



NATIONAL BANK OF KAZAKHSTAN

ANNUAL REPORT 2022





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ANNUAL PERFORMANCE REVIEW

The National Bank's goal is to ensure the price stability. Under the laws, the National Bank's objectives are as follows:

- formulating and implementing the government's monetary policy;
- promoting the financial system stability;
- ensuring the functioning of payment systems;
- engaging in currency exchange regulation and currency control;
- carrying out statistical activities in the field of monetary statistics, financial market statistics and the external sector statistics.

In broad terms, the National Bank's mission is to improve the people's well-being in Kazakhstan through ensuring a low inflation rate and the financial system stability.

The past year has been a year when the strength of the financial system was tested and has been full of challenges to our economy. The economy and financial sector of Kazakhstan faced an unprecedented shock caused by both external and internal factors.

Massive social protests in January hampered economic activity in a number of major cities. Deterioration of the macroeconomic situation in the world as a result of the geopolitical crisis and the tightening of central bank policies in developed countries in the fight against accelerating inflation led to volatility in the global financial, commodity and primary markets.

The combination of a surge in world energy and food prices and supply disruptions affected inflationary processes and economic activity in Kazakhstan and became a challenge for the Kazakh financial system.

The Government, the National Bank and the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market took prompt actions aimed at preventing the destabilization of the financial system and maintaining confidence in the tenge-denominated assets. In a short time, the functioning of banking services was restored, operations were carried out to provide liquidity and the base rate and cap rates of the Kazakhstan Deposit Insurance Fund on the tenge deposits of the population were increased. Jointly with the Government, the Tenge Deposit Protection Program was implemented; since the beginning of 2022, the maximum amount



of guaranteed reimbursement for savings deposits in the tenge has been increased from 15 to 20 million tenge.

The measures taken helped preventing the reduction of retail deposits in the tenge, stabilizing the bank funding base, and decrease deposit dollarization from 38.4% in February to 31.6% in December 2022.

Sanctions that followed the geopolitical conflict have put serious pressure on the banking sector in Kazakhstan, in particular on subsidiaries of Russian banks. Timely measures enabled to curb the negative consequences of sanctions imposed against Russian banks on the banking system of Kazakhstan.

Despite high uncertainty, as of end-2022, the volume of bank credits to the economy went up by 23.3% – to 22.8 trln tenge. Loans to businesses in 2022 increased by 13.9% – to 9.6 trln tenge, and SME loans – by 22.8% – to 4.5 trln tenge. Meantime, as of end-2022, credits to the economy in broad definition amounted to 28.9 trln tenge, where loans to businesses equaled 14.4 trln tenge. As of end-2022, bank assets increased by 18.4%, or 6.9 trln tenge, amounting to 44.6 trln tenge.

Geopolitical tensions have affected Kazakhstan also in terms of the exchange rate due to closer trade relations between Kazakhstan and Russia. In March 2022, the tenge weakened by 18.15%. To normalize the situation, the National Bank and the Government implemented a set of measures aimed at stabilizing the foreign exchange market. The tenge was also supported by sales of foreign exchange proceeds by the quasi-public sector entities, sales of foreign currency to secure transfers from the National Fund, as well as by the National Bank's foreign exchange interventions. Subsequently, the balance in the foreign exchange market was improved by expanding the market principles of foreign exchange trading and allowing for bilateral exchange rate volatility.

Despite the high volatility in the external market, gross international reserves during 2022 expanded by 1.2 bln US dollars – to 90.8 bln US dollars, where gold and foreign exchange reserves went up to 35.1 bln US dollars, and the National Fund assets – to 55.7 bln US dollars.

According to preliminary outcomes for 2022, the current account of the balance of payments for the first time in the last 8 years moved into a surplus zone, amounting to 6.3 bln US dollars. The surplus was mainly secured by rising prices for raw materials – oil, metals, gas, coal, uranium and cereals. The state of the country's balance of payments is unstable due to its dependence on volatile commodity prices, which indicates the need

to increase non-primary exports and reduce the import dependence.

Total pension assets of the Unified Accumulative Pension Fund under the National Bank's fiduciary management at the end of-2022 amounted to 14.6 trln tenge, having increased by 12.1% over the year. In 2022 the accrued investment return was 914.1 bln tenge.

In order to develop the market of payment systems, in 2022, jointly with the financial market participants, the main components of the payment infrastructure were put into commercial operation – the Instant Payment System and the Interbank Payment Card System, with the linkup of second-tier banks.

At the end of 2022, the Concept Development of Open API and Open Banking in the Republic of Kazakhstan in 2023–2025 was approved; it describes the goal-oriented vision of the technological infrastructure for ensuring the implementation of open banking interfaces and the necessary infrastructure and regulatory approaches.

The exploration of the digital tenge introduction was underway, an analysis of economic aspects was carried out and a pilot project was tested with the participation of consumers, market participants and trade and service enterprises, as well as a model for the decision-making on the digital tenge introduction was developed. Based on the results of the study, in December 2022, a decision was made on the phased introduction of a digital currency by the end of 2025.

In 2023, the top priority for the National Bank will be to stabilize inflation. The National Bank could preserve financial stability in 2022, which is paramount and creates conditions for reducing inflation. Implementation of a disinflationary monetary policy will lead to stabilization of inflation in the medium-term.

G.O. Pirmatov
Chairman of the National Bank



SECTION 1.

ECONOMIC CONDITIONS FOR DEVELOPMENT AND KEY MEASURES OF THE NATIONAL BANK



1.1 EXTERNAL CONDITIONS

According to the IMF, in 2022 the global economy slowed down from 6.2% in 2021 to 3.4%. In the group of developed countries, a sharp deceleration in the economic activity occurred in the US (from 5.9% to 2.0%), United Kingdom (from 7.6% to 4.1%), Germany (from 2.6% to 1.9%), France (from 6.8% to 2.6%). In general, the growth rates in developed countries amounted to 2.0%. The group of developing countries was characterized by similar dynamics, so, the upturn of China's economy as the third largest economy worldwide slowed down from 8.4% to 3.0%.

The weakening of the global economy is largely explained by deterioration of the geopolitical situation in the world, which led to a series of shocks in the food and energy markets. World wheat prices in March 2022 hit an all-time record since 2008, increasing to 470 US dollars per ton (prior to the emergence of geopolitical conflict, the price averaged about 280 US dollars per ton). Also considering that Ukraine is the world's largest producer and exporter of sunflower oil (almost 46.0% of exports in the world), corn and fertilizers, prices for these commodities also showed a sizable increase. In addition, due to the emerging risk of a decreasing supply of oil and petroleum products from Russia, world prices for oil, gas and coal demonstrated rapid growth. Prices for Brent oil rose to almost 130 US dollars per barrel, and prices for European gas went up to 340 US dollars per MW/h (over the recent 10 years, gas prices have not exceeded 25 US dollars MW/h).

With rapidly growing food and energy prices, global inflationary pressures have risen sharply. In many developed countries, inflation has exceeded the 40-year highs. Thus, in the United States, for example, in June 2022, for the first time since 1982, inflation made up 9.1% in annual terms and by the end of the year it slowed down somewhat (to 6.5%) but still remained above the target level of 2.0%. Inflation in the European countries was also building above the targets; as of end-2022, inflation in Italy accounted for 12.3%, in Germany – 9.6% and in France – for 6.7%. In some European countries, the rise in consumer prices altogether exceeded 20% (Hungary – 25%, Latvia – 20.7%, Lithuania – 20%). A surge in prices during the year was also observed in the Russian Federation. By the end of the year, inflation appeared to be nearly thrice as much as the target of 4.0% and made up 11.94%, despite its deceleration from the peak of 16.69% (in March 2022)

amid the crisis, economic contraction and the reduced consumer demand.

