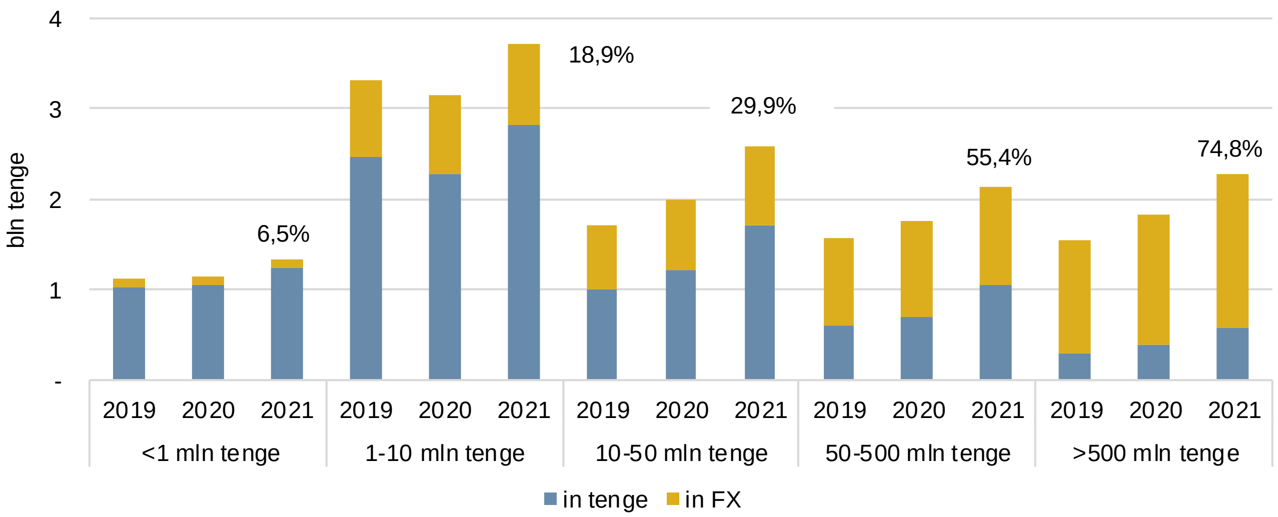
Chart 5.16 ***In 2021, the highest levels of dollarization are observed on transaction accounts of the corporate segment and term deposits of the retail segment***



Source: *STB reports*

The trend of recent years continues also in 2021 - the larger a deposit is, the more likely that the funds will be placed on a currency deposit *(Chart 5.17)*. Broken down by groups of household deposits in terms of their size, the chances for de-dollarization of household deposits remain mostly for medium-sized deposits, while chances for small-sized deposits are almost exhausted. Large-sized deposits also have a high base to reduce the share of foreign currency deposits; however, notwithstanding this fact the rate of de-dollarization of this group still confirms the preference of depositors of this group to keep their savings in foreign currency.

Chart 5.17 ***Trend of recent years continues, dollarization of deposits prevails in placements amounting to more than 50 million tenge***