The situation in the global labor market has also become tenser. In the US, in December 2022, 11 million vacancies have been registered on the labor exchange (in the pre-pandemic year of 2019 – 7.2 million on average), and the number of unemployed equaled 5.7 mln people. Thus, there were 1.9 vacancies per one unemployed individual at year-end. Given a heightened demand for the labor force, the dynamics of wages demonstrated significant growth throughout the year. In other developed countries, the situation in the labor market was generally the same.

In order to curb high inflation and ensure a balance of supply and demand, the largest central banks simultaneously tightened their monetary policies. During 2022, the US Fed increased the policy rate by 425 bp in total – from 0.0-0.25% to 4.25-4.50%; this has been the maximum rate since October 2007. The increase in the key rate by the European Central Bank by the end of the year amounted to 250 bp – to 2.5% per annum, which was the largest increase since the euro had been put into cash circulation in 2002. In addition, in order to reduce the balance sheet, the US Fed significantly cut the holdings of treasuries, debt obligations and securities during the year.

On the one hand, the tighter monetary policy of central banks contributed to the slowdown in inflationary processes in the world, but on the other hand, it led to heightened volatility in the foreign exchange markets. In particular, given the increase of the US Fed policy rate, by September 2022 the US dollar index (DXY) for the first time since the early 2000s reached a peak and amounted to 112-114 points. As a result, by the end of September 2022 compared to December 2021, the euro had depreciated against the US dollar by 14.6%, the British pound sterling – almost by 20.0%, and the Chinese Yuan – by 12.4%.

For Kazakhstan's economy as well as for many other developing countries, the year of 2022 was not easy as a whole. Due to high inflation in the countries – Kazakhstan's trading partners, external inflationary pressure on consumer prices increased. Another negative point was a sharp slowdown in the economic activity in the European Union countries, which resulted

in some reduction in energy exports during the year. Increased volatility in the global foreign exchange markets also had a negative impact on the exchange rate of the Kazakhstani tenge. On the positive side,

prices for oil and other energy commodities were rising, and China had made the decision to move away from the policy of zero tolerance for COVID-19 by the end of 2022.

1.2 DOMESTIC TRENDS

1.2.1 INFLATION

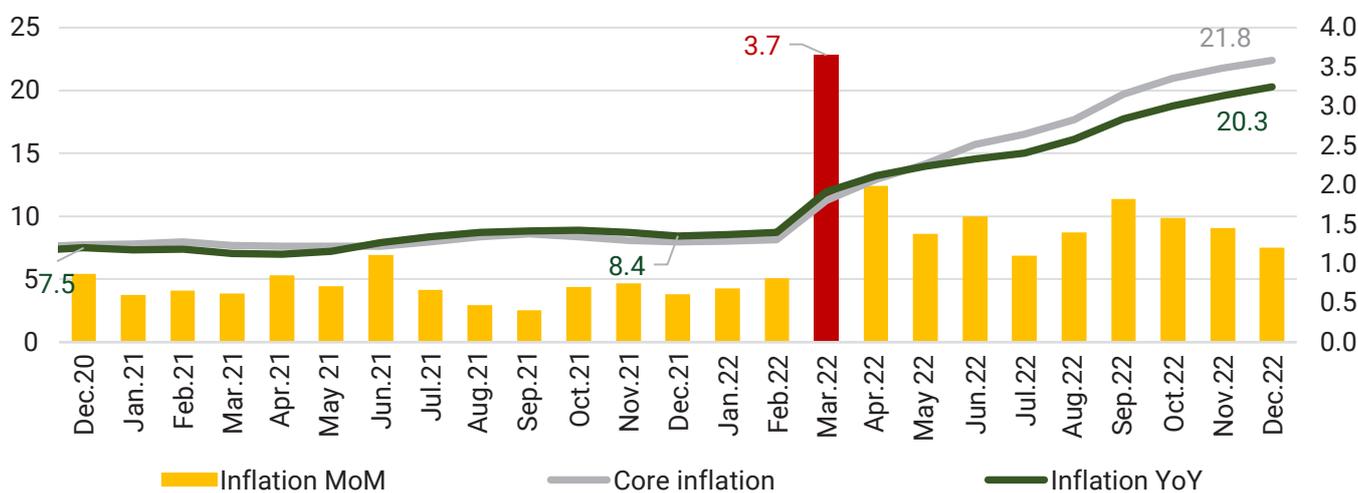
According to the Bureau of National Statistics with the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, the annual inflation in Kazakhstan at end-2022 was 20.3% (in 2021 – 8.4%).

Within the inflation structure, food products appreciated by 25.3% (in 2021 – by 9.9%) in terms of price, non-food products – by 19.4% (8.5%), and paid services – by 14.1% (6.5%).

During 2022, inflation was building under the impact of external factors, including an unstable geopolitical situation in the world, rising world food prices, high inflation in the trading partner countries and disruption in logistics supply chains.

Throughout the year, monthly inflation rates were exceeding the corresponding averages for the last 5 years. The maximum monthly growth was observed in March (Figure 1.2.1.1). The greatest contribution to acceleration of inflation was made by the rise in food prices. In particular, there was a significant increase in prices for bread and bakery, cereals, sugar and confectionery as well as dairy products. Growing prices for meat, driven by high producer prices and a surge in prices for fodder crops, also made a sizable contribution to the rise in food prices. In addition, sugar prices went up sharply in May 2022 in the face of a shortage of supply and the growing global demand.

Figure 1.2.1.1 Inflation dynamics



Source: ASPR BNS

An additional pro-inflationary pressure on the domestic pricing of food products in the first half of 2022 was made by the rise in world food prices. Thus, in 2022, against the backdrop of geopolitical conflict, the average annual rise of the FAO Food Price Index amounted to 14.3% as

a result of dramatic appreciation of prices for vegetable oils and grain cultures. The growth of world prices peaked in March 2022 due to the prevailing uncertainty in the global market.



In 2022, prices in the food market of Kazakhstan also accelerated significantly to 19.4% in annual terms. Supply chain disruptions were the main drivers behind the acceleration in prices. The weakening of the tenge, especially against the Russian ruble, which occurred in March 2022 due to geopolitical tensions, led to an increase in prices for imported goods, where prices for personal goods, clothing and footwear, detergents and cleaning products increased most. At the same time, the administrative regulation of prices for fuel and lubricants had a disinflationary effect on the non-food component.

In 2022, the growth in prices for paid services to the population amounted to 14.1%. The inflation

of paid services accelerated most in the third quarter of 2022 due to a sharp increase in housing rent. A significant increase in housing prices was observed in the autumn months, being caused by heightened demand. Along with this, the increase in prices for interim goods and the growing inflation expectations contributed to the rise in prices for unregulated paid services to the population, including services in the field of culture and recreation, education, transport as well as household services, such as hairdressers and beauty salons. In the context of regulated services, upward price pressures were observed as a result of the increase in base tariffs and rising costs of generation, transmission and distribution of electricity by its producers.

Figure 1.2.1.2 Inflation expectations of the population



In 2022, inflation expectations of the population were growing and showing the all-time highs on record. In December 2022, the median estimate of expected inflation for 12 months ahead was 21.3%.

Since May 2022, annual core inflation rates have been exceeding annual rates of the headline inflation (Figure 1.2.1.1). As of end-2022, core inflation indicator excluding the growth in prices for fruits and vegetables, regulated services, utilities, railway transport, communication, gasoline, diesel fuel and coal accounted for 22.4%.

1.2.2 REAL SECTOR OF THE ECONOMY

According to the updated information from the Bureau of National Statistics with the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, in 2022 Kazakhstan's GDP increased by 3.3% in real terms compared to 2021 (Figure 1.2.2.1). The economic growth was largely driven by the positive dynamics in the production of goods, especially by a record harvest of cereals in agriculture and the increased amount of construction works.

Figure 1.2.2.1 Contribution of economic sectors to the real GDP growth as % of the corresponding period of the preceding year



Source: ASPR BNS

Positive growth rates were observed in the branches of manufacturing industry, trade, information and communication. Public sector branches were demonstrating moderate growth rates.

Within the structure of manufacturing industry, which advanced by 3.4% in annual terms in 2022, a major positive contribution was made by a 1.9% upturn in the metallurgical industry (resulting from a 5.5% increase in the production of precious and non-ferrous metals), the growth in the production of coke and refined products – by 1.9%, food products – by 3.9%, engineering – by 9.4%, chemical industry – by 10.2% and beverages – by 11.2%.

At the same time, in 2022 a cutback in production driven by a 1.9% reduction in crude oil and gas condensate output was observed in the mining industry. Alongside with that, negative contribution was also made to the reduction in the volumes of metal ore production by 0.7%, namely, iron ores – by 20.6% because of decreased exports to Russia.

At end-2022, trading volumes increased by 5.0% in annual terms as a result of growth of sales in wholesale and retail trade by 6.3% and 2.1%, respectively. It is worth to mention the upturn in wholesale realization of food products (by 18.3%) against the decreasing retail

sales of food products (by 5.4%). This may point to an ongoing post-pandemic recovery of consumer demand for public catering services. In turn, the expanding consumer lending helped increase the retail turnover of non-food products (by 6.6%). Positive rates of retail sales were also supported by the demand from citizens of the Russian Federation.

The positive rates of trade turnover led to an increase in the volume of transport services, with their growth amounting to 3.9% in annual terms at the end of the year. At the same time, the decline in oil exports in the second half of 2022 resulted in reduction in the volume of pipeline transport in the fourth quarter of 2022. The disruption of supply chains due to hostilities in Ukraine and the imposition of sanctions against Russia caused a reduction in cargo turnover by air and land. Meantime, in the environment of heightened demand, the volume of passenger traffic increased.

The implementation of government industry support programs has become a significant factor for a 9.4% growth in the construction sector. High advancement of the industry is mainly associated with construction of industrial facilities in the petrochemical industry. In addition, the growth in the volume of construction works was nurtured by the construction of motorways



and railroads, the laying of main pipelines and the construction of the “Gate city” satellite.

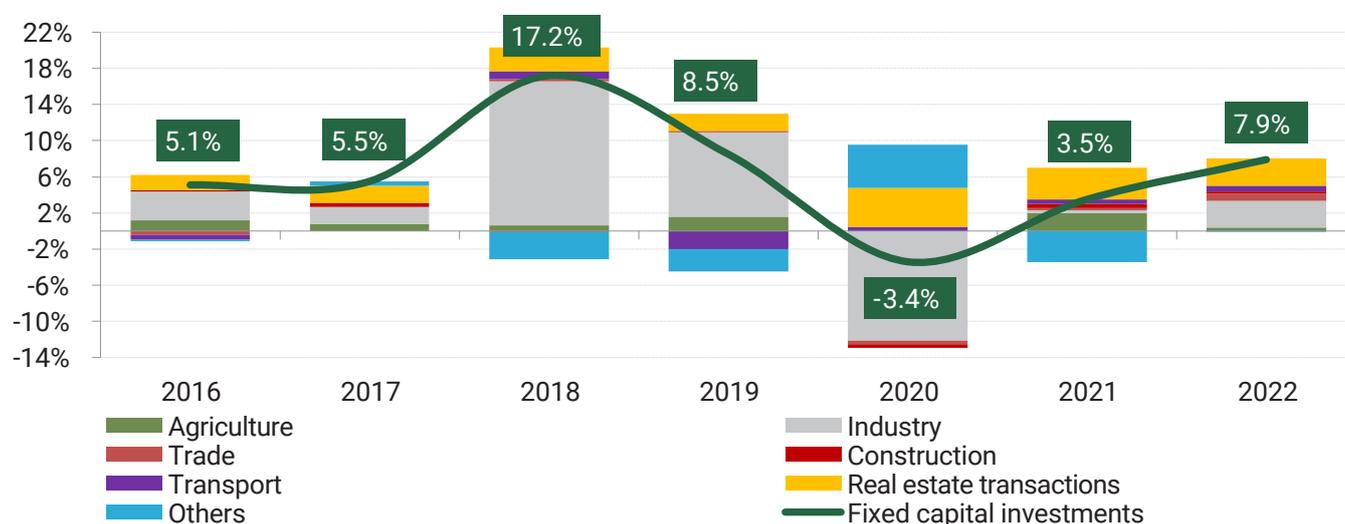
Communication services demonstrated positive dynamics with their growth accounting for 8.0%. The main contribution to the upturn in the sector was secured by expansion of Internet services and teleinformatics services.

The dynamics of domestic demand in 2022 have been demonstrating moderate growth rates compared to the preceding year. As of the end of nine months of 2022, real household consumption contracted slightly by 1.0%. Meantime, real retail turnover (in the 2014 prices) in 2022 was at the average level of 2021. In 2022, retail sales went up by 2.1%.

Overall, high inflation was conducive to a moderate household demand in 2022. High inflation was conducive to a gradual deceleration in the household income to 2.8% in 2022.

As of the end of nine months of 2022, gross formation increased by 1.0%. Within the structure of gross formation, positive dynamics have been observed in fixed capital formation. Fixed capital formation was staying in the growth zone throughout the year, being driven by the growing investments in the mining industry, construction, trade, transport and other key sectors of the economy (Figure 1.2.2.2).

Figure 1.2.2.2 Contribution of economic sectors to fixed capital investments as % of the corresponding period of the preceding year



Source: ASPR BNS

In 2022, the dynamics of exports were staying in the growth zone, primarily as a result of increasing exports of oil, wheat, precious metals. As of January – September 2022, exports expanded by 18.0% (in 2021, a 2.0% growth). Along with that, the dynamics of real exports were retaining in the growth zone.

1.2.3 FISCAL POLICY

Due to persistently large transfers from the National Fund and growing tax revenues, the budget deficit was decreasing as compared to 2021. State budget revenues went up by 27.8%, with tax revenues accounting

for a major share in the structure of state revenues (Figure 1.2.3.1).

As of end-2022, tax revenues comprised over 70% of state budget revenues and transfers – 23%.