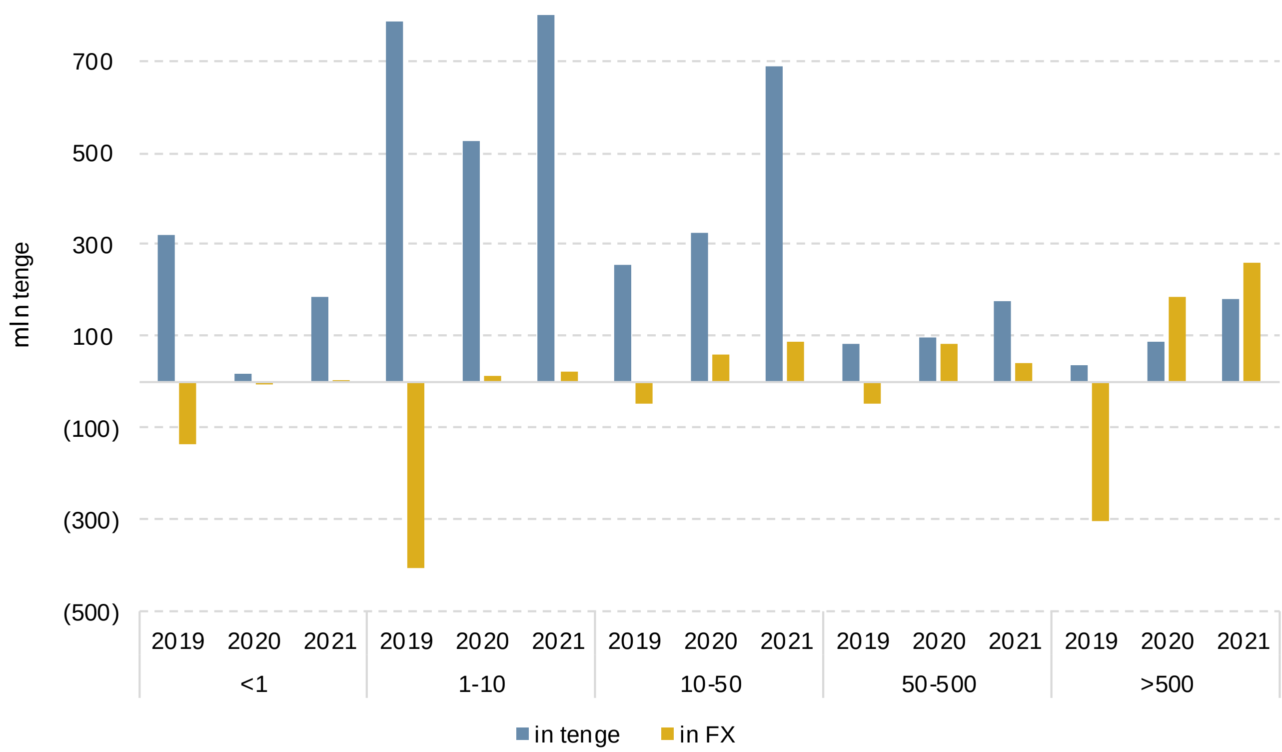
Source: *KDIF*

At the end of 2021, the highest decrease in the level of foreign currency deposits was recorded in the group of retail deposits ranging from 50 to 500 million tenge (-9.1 pp) and from 10 to 50 million tenge (-6.8 p.p.), which accounted for 55.4% and 29.9%, respectively, at the end of 2021. Deposits ranging from 1 to 10 million tenge and more than 500 million tenge showed comparable levels of dollarization decline of -3.4 pp and -3.8 pp, respectively (18.9% and 74.8% at the end of 2021). The decrease in the share of foreign currency deposits of total deposits in the amount of up to 1 million tenge was insignificant (-0.9 pp) due to limited potential - the tenge deposits at the end of 2021 accounted for 93.5%.

In 2021, household deposits in the tenge of all sizes increased; however, the largest inflow of retail tenge deposits was observed among deposits up to 50 million tenge (about 82.6% of the total inflows in the tenge). This trend can be underpinned by the existence of a deposit insurance system. Given that beginning next year, the amount of insurance coverage for savings deposits in the tenge will increase from 15 million tenge to 20 million tenge, and that, accordingly, the total amount of a guarantee for one bank has been increased to 20 million tenge, the trend of inflow of deposits in the tenge of deposits covered by the insurance will continue.

The largest inflow of foreign currency deposits was demonstrated by large-sized deposits – in excess of 500 million tenge (62.8%) and medium-sized deposits ranging in size from 10 million tenge to 50 million tenge (21.6%). The smallest inflow of funds in foreign currency is observed in the group of small deposits – up to 1 million tenge (0.2%). This may be due to the transactional nature of small deposits and their use for current purposes, while large deposits are intended more for saving purposes *(Chart 5.18)*.

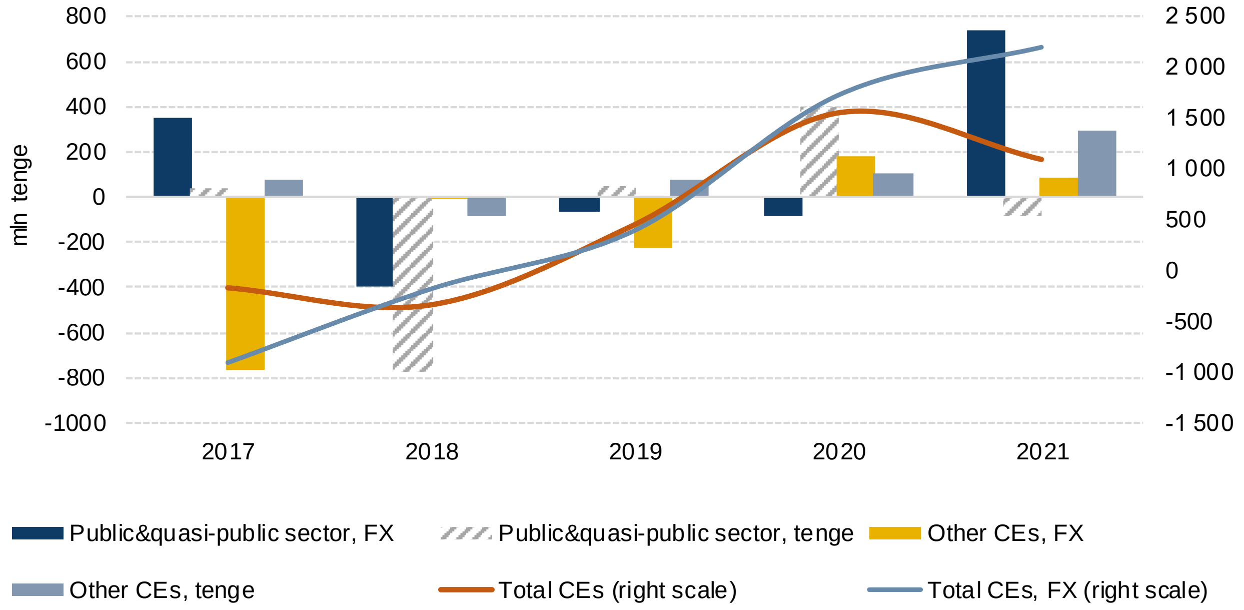
Chart 5.18 ***The main inflow of retail deposits was driven by small and medium-sized tenge deposits***



Source: *KDIF*

The highest increase in foreign currency deposits in the corporate segment was observed in the public and quasi-public sectors *(Chart 5.19)*. Relative to preceding years, in 2021 there was a significant inflow of the tenge deposits from other corporate entities not related to the public and quasi-public sectors.