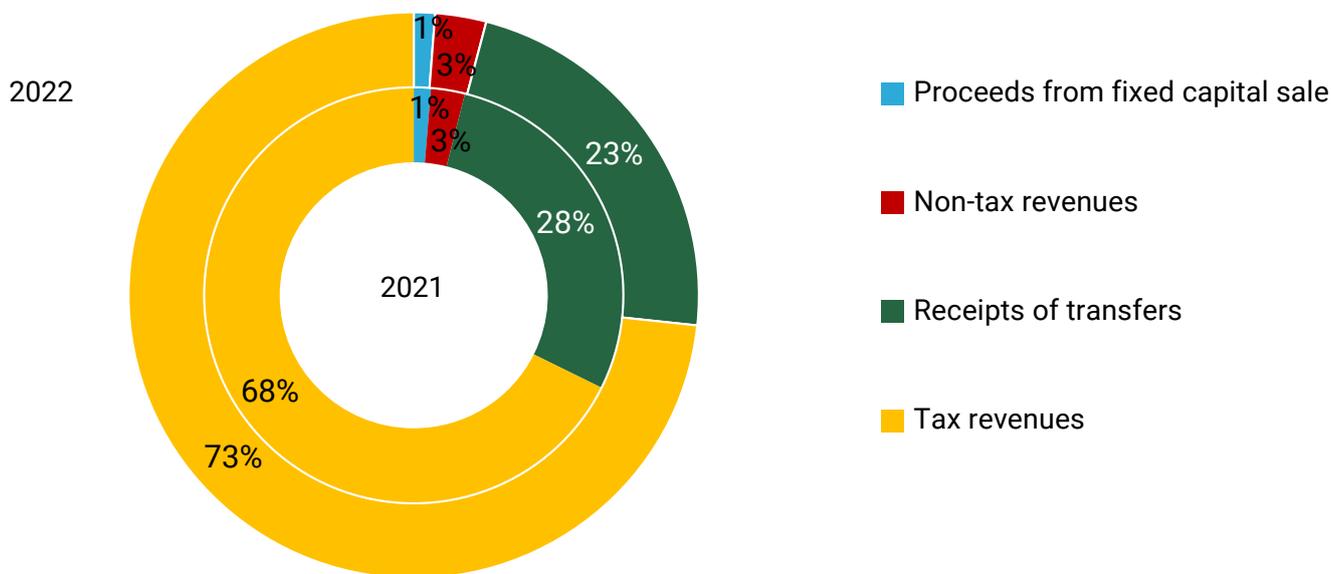
In 2022, transfers from the National Fund totaled 4.6 trln tenge, which is comparable with the volume of withdrawals of the Covid-19 and post-Covid years. Thus, due to the persistently increased fiscal stimulus owing to an active involvement of the National Fund, the level of non-oil deficit continues to remain high for more than 10 years. In particular, the non-oil deficit

of the national budget in 2022 went up by 543 bln tenge compared to 2021. At the same time, the non-oil deficit decreased in relation to GDP to 8.5% in 2022 from 9.6% in 2021, resulting from an outstripping growth of nominal GDP. In aggregate, this fiscal policy practice exerts pressure on the Government's net assets (the National Fund assets excluding the government debt), which in 2022 amounted to 6.5% of GDP, having decreased

from 11.06% of GDP in 2021; this significantly reduced the government fiscal space and, therefore, opportunities to respond to future macroeconomic shocks.

The value-added tax (28.5%), corporate income tax (26.7%) and personal tax (10.1%) account for the largest share within the structure of tax revenues, and the share of other taxes amounted to 34.7%.

Figure 1.2.3.1 Structure of state budget revenues, as % of total revenues

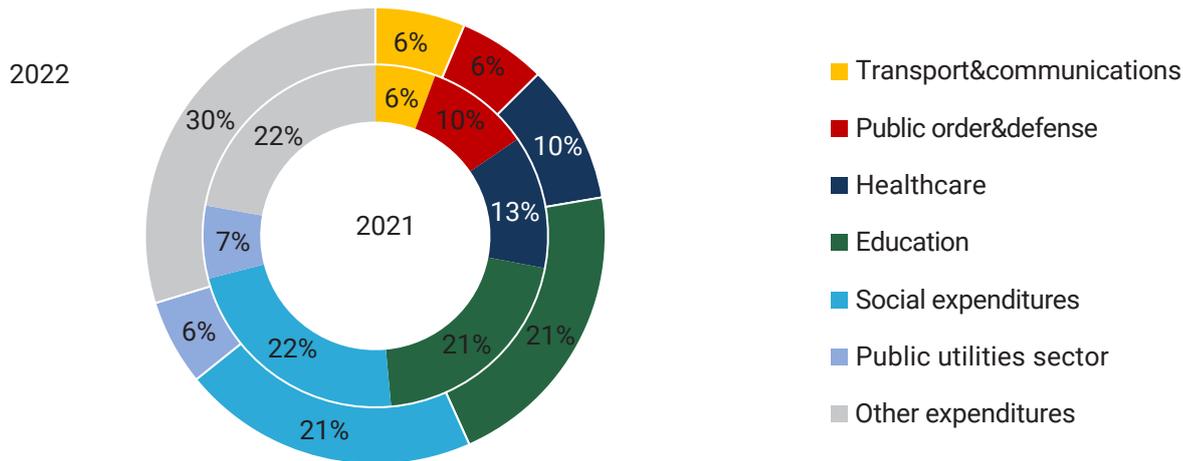


Compared to 2021, tax revenues to the country's budget increased by 38.4%. Within the tax structure, the largest growth was demonstrated by revenues from the value-added tax – by 50.5% (owing to expansion in the production of goods by 3.2% and services by 2.5% in key sectors of the economy), tax on international trade and foreign operations – by 36.7% (as a result of rise in world oil prices and the raising of the floating rate of export customs duty on crude oil), as well as from excises – by 61.6% (due to the increase of the excise rate for tobacco products, alcohol products and fuel and lubricants). The amount of revenues from corporate income tax grew by 40.1%, from personal income tax – by 32.2%, and from social tax – by 23.0%.

Receipts of transfers from the National Fund to the national budget increased by 1.8% – from 4.5 trln tenge in 2021 to 4.6 trln tenge in 2022. Transfers from the National Fund remain high and preserve their pro-cyclical nature.

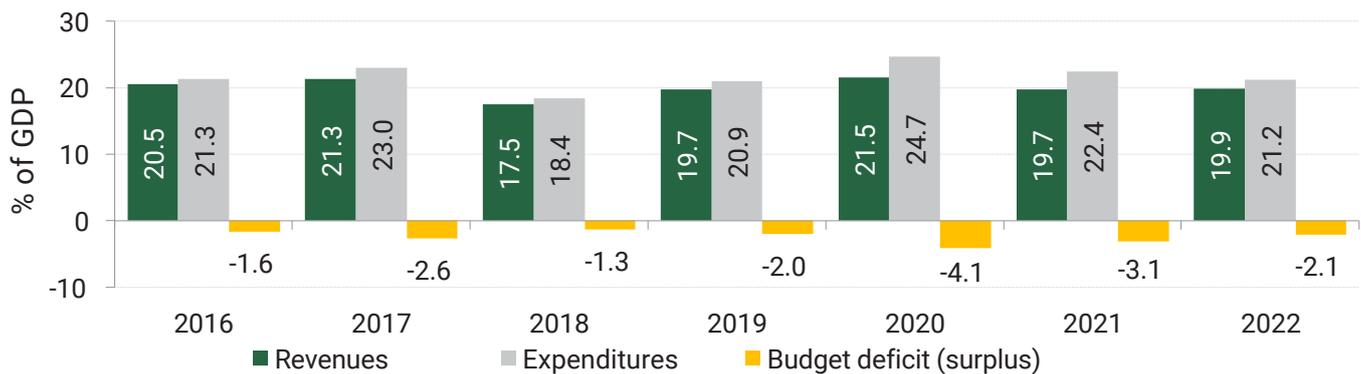
State budget expenditures in 2022 compared to 2021 increased by 19.9%. Significant growth was observed in items that have traditionally been the main beneficiaries of government spending. Thus, the costs of social welfare and social security increased by 11.6% (against the indexation of retirement benefits, allowances and targeted social assistance), education – by 22.8% (owing to the raising of salaries to teachers), defense – by 49.4% (in connection with combat and mobilization readiness of the Armed Forces) (Figure 1.2.3.2). The 18.1% increase in expenditures under the "Others" item stemmed from the raising of salaries to certain categories of civil servants, employees of organizations supported by the state budget. At the same time, expenditures on the health care, which during the coronavirus pandemic was one of the largest budget expenditure items decreased (by 6.5%).

Figure 1.2.3.2 Structure of the state budget spending, as % of total expenditures



As of end-2022, the state budget spending amounted to 2.2 trln tenge or 2.1 % of GDP (the non-oil budget deficit was 8.4 trln tenge or 8.2 % of GDP) (Figure 1.2.3.3).

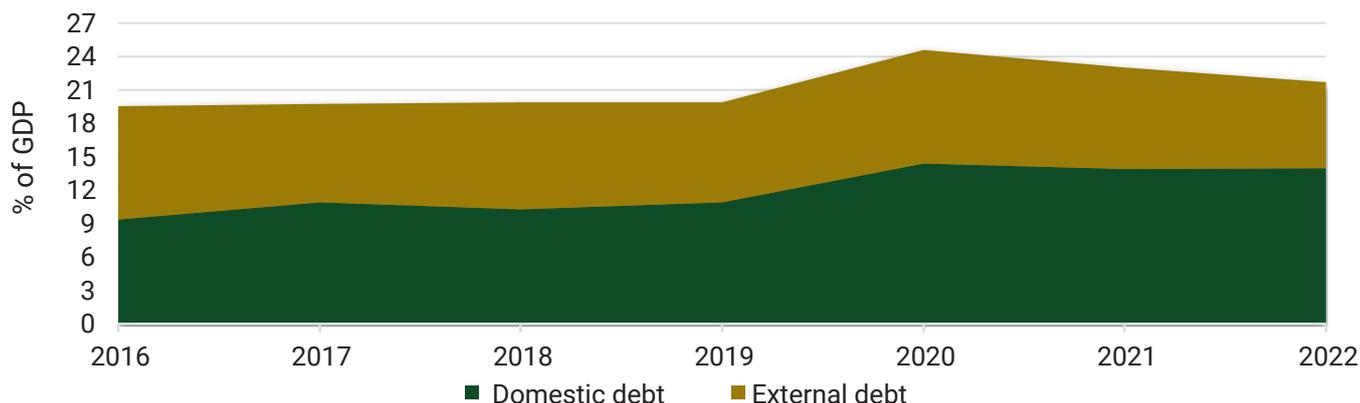
Figure 1.2.3.3 State budget execution



In 2022, receipts to the National Fund (excluding investment income) increased by 1.5 times compared to 2021. This is owing to a 1.5-fold increase in direct taxes from oil sector enterprises (excluding taxes paid to the local budget) in the face of rising world prices of oil. The increase occurred mainly due to a 133.8% growth of revenues from corporate income tax and an 86.8% expansion in the share of the Republic of Kazakhstan from product sharing under concluded contracts. In addition, revenues from the rent tax on exported crude oil and from mining resources extraction tax increased by 87.9% and 3.5 times, respectively. The proceeds from the management of the National Fund decreased by 2.7 times compared to the previous year.

As of end-2022, external government debt equaled 7.8 trln tenge (16.9 bln US dollars), or 7.7% of GDP, having increased by 6.0% compared to 2021 (Figure 1.2.3.4). The major portion in the total external debt of the Government of the Republic of Kazakhstan was comprised of Eurobonds (52.2%) as well as foreign loans of the International Bank for Reconstruction and Development (20.9%) and the Asian Development Bank (11.6%). The domestic debt of the Government of the Republic of Kazakhstan increased by 25.0% due to the growth of long-term treasuries by 16.6% and amounted to 14.2 trln tenge, or 14.0% of GDP at the end of 2022.

Figure 1.2.3.4 Government debt of the Republic of Kazakhstan



1.2.4 BALANCE OF PAYMENTS AND EXTERNAL DEBT

According to the results of 2022, the current account was in surplus and amounted to 8.5 bln US dollars (in 2021 the current account deficit made up 2.6 bln US dollars). A positive current account balance is associated with an improved state of the trade balance (Appendix 1 to Section 1.2.4, Table 1.2.4.1).

The trade surplus increased by 50.1% – to 36.4 bln US dollars. The increase in the surplus was secured by an outstripping rate of growth in exports of goods over the growth rate of import.

Exports of goods increased by 30.9% versus 2021 and amounted to 86.1 bln US dollars. The value of oil and gas condensate exports (55.6% of official exports) grew by 50.9%, or by 15.8 bln US dollars, due to 52.1% rise in contractual prices. In 2022, world prices of Brent oil were 99.8 US dollars per barrel on average and increased by 41.7% versus 2021 (70.4 US dollars per barrel on average in 2021).

Exports of ferrous metals increased by 11.8%, and exports of non-ferrous metals – by 10.5%. Exports of grain grew up by 34.1%.

Imports of goods expanded by 19.7% and equaled to 49.8 bln US dollars. An increase in imports of goods was driven by the growing imports of interim goods – by 19.7%, or 3.9 bln US dollars and of non-food consumer goods by 33.1%, or 2.9 bln US dollars.

The deficit in the balance of international services decreased by 26.1% – to 1.5 bln US dollars relative to 2021. The reduction in the deficit of the balance of services is associated with an increase in exports of services by 34.6% and imports of services by 19.1%.

Foreign trade turnover on international services grew up by 25.7% and equaled to 17.3 bln US dollars.

The deficit of primary income balance grew up by 5.6% compared to 2021 and equaled to 25.5 bln US dollars. The deficit increased because of growing returns of foreign direct investors.

Investment income received from residents' investments increased by 64.7% versus 2021 and amounted to 3.4 bln US dollars. About a half of such income falls on revenues from the country's official reserves (reserve assets and foreign assets of the National Fund), which increased by 23.9% – to 1.2 bln US dollars.

Investment income payable to foreign investors increased by 10.1% – to 27.8 bln US dollars, including income of non-residents from direct investments grew by 10.8% from 22.8 bln US dollars in 2021 to 25.3 bln US dollars in 2022.

The net outflow on the financial account (excluding reserve assets) in 2022 amounted to 6.2 bln US dollars, being largely secured by the public sector operations. In 2021, there was a net inflow of 2.4 bln US dollars on the financial account. A larger buildup in assets of residents compared to the growth in their liabilities secured a net capital outflow on financial operations or "net lending to the rest of the world".

The net inflow of foreign direct investments (negative balance) in 2022 amounted to 7.9 bln US dollars (1.9 bln US dollars in 2021). Operations on foreign direct investments are related to financing of foreign affiliated companies by Kazakhstani enterprises.

Liabilities on foreign direct investments expanded to 4.9 bln US dollars. The increase in liabilities of residents on foreign direct investments was secured

by the reinvestment of returns of non-residents (retained profit of direct investors).

The gross inflow of foreign direct investments into Kazakhstan grew up by 17.7% versus 2021 and equaled to 28.0 bln US dollars. Investments into production of crude oil and natural gas (their share accounted to 34.5% of gross inflow of foreign direct investments in 2022) increased by 45.6% and amounted to 9.7 bln US dollars. Foreign direct investments into the metallurgical industry (the share of 14.3%) decreased by 3.6% to 4.0 bln US dollars; investments into wholesale and retail trade, car repair (the share of 18.15%) increased by 36.0% to 5.1 bln US dollars; investments into financial and insurance activities (the share of 2.3%) decreased by 59.8% and equaled 0.6 bln US dollars; and investments into transport and warehousing (the share of 4.1%) increased by 13.5% – to 1.2 bln US dollars.

In the structure of gross inflow of foreign direct investments by countries, the Netherlands are dominating (29.7% of gross receipts of foreign direct investments), followed by the USA (18.2%), Switzerland (9.9%), Belgium (5.6%), the Russian Federation (5.4%), Republic of Korea (the South Korea) (5.3%), China (5.1%), France (2.7%) and the UK (2.4%).

The net capital outflow on portfolio investments amounted to 13.4 bln US dollars (in 2021 the capital inflow was 3.6 bln US dollars). The capital outflow was secured by an increase in the foreign assets of the National Fund and enterprises of the non-banking sector by 10.2 bln US dollars.

Medium- and long-term debt instruments reported under "Other investments" item showed up a net capital inflow of 0.8 bln US dollars (net inflow of 2.9 bln US dollars in 2021).