Chart 5.19 ***In the corporate segment, the quasi-public sector accounted for the major inflow of foreign currency deposits***



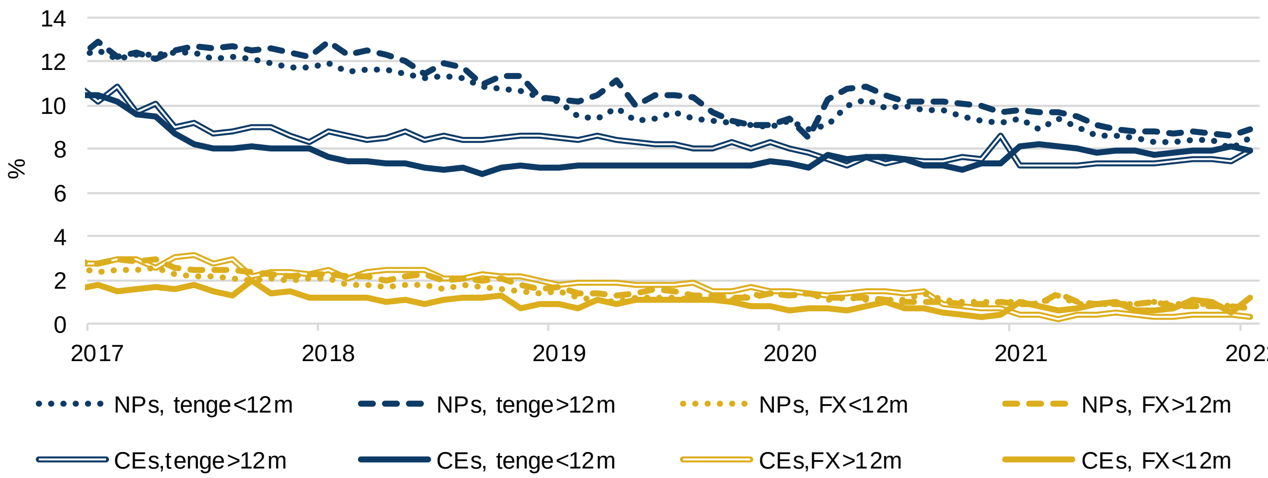
Source: *STB reports*
Note: *NBK assessment based on top 25 creditors*

Inflow of this category of deposits increased from 104.9 million tenge to 297.3 million tenge (1.8 times increase) compared to the previous period. This may be due to a change in the procedure for presenting information on the main sources of funding for the 30 largest creditors, and reducing the role of the public and quasi-public sectors in the bank liabilities.

5.4 Interest Rate Risk

In 2021, bank interest rates on new deposits decreased only on deposits of individuals both in the tenge and foreign currency (-0.9 p.p. and -0.2 p.p., respectively), while interest rates on new deposits from other groups of depositors remained virtually unchanged.

Chart 5.20 ***Attraction cost of the tenge and foreign currency deposits from individuals continues to gradually decrease***



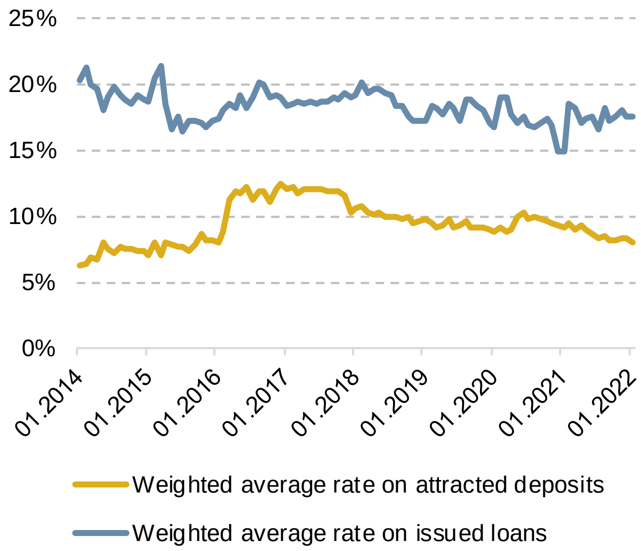
Source: *STB reports*

In 2021, interest rates on deposits of individuals decreased (-1.2 percentage points) and increased on loans to all entities (2.6 pp to individuals and 0.8 pp to corporate entities).

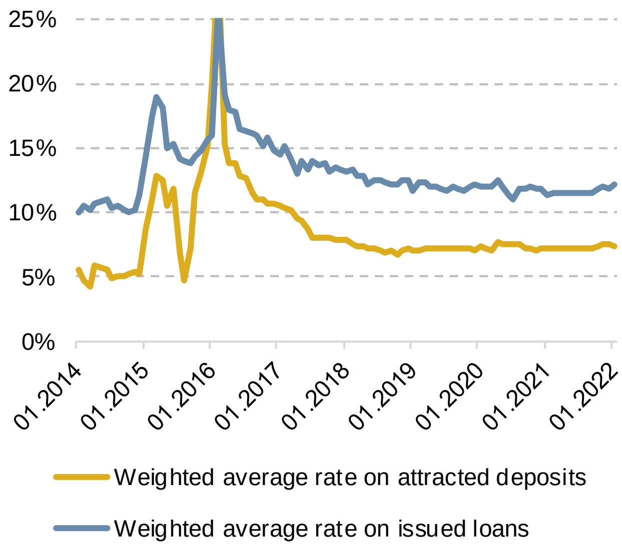
The highest growth of weighted average interest rates on loans issued was observed in January 2021 (from 14.9% to 17.5%) due to increased demand for unsecured loans *(Chart 5.21A)*. The weighted average placement rates and attraction rates were 12.2% and 7.4%, respectively *(Chart 5.21Б)*.