The net capital outflow on short-term debt instruments in 2022 equaled to 1.3 bln US dollars (5.8 bln US dollars in 2021). The increase in short-term assets of residents by 7.0 bln US dollars was secured by the growth in assets of banks, the National Fund, Unified Accumulative Pension Fund and Kazakhstani enterprises on foreign accounts. Liabilities of residents went up by 5.7 bln US dollars due to the increase in liabilities on short-term credits and loans of banks and other sectors as well as accounts payable of Kazakhstani enterprises.

Reserve assets (excluding assets of the National Fund) as of January 1, 2023, were estimated at 35.1 bln US dollars, which covers the financing needs of 7.1 months of Kazakhstani imports of goods and services.

External debt of the Republic of Kazakhstan as of end-2022 equaled to 160.5 bln US dollars, of which 9.7%, or 15.6 bln US dollars is the public sector's external debt; 6.0%, or 9.7 bln US dollars – external debt of the sector of "Banks"; 26.2%, or 42.1 bln US dollars – debt of "Other sectors" not unrelated to direct investments; and 58.0%, or 93.2 bln US dollars is intercompany debt (Appendix 2 to Section 1.2.4, Table 1.2.4.2).

During 2022, the country's external debt contracted by 3.6 bln US dollars (in 2021 – the growth of 135.9 mln US dollars). In case of increase in the balance of payments operations, reduction in external debt is caused by changes of the Eurobond market value, exchange rate revaluation of credits and loans, and other non-operational changes.

In 2022, external debt of the Government of the Republic of Kazakhstan went down by 2.5 bln US dollars and amounted to 13.4 bln US dollars. The reduction was associated with a contraction in liabilities of the Ministry of Finance on securities held in portfolios of non-residents due to a lower demand from foreign investors on Eurobonds issued by the Ministry of Finance from foreign investors as well as because of changes in their value.

External liabilities of the National Bank also decreased by 0.4 bln US dollars – to 2.2 bln US dollars due to the lower demand from non-residents for the National Bank's short-term notes and also owing to reduction in the SDR-denominated liabilities' exchange rate's movements.

External debt of "Banks" grew by 4.2 bln US dollars – to 9.7 bln US dollars, primarily due to an inflow of non-residents funds to Kazakhstani banks' accounts and expansion of short-term foreign loans received from non-residents. Repayment, including early repayment, by the "Development Bank of Kazakhstan" JSC of earlier issued Eurobonds had partially offset the increase in bank liabilities.

External debt of "Other sectors" to non-affiliated lenders amounted to 42.1 bln US dollars, having decreased by 1.9 bln US dollars since the beginning of the year, mainly because of reduced liabilities on securities. At the same time, in the reporting period, there had been an increase in liabilities on loans and trade credits and advances that had partially offset the reduction in other sectors.

The "Intercompany debt" contracted by 3.1 bln US dollars, equaling 93.2 bln US dollars through repayment of intergroup loans (from foreign direct investors and foreign fellow enterprises) by oil and gas sector enterprises, transport and construction companies.

Favorable domestic economic conditions amid rising world prices on commodity markets promoted the growth of GDP and exports of goods and services. As a result, relative external debt parameters improved (Appendix 3 to Section 1.2.4, Table 1.2.4.3): at January 1, 2023, external debt to GDP was 72.6% (at January 1, 2022 – 83.1%), and external debt to exports of goods and services – 170.6% (at January 1, 2022 – 229.0%).

Kazakhstan's net external debt in 2022 amounted to 50.0 bln US dollars, having decreased by 14.2 bln US dollars since the beginning of the year. The public sector and the sector of "Banks" are net creditors to the rest of the world (41.0 bln US dollars in total), and "Other sectors" and intercompany debt – are net debtors (91.0 bln US dollars).

1.3 NATIONAL BANK'S MEASURES

1.3.1 MONETARY POLICY

Based on the balance of risks, instability in deceleration of inflation at the end of 2021, at the beginning of 2022 the National Bank continued to tighten its monetary policy. On January 24, 2022, the decision was made to increase the base rate by 50 bp to 10.25%.

On February 24, 2022, in order to prevent negative implications from realized risks on the part of external sector in the context of significant aggravation of the geopolitical situation, the National Bank made an extraordinary decision to raise the base rate by 325 bp to 13.5% to ensure macroeconomic stability and protect the tenge assets.

Following this decision, cap rates on retail deposits in the tenge recommended by the Kazakhstan Deposit Insurance Fund, were increased. In addition, together with the Government, the Tenge Deposit Protection Program was elaborated. It provides the calculation of a 10% compensation (premium) on deposits of individuals in the tenge, on condition that the deposit is kept for the next 12 months.

Given the depreciation of the tenge, a feverish demand and disruption in supply chains, the annual inflation accelerated to 12% in March and 13.2% in April 2022.

As a result, the risk of inflation rising above the targets set for 2022–2023 increased significantly. In response to the heightened inflationary pressure, on April 25 the National Bank raised the base rate to 14%.

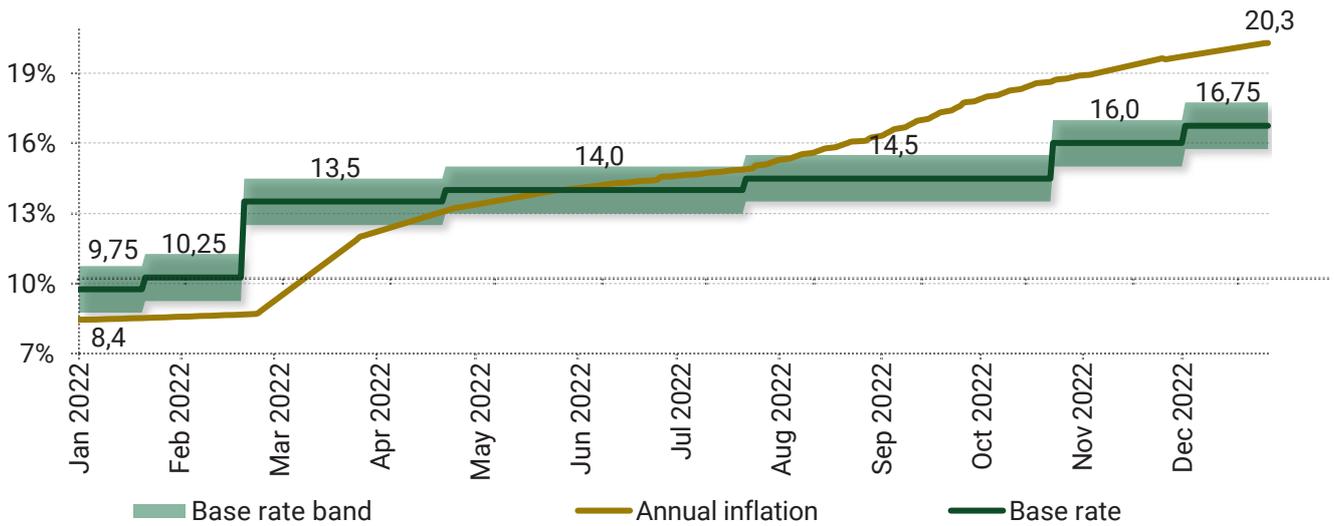
By mid-2022, due to the growing pressure from the external sector (increasing cost of logistics services, high inflation in the trading partner countries, depreciation of the tenge against the ruble) and internal drivers (acceleration of inflation expectations, stimulative fiscal impulse), the annual inflation accelerated. Therefore, in order to stabilize and slow down inflationary processes and expectations in 2023, on July 25, 2022, the National Bank made the decision to raise the base rate to 14.5%.

At the end of the 3rd quarter of 2022, amid persistent internal and external factors as well as due to the migration shock, the annual inflation hit the all-time highs of 2016 (17.7% in September 2022, 17.7% in July 2016), having considerably deviated from the projected path. In this environment, in its regular decision of October 26, 2022, the National Bank raised the base rate by 150 bp to 16%.

In December, in response to a further acceleration of inflation in October – November, and the revision of the medium-term forecast, the National Bank made another decision to increase the base rate to 16.75%.



Figure 1.3.1.1 The base rate path and annual inflation rate



Based on the monetary policy measures taken in 2022, once the external inflationary pressure weakens

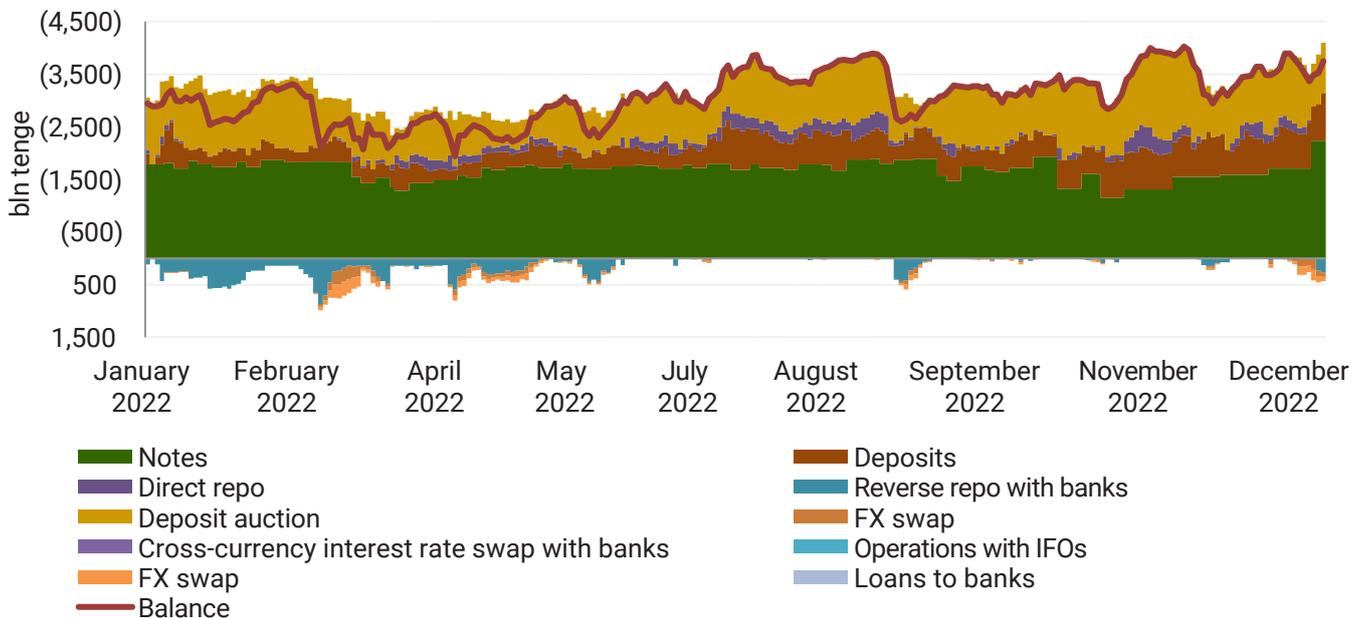
and supply chains normalize, inflation is expected to start stabilizing from 2023.

1.3.2 MONEY MARKET

In 2022, the money market was functioning in conditions of structural liquidity surplus, which has slightly increased over the year and equaled 3.7 trln tenge at the year-end. The National Bank was conducting operations

to withdraw excess liquidity mainly by issuing short term-notes, conducting deposit auctions and deposit-taking (Figure 1.3.2.1).

Figure 1.3.2.1 Open position of the National Bank's operations

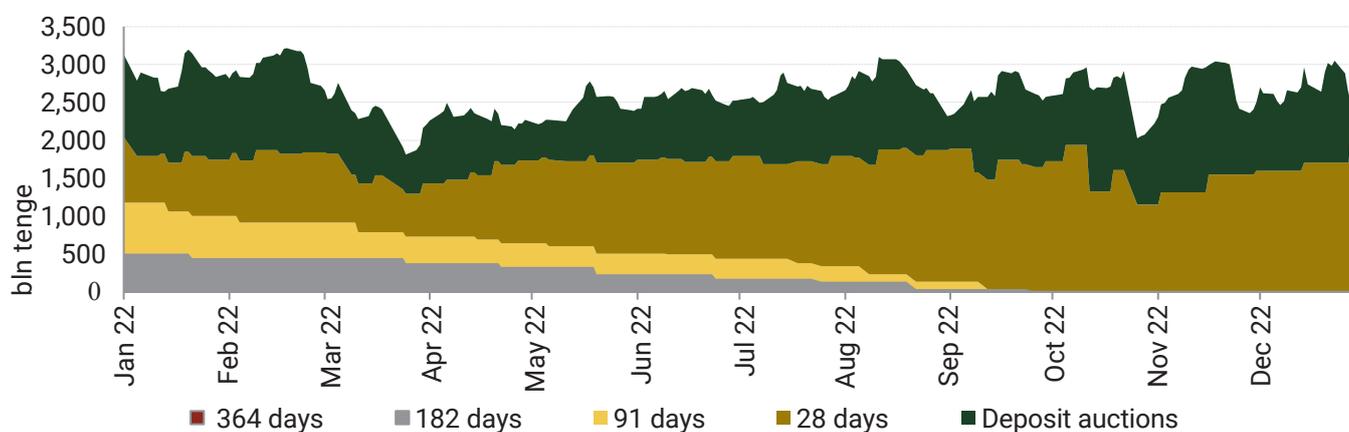


In 2022, the National Bank conducted 53 auctions to place short-term notes with maturity from one month to six months. From April 2022, the issuance of 182-day notes was discontinued, and the issuance of 91-day notes was limited to 100 bln tenge. The issuance of the latter since July 2022 has been discontinued. In the last quarter of 2022, in order to further improve implementation of the monetary policy, the frequency of note issuance was reduced from weekly to bi-weekly. These measures were implemented with the objective of improving the efficiency of monetary policy transmission and stimulating the demand for government securities of the Ministry of Finance. Despite that, notes remained as the main National Bank instrument, and during 2022 their volume in circulation increased by 134 bln tenge – to 2,236.3 bln tenge, and notes in circulation in 2022 on average amounted to 1 677.7 bln tenge.

Besides, excess liquidity in the money market was withdrawn by conducting deposit auctions and through standing facilities operations. Thus, during the year, the National Bank conducted 245 deposit auctions, with their open position equaling 962.3 bln tenge at the end of December 2022. As part of the standing facilities framework, deposit transactions in the interbank market were conducted and repos and FX swaps were executed on the Kazakhstan Stock Exchange platform.

The National Bank participated in the stock exchange repo market in the sector of repo with a central counterparty. In addition, liquidity provision and withdrawal via repos and swaps were also carried out at an additional session where only the National Bank acted as one party to a transaction.

Figure 1.3.2.2 Open position on notes and the deposit auction



Operational monetary policy measures contributed to the formation of money market rates within the target interest rate corridor.

near the lower bound. Interest rates in the swap market were replicating the TONIA pattern, rising in the periods of high demand for the tenge liquidity (Figure 1.3.2.3).