Chart 5.21 ***In 2021, the average weighted rates on deposits were generally decreasing, while the lending rates, on the contrary, were growing***

A. retail segment



B. corporate segment

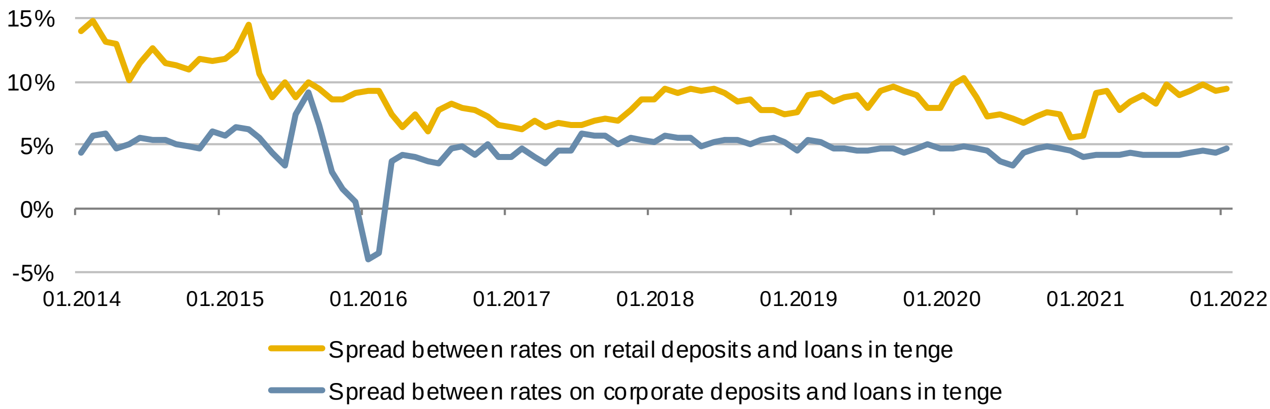


Source: *STB reports*

Note: *Attraction rates are the average weighted rates on deposits attracted over the reporting period (new deposits and replenishment of previously opened deposits). Placement rates are the weighted average rates for new bank loan agreements signed during the reporting period. Retail segment are deposits and loans of individuals, corporate segment includes deposits and loans of a corporate entity. The reporting period is a month.*

By the end of 2021, the spread between placement rates and attraction rates in the retail segment increased by 3.8 p.p. due to higher rates on loans at the beginning of the year and lower interest rates on deposits *(Chart 5.22)*.

Chart 5.22 ***Spread in the retail segment increased significantly at the beginning of the year and kept increasing until the end of 2021, while there were no dramatic changes in the corporate segment***



Source: *STB reports*

In the corporate sector, the spread in the first half of the year remained at the level of 4.3-4.4 pp. By the end of the year, there was a slight increase in the spread to 4.8 pp, mainly due to the lower interest rates on loans.

VI. Activities of the Council on Financial Stability of the Republic of Kazakhstan

In 2021, the Council on Financial Stability of the Republic of Kazakhstan ("the Council") considered, on a quarterly basis, the most urgent issues of financial stability, reducing systemic risks and developing the financial sector.

In 2021, the Council held a number of meetings, where the current problems of the financial sector, ways of their solution and promising areas of development were discussed. In particular, during the reporting period the members of the Council considered the following issues and adopted decisions thereon:

- the impact of government programs to support demand in the residential real estate market on financial stability. The Council recommended that the Ministry of the National Economy and Ministry of Finance prepare proposals for new approaches to the housing policy and instruments of state financing of housing programs, taking into account the need for social security, balanced regional development, and directing the state support for development of the rental housing market;

- the top priorities of the banking sector supervision policy in 2021. The Council considered the top priorities of the banking sector supervision policy in 2021 and recommended that the Agency continue to work on developing a methodology and approaches to integrate key elements of asset quality assessment into the regular supervisory process, and carry our work on developing methodology and stress-testing models for the second-tier banks;

- a new model to assess the financial position of the banks – members of the deposit insurance system. The Council approved the fundamental approaches of the new model and recommended the "Kazakhstan Deposit Insurance Fund" JSC to start its implementation from October 1, 2021;

- a model for development of the distressed assets market in Kazakhstan. The Council approved the main approaches to development of the distressed assets market and recommended that the Agency, together with the Ministry of Finance and Ministry of the National Economy, draft the proposals for amending the legislation to develop the distressed assets market, including the taxation issues;

- consideration of the issue of the digital tenge introduction. The Council decided to consider the need to introduce the digital tenge at the end of 2022 based on analysis of potential benefits and risks, elaboration of technological aspects, as well as the impact on the national payment system;

- transformation of microfinance organizations into second-tier banks. The Council supported the inclusion of amendments to the draft Law of the Republic of Kazakhstan "On Amendments and Additions to Certain Legislative Acts of the Republic of Kazakhstan on Regulation and Development of the Insurance Market and the Securities Market" to streamline the legislative requirements for transformation of MFOs into STBs;

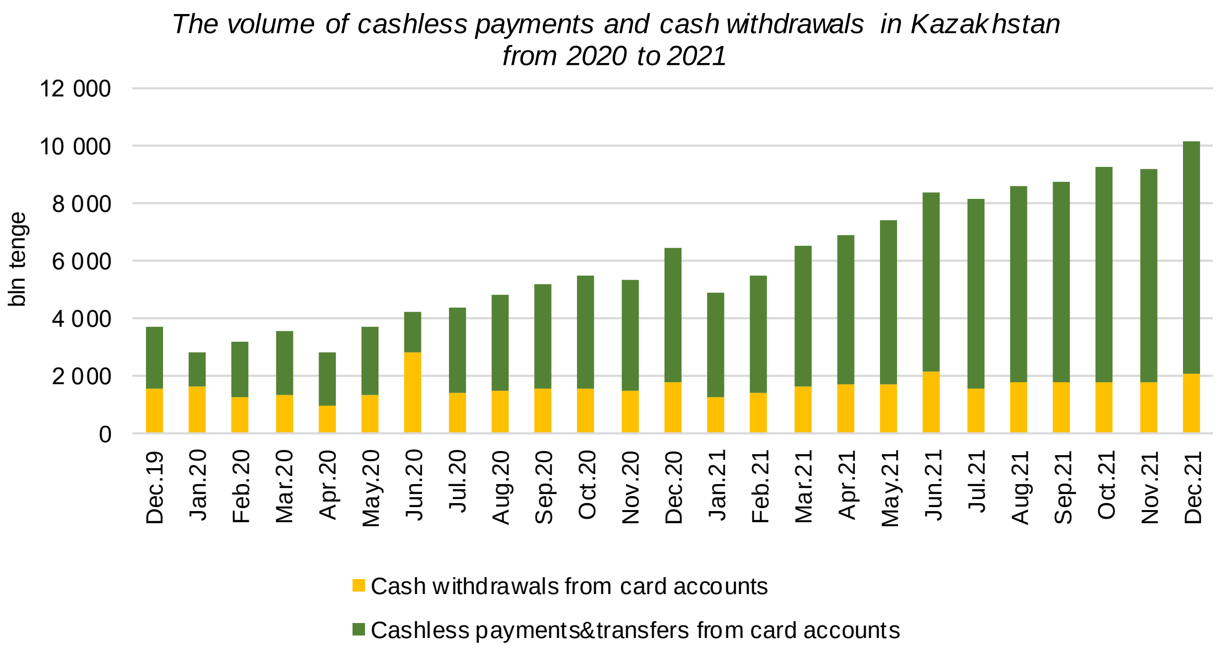
- expanding the types of activities of the banks, bank holding companies and their subsidiaries. To develop ecosystems and financial technologies, the Agency proposed to expand the opportunities for second-tier banks to participate in the capital of the following organizations: those providing financial services using innovative technologies; the possibility of making transactions via the Internet; those developing software for financial services; electronic trading platforms; those providing telecommunications channels for delivery of financial services. The Council supported the inclusion of the relevant amendments.

Box 10. Prospects for Introduction of Digital Currency

Introduction of digital technologies has resulted in fundamental changes and determined the trajectory of development of the economy and society as a whole. Establishment and formation of the digital economy is one of the priority areas for most of the countries. In recent years, one can see a transformation of activity models in business and social sphere caused by creation of new generation digital technologies. Such technologies include artificial intelligence (AI), robotics, the Internet of Things, wireless communication technologies, and a number of others. In the short term, the effective use of new digital technologies will determine the level of international competitiveness of both individual companies and countries as a whole.

In recent years, against the backdrop of the COVID-19 pandemic, the demand for non-cash (online) payments and transfers around the world has increased significantly. Thus, for example, in Kazakhstan over the past 2 years, the number of non-cash transactions and transfers increased by 3.75 times, while the number of cash withdrawal operations increased only by 1.35 times against the backdrop of news that control has been taken over non-cash transfers to detect the shadow market of tax evaders from entrepreneurial activity *(Chart 6.1)*. As a result, the issue of introducing a national digital currency of central banks has become urgent, Kazakhstan including.

Chart 6.1 ***The COVID-19 pandemic triggered an increase in non-cash (online) card account transactions (payments and transfers) compared to traditional cash payments***



Source: *NBK statistics*

The central bank digital currency (hereinafter – the CBDC) is potentially the third form of money circulation in the country that will be available to all citizens and businesses - similar to banknotes but in digital form - to make their daily payments in a fast, simple and secure way.

The CBDC will be issued by the central bank and represent its liability along with traditional fiat currencies and act as another form of the national currency. This differentiates the CBDC from cryptocurrencies, which do not have an issuer that guarantees the reliability of their issue and further circulation.

Currently, more than 68 central banks worldwide are investigating the issue of adopting the CBDC along with cash and non-cash means of payment. The CBDC combines the advantages of cash and non-cash money, and also opens up new opportunities due to the technological features and is a safer payment instrument.

As at the end of 2021, the CBDCs were already officially launched in ten countries of the world, in particular, in such regions as the Caribbean, Southeast Asia and Africa. The Commonwealth of the Bahamas and the Kingdom of Cambodia were the first countries to launch the CBDC. In 2021, the People's Republic of China (hereinafter - the PRC) also launched a pilot version of the digital yuan through its 6 largest banks. As at the end of June 2021, over 20.8 million individual wallets and over 3.5 million corporate wallets were opened in the PRC, through which 70.7 million transactions were carried out amounting to approximately 34.5 billion yuan (≈5.4 billion USD). The European Central Bank has also launched a digital euro pilot project aimed at ensuring its own digital sovereignty, in which the digital euro, together with the new pan-European payment system EPI (European Payments Initiative), is to ensure the competitiveness of international payment systems and services operating in Europe[40].

The main objectives of the CBDC implementation, in general, are as follows[41]:

1. *Financial accessibility.* The CBDC has the potential to promote financial accessibility by expanding access to digital payments. For example, China has made rapid progress in financial accessibility and digitalization; however, because of low coverage by the operators of mobile payments in remote regions, the population is still underbanked.

2. Access to payments. To facilitate payments among the public is an important task for many central banks. Access to payments is related to financial accessibility but is not identical to it. In today's world, access to payments can face numerous barriers, including shortages of cash, refusal of firms to accept cash, and the difficulty of transitioning to modern digital platforms. For example, one of the priority goals of the Swedish Central Bank for the e-krona project is to provide wide access to payments for all segments of the population. In particular, the Bank of Sweden has identified older people and people with certain disabilities as negatively affected in a cashless society. In this regard, the Central Bank is exploring how the CBDC can help create digital payments that are particularly suitable for these groups of population as a complement to cash.

3. *Improving the efficiency of payments*. The CBDC may reduce costs of payments made in cash and other forms of payment. The CBDC is initially designed as an efficient means of payment with the ability to control the financial infrastructure. In addition, thanks to introduction of the CBDC, interbank costs will be reduced and commissions will be eliminated, which will be an advantage over existing non-cash and online payments.

4. *Ensuring the continuity of payments*. For example, in countries prone to natural disasters, it is rather difficult to ensure the solvency of individuals in difficult circumstances and provide them with government transfers. Thus, the Eastern Caribbean Central Bank accelerated the expansion of its DCash pilot project to areas affected by the volcanic eruption in St. Vincent and the Grenadines in 2021. The PRC decided to use the e-CNY functionality as an additional backup of existing digital payment solutions as in the country there is a high risk of concentration of mobile payments among two mobile operators, the bankruptcy of which could result in serious consequences for the Chinese payment system. Thus, the CBDC could potentially play the role of an additional backup.

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[40] Development of the central bank digictal currencies at the current stage. Global experience and forecasts, PLUS magazine, No.1 – 11 February 2022

[41] Fintech notes. Behind the Scenes of Central Bank Digital Currency. Emerging Trends, Insights, and Policy Lessons. IMF. NOTE/2022/004

5. *Reducing the illegal use of money*. Several features of cash, including anonymity and lack of audit trail, make it attractive for illicit transactions (e.g. tax evasion, money laundering and terrorist financing). The CBDC could potentially mitigate this problem with the ability to digitally trace any digital transactions.

6. *Monetary sovereignty*. It is assumed that new forms of digital currency may have a competitive advantage over older forms of currencies. If a sufficiently large proportion of a country's population accepts a foreign digital currency or a global stable coin, the country's ability to perform a number of important central bank functions may be impaired. For example, the Bank of China stated that one of the incentives for CBDC introducing was to secure the monetary sovereignty in the future.

7. *Competition*. The CBDC can potentially increase competition in the country's payments sector in two ways: directly - by competing with existing forms of payments; and, indirectly – if the CBDC is developed as a platform open to private payment service providers. For example, the Sweden Central Bank sees competition as a potentially important contribution of the e-krona. The payments market, according to the analysis of the Central Bank, demonstrates the clear network effects, which as a rule favor a concentration of a few large players. The e-krona could be a way to ensure greater competition and improve market efficiency.

However, there are potential risks associated with the CBDC introduction. Thus, if the depositors translate cash into digital assets, the commercial banks, to combat the outflow of liquidity, will be forced to raise deposit rates, and this, in its turn, will lead to an increase in both lending rates and customer dissatisfaction, and a slowdown in economic development.

CBDC introduction, in its turn, can lead to negative consequences, such as[2]:

1. *Low confidence to digital currency among the population*. In general, as this type of payment is still quite new, it does not inspire confidence among the population, especially in terms of security.

2. *Cybersecurity*. The Bank of China noted that the risks from cyberattacks would be significant if the e-CNY becomes a major payment system. Creating an acceptable level of cybersecurity is one of the main challenges the Bank of China sees.

3. *Legal issues*. Making changes and additions to the regulatory and legal activities is also associated with a number of difficulties due to the novelty of the instrument, as well as the lack of sufficient international experience.

4. *Lack of resources*. The CBDC introduction is a rather expensive project. Some central banks, such as the Central Bank of Uruguay and the Eastern Caribbean Central Bank, have suspended the expansion of the project due to the very high financial costs.

5. *No precedents*. Complexity of development of this project is due to the lack of sufficient experience in terms of the full implementation of the CBCD into the country's economy.

Thus, notwithstanding all difficulties, in the future, the CBDC will become an important and, possibly, the dominant form of money. The global development of finance requires innovations on the part of the central banks, and one of the up-to-date tools is exactly the introduction of CBDC, which will allow implementing effectively the monetary policy measures and keeping pace with the rapidly developing digital market and fintech institutions.

The CBDC Initiatives in Kazakhstan

The National Bank of Kazakhstan, along with other central banks, is also elaborating on the issue of introducing a digital tenge (hereinafter referred to as DT). In May 2021, the National Bank published the Report covering the main concepts for the DT implementation for public discussions with market participants, government agencies, international partners and experts.[42]

In addition, by the end of the year, a prototype of the DT platform was developed to test the viability of the concept through experimental confirmation of its technological feasibility; a primary model for assessing the DT impact on the economy, financial stability and monetary policy was worked out, and possible approaches to regulation were identified. The results were presented in the Report of the Pilot Project Results published on the National Bank's web site[43]. As part of the pilot project, basic scenarios for the life cycle of the digital tenge were implemented - from issue and distribution to purchases and transfers using digital tenge. Moreover, it is noted in the Report that when issuing a digital analogue of cash, there will be no increase in the monetary base and money quantity in the economy of Kazakhstan, and only changes in the structure of the money supply will be observed.

Based on the above two reports, the main tasks for DT introducing in Kazakhstan were identified:

1. Increasing competition in the financial market within the country;
2. Increasing the penetration of non-cash payments;
3. Ensuring the uninterrupted functioning of the National Payment System;
4. Increasing the efficiency of payments with participation of the state;
5. Increasing the competitiveness of the financial market in relation to players from different sectors of the economy and other countries.

According to the Order of the Head of State, by July 1, 2022, it is planned to submit a decision-making model on the need to introduce DT (the DT Model), given the results of economic and regulatory research, assessment of technological parameters, quantitative and qualitative research of consumer behavior, results of design sessions and expert discussions. The priority in developing a solution will be the final effect for consumers of payment services.

At the stage of assessing the economic aspects, it is planned to make a quantitative analysis with modeling the effect to confirm the developed hypotheses through conducting a survey of the population and market participants to collect data, build a micromodel to assess the demand for DT, as well as two dynamic stochastic general equilibrium models (DSGE). It will allow obtaining the economic rationale for the overall impact of DT on the economy as a whole, including financial stability and changes in people's well-being, taking into account the specific characteristics of the domestic economy.

The decision on the need to introduce DT will be made at the end of 2022 based on the results of a comprehensive study of potential benefits and risks, elaboration of technological aspects, impact on the monetary policy and financial stability, and impact on the national payment system and its participants.

[42] Digital tenge. Report for public discussions. May 2021. National Bank of the Republic of Kazakhstan, www.nationalbank.kz.
[43] Digital tenge project. Report on the pilot projects results. 2021. National Bank of the Republic of Kazakhstan.

Box 11. Integrating the ESG (Environmental, Social, Governance) Principles of Sustainable Development into Kazakhstan's Economy

Recently, the issues of the impact of climate risks on stability of the financial sector have become urgent for the central banks and financial regulators in various countries. They develop policies to reduce climate risks by encouraging investments in low-carbon energy and reducing emissions of harmful substances into the atmosphere. For these purposes, changes are made to the regulatory policy in relation to the financial market participants that is built taking into account the impact of climate risks on their activities and financial stability.

In 2021, the President of the Republic of Kazakhstan made an instruction[44] to make specific proposals to expand the green investment market that complies with requirements of ESG international principles in the Republic of Kazakhstan and integrate these principles into the regulatory environment.

ESG Concept

ESG (Environmental, Social, Governance) sustainable development principles are environmental, social and governance criteria, which comprise a set of an entity's performance standards that the investors and lenders use to evaluate investment projects aimed at protecting the environment, reducing the impact of climate change, improving social aspects and a degree of impact of these criteria on the operations of companies.

As part of the Paris Climate Accords (2016)[45], the countries that have signed this agreement to reduce carbon dioxide emissions to slow down a global warming, including Kazakhstan, must develop a set of appropriate measures and adhere to the ESG principles. The guidelines of the European Banking Authority (EBA) and the European Central Bank (ECB) as part of the Single Supervisory Mechanism (SSM) have become a benchmark for the regulators around the world in the implementation of the ESG principles. In particular, within the framework of the EU, an Action Plan for 2020-2025 was approved to introduce a number of regulatory instruments aimed at implementing the principles of sustainable financing. This Action Plan provides for development of ECB guidance on climate and environmental risks and consideration in the Supervisory Review and Evaluation Process (SREP) of changes in the Markets in Financial Instruments Directive (MiFID II), green bond standards and credit ratings, stress tests in relation to climate and environmental goals, amendments to IFRS 9 regarding climate risks, etc.

The main international initiatives for the ESG implementation are: TCFD – Task Force on Climate Related Financial Disclosure, UN Principles for Responsible Investment (UN Principles for Responsible Investment, PRI)[46], ICMA green bonds principles[47], etc.

Implementation of the ESG Principles and Standards in Kazakhstan

As part of the implementation of the tasks set in January 2021, the Parliament of the Republic of Kazakhstan adopted the Environmental Code [48] as amended, the norms of which define the concepts of "green" technologies, "green" financing and "green" projects, "green" bonds and "green" loans, as well as government support measures as part of the "green" financing, etc.

According to the Environmental Code, "green" investments are attracted to introduce and implement the "green" technology project, including through grants and (or) investments from national development institutions, funds of the local budgets and other sources of organizations not prohibited by the legislation of the Republic of Kazakhstan. The rules for recognizing technologies as "green" technologies are approved by the Government of the Republic of Kazakhstan.

To regulate the green investment market, the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market (hereinafter referred to as the ARDFM) amended the current Rules for state registration of the issue of non-government bonds[49], according to which the procedure for state registration of bonds in the ESG format is determined, as well as the requirements for information disclosure.

To organize the placement of bonds in the ESG format by Kazakhstan Stock Exchange JSC (hereinafter - KASE), in August 2021 the relevant amendments were made to the Listing Rules[50] in terms of the conformity of the intended purpose of the bonds with international standards and "green" taxonomy. A Methodology was also developed to compile an ESG report[51] in order to form the appropriate corporate governance systems, improve the investment climate in the Republic of Kazakhstan and increase the level of information disclosure by companies on their compliance with the intended use of money received from the placement of "green", social bonds and sustainable development bonds.

Moreover, to develop the ESG-direction, KASE grants benefits for payment of listing fees to the issuers of sustainable development bonds, and provides the appropriate consulting support.

In 2020, Asian Development Bank placed its green bonds on the KASE floor in the amount of 14 billion tenge for development of their own projects. According to the prospectus, the purpose of using the money received from the placement of bonds is to invest in the projects that are aimed at reducing greenhouse gas emissions into the atmosphere, or removing greenhouse gas emissions from the atmosphere, as well as at reducing the vulnerability of anthropogenic or natural systems to the consequences of climate change and increasing resilience and ability to adapt.

In September 2021, the Eurasian Development Bank and "DAMU" Entrepreneurship Development Fund JSC (hereinafter referred to as "Damu EDF") placed their initial bonds in accordance with the ESG sustainable development principles.

Thus, Eurasian Development Bank placed "green" bonds in the amount of 20 billion tenge for a period of 3 years with a coupon rate of 10.5% per annum. The issue of bonds was fully consistent with the principles of "green" bonds. Investor demand for bonds exceeded the placement volume. The investors were Kazakhstan banks, financial and investment companies, and private investors. This issue is used for financing ESG projects in the Republic of Kazakhstan.

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[44] P. 5 of the Minutes of the meeting of the Council of Foreign Investors under the President of the Republic of Kazakhstan No .21-01-8.2 dated 06/10/2021 under the Chairmanship of the President of the Republic of Kazakhstan Tokayev K.K. regarding the introduction of specific proposals for expanding the market of "green investments" that meet the requirements of the international principles of ESG (Environmental, Social, Governance) in the Republic of Kazakhstan.

[45] To combat climate change and its negative impacts, 197 countries adopted the Paris Agreement at COP21 in Paris on 12 December 2015. This agreement aims to significantly reduce global greenhouse gas emissions with the goal of reducing temperatures by 2 degrees Celsius by 2100.

[46] The Principles for Responsible Investment (PRI) define responsible investment as "an approach to investment that aims to integrate environmental, social and governance (ESG) factors into investment decisions in order to better manage risk and generate sustainable, long-term returns." The principles were presented to the UN in April 2006 on the New York Stock Exchange.

[47] The Green Bond Principles were developed by the International Capital Market Association (ICMA) and aim to support issuers in financing environmentally sound and sustainable projects

[48] The Environmental Code of the Republic of Kazakhstan dated January 2, 2021 No. 400-VI ZRK, Article - 130

[49] Resolution of the Board of the National Bank of the Republic of Kazakhstan dated October 29, 2018 No. 248 "On approval of the Rules for state registration of the issue of non-government bonds (bond program), registration of amendments and (or) additions to the prospectus for the issue of non-government bonds (prospectus of the bond program), private memorandum, submissions and consideration of the notice on the results of the redemption of non-government bonds, cancellation of the issue of non-government bonds, Requirements for documents for state registration of the issue of non-government bonds (bond program), registration of changes and (or) additions to the prospectus for the issue of non-government bonds (prospectus of the bond program), private memorandum, consideration of the notification on the results of the redemption of non-government bonds, the List of documents for the cancellation of the issue of non-government bonds and the requirements for them, the Rules for the preparation and execution of the prospectus for the issue of non-government bonds (prospectus of the bond program), amendments and (or) additions to the prospectus for the issue of non-government bonds (prospectus of the bond program), notification of the results of the redemption of non-government bonds"

[50] Listing Rules of the Kazakhstan Stock Exchange as amended on March 11, 2022.

[51] Methodology for compiling an ESG report: turning formality into an advantage - Kazakhstan Stock Exchange JSC

The DAMU EDF, in its turn, placed “social” bonds in the amount of 1 billion tenge for a period of 5 years and a yield of 11.9%. This issue was intended to address social problems by financing small and medium-sized businesses from the sectors of the economy that were most affected during the COVID-19 pandemic through the second-tier banks, microfinance organizations or leasing companies.

In addition, in 2020, Damu EDF placed its first “green” coupon bonds in the amount of 200 million tenge with a maturity of 36 months and a coupon rate of 11.75%. This placement was the first listing of securities that complied with the rules of "green" bonds of the stock exchange of the Astana International Financial Center (AIFC) and the first listing of green bonds in Kazakhstan.

In 2018, the Green Finance Centre (GFC)[52] was established under the AIFC to develop and promote green finance in Kazakhstan and Central Asian region. The Green Finance Advisory Council established under the GFC consists of the representatives of international and foreign financial institutions. The purpose of the Council is to develop a regional green finance hub in Central Asia and Eastern Europe, to attract the leading international organizations in the field of green finance.

The AIFC, jointly with the interested government agencies, has developed the Concept of a Green Financial System for Kazakhstan, the Strategy for its implementation, and the Green Taxonomy Project[53]. In addition, the AIFC has implemented the Rules for Issuing Green Bonds on Astana International Exchange[54], based on international standards. To develop the “internal” credit rating market, GFC is considering an issue of establishing a company that will provide the rating and analytical services. To create comfortable conditions for business, the issue of introducing a digital “green bond” is being worked out. In addition, the GFC sets itself the task to reduce the cost of services for verification and validation of green bonds, which is currently unreasonably high. To this end, GFC is working on this initiative together with the EADB Digital Initiatives Fund to implement the opportunities for issuing digital green bonds, which confirms the commitment of the Green Finance Center to promote low-carbon development of Kazakhstan and the EAEU countries.

In order to further implement the ESG principles in the financial market and develop the green bond market, ARDFM, together with the National Bank, is planning to implement the following:

I. *Develop recommendations on implementation of ESG principles by financial institutions* - it is planned to develop and send to the financial market participants recommendations on disclosure of information on the degree of exposure to ESG risks, and procedure for identifying and managing these risks. Financial institutions may voluntarily implement recommendations and publish a report as part of their annual audit.

II. *Develop the mandatory requirements for financial organizations to implement ESG principles* - it is planned to implement requirements for internal risk management systems and corporate governance systems, covering the need to take into account the sustainable development goals, ESG factors and related risks in the strategy and business model of financial organizations, the need to build corporate governance systems of financial organizations, taking into account the ESG factors, etc.

III. *Monitor ESG risks and integrate them into the supervisory system* – it is planned to introduce requirements for monitoring and control of compliance with the principles of

[52] The Green Finance Centre (GFC) with the Astana International Financial Center - gfc.aifc.kz
[53] Draft Taxonomy of green projects to be financed through “green bonds” and “green loans” (“Green” taxonomy)
[54] Instruction on issuance of green bonds (the Green Finance Centre with the AIFC)

ESG risk management, including application of regulatory measures, in the internal procedures for control and supervision over the activities of financial institutions.

IV. *Develop a standardized approach to disclosure of ESG information* - it is planned to switch from voluntary disclosure to mandatory disclosure in reporting of information on the ESG activities of companies in accordance with international recommendations on the KASE and AIFC exchange.

A large-scale transition to mandatory disclosure of non-financial information will allow investors and rating agencies to evaluate financial instruments for their compliance with the ESG criteria for inclusion in their investment portfolios.

Despite the measures taken, currently the activity in the green bond market in the Republic of Kazakhstan remains low due to the lack of economic incentives for the commercial sector to implement “green” projects. In this regard, in addition to continuing work on development of the legal environment and infrastructure, it is necessary to introduce effective economic incentives for the commercial sector to increase the attractiveness of green projects in the Republic of Kazakhstan.