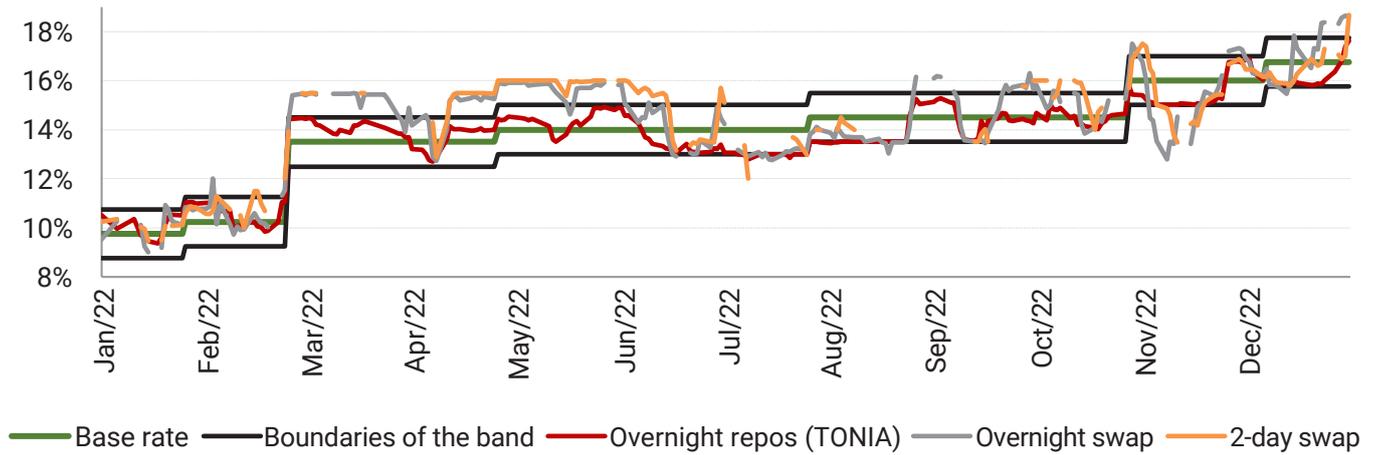
The target money market rate TONIA¹ during 2022 was formed within the range of 9.38-17.63%. During the periods of high volatility that were related to worsening of the geopolitical situation as well as in the period of tax payments, interest rates on overnight repo transactions were increasing closer to the upper bound of interest rate corridor. At all other times, TONIA was forming primarily

In the periods of high demand for liquidity, which was observed mainly in the first half of 2022 and some days of the second half, the National Bank was providing liquidity via reverse repo operations. Over the year, the average daily volume of trades in overnight repos has grown by 36.8% – to 663 bln tenge (in 2021 – 484 bln tenge).

¹ Overnight repo rate on securities from the government securities basket



Figure 1.3.2.3 Interest rates in the repo and swap market



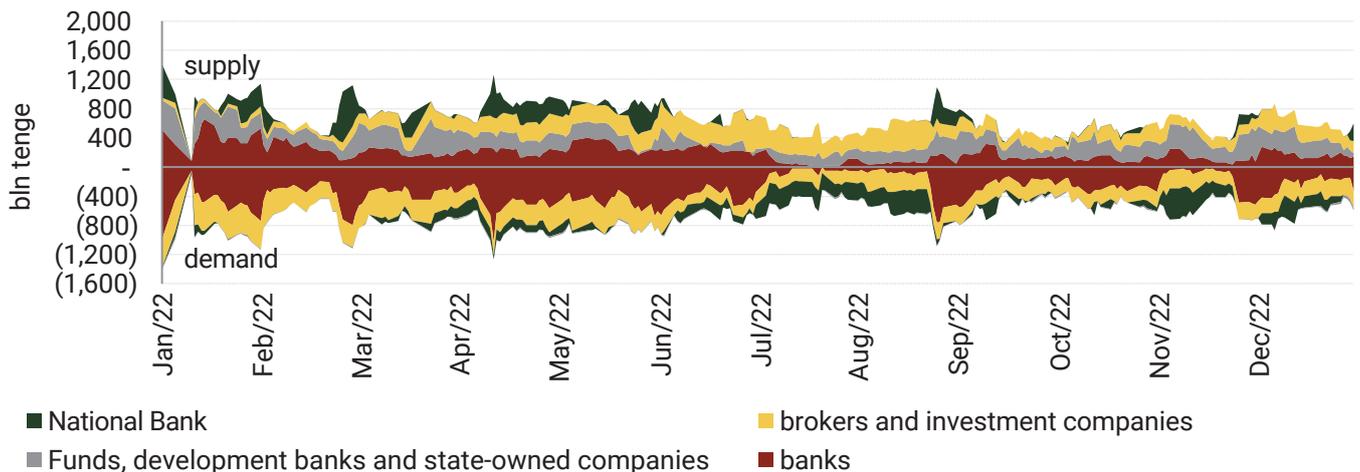
Generally, money market rates were formed mainly by the market participants, while the National Bank's participation was insignificant. In the stock exchange repo market, the National Bank's share of participation in the main session on liquidity placement increased from 4% in 2021 to 8% in 2022 due to the growing demand for the tenge liquidity.

In 2022, the structure of participants in the overnight repo market had changed (Figure 1.3.2.4). In terms of placement, the share of brokerage firms and investment companies increased significantly from the average level of 8% in 2021 to 32% in 2022. On the contrary, the share of second-tier banks, which

used to cover more than a half of the market decreased, in 2022 it averaged 28% of the total volume of liquidity placement. Big funds, development banks and state-owned companies have slightly reduced their share to 31% on average during 2022 (34% in 2021).

In terms of liquidity attraction, brokerage firms and investment companies that covered more than a half of the market lowered their participation to 37% on average during 2022. Whereas, the share of second-tier banks went up to 44% on average in 2022 (37% in 2021). In view of excess liquidity, the volume of attraction by the National Bank increased to 17% in 2022 on average (in 2021 – 6.2%).

Figure 1.3.2.4 Structure of the overnight repo market in 2022



Development of the Government Securities Market

In 2022, jointly with the Ministry of Finance of the Republic of Kazakhstan, the work was underway to build a risk-free yield curve and to increase liquidity of the government bond market.

In the reporting period, the Ministry of Finance, as a part of the state budget deficit financing, issued government securities with maturities from one to 15 years and total volume of more than 4 trln tenge (nominal value). The auction yield on government securities ranged between 10.30%-16.58%.

In order to increase the demand for government securities and to expand the investor base, from August 2022 the issuance of government securities with a floating coupon rate indexed to TONIA was launched. This category of government securities had been successfully placed, with maturities of up to 6 years.

From April 2022, Kazakhstan's government securities were included in the FTSE Frontier Emerging Markets Government Bond Index Series, which is an indication of the growing interest and attention from international investors.

In addition, jointly with the Ministry of Finance, the work to include sovereign bonds of the Republic of Kazakhstan in the J.P. Morgan Emerging Market Bond Index was continued. The next step for the market development should be the inclusion of government securities in the GBI-EM, which serves as a benchmark for a wider range of investors and international funds.

There was also an active cooperation with international investors, including with the index provider, aimed at increasing non-residents' interest in the local government debt market.

Besides that, jointly with Bloomberg, a platform was developed and launched for the Kazakhstani market for trading government securities in tenge on the over-the-counter market, which will help increase the efficiency of the secondary market for government debt.

1.3.3 FOREIGN EXCHANGE MARKET

In 2022, the exchange rate of the tenge fluctuated in a wide range from 414.79 to 512.17 tenge per US dollar, having depreciated by 7.1% at the year-end – to 462.66 tenge per US dollar.

The tenge exchange rate was formed in conditions of geopolitical tensions, volatility in oil prices

and the disinflationary policy pursued by central banks of developed countries. As for internal factor, the tenge dynamics was affected by the growing demand in certain periods of high uncertainty. At the same time, there were a number of factors that supported the tenge: greater attractiveness of the tenge assets due to the increase of the base rate; the tenge deposit protection program; sales of foreign exchange proceeds by the quasi-public sector entities; the National Bank's operations to convert the National Fund assets, as well as the National Bank's interventions carried out at the beginning of the year to prevent destabilization of the foreign exchange market.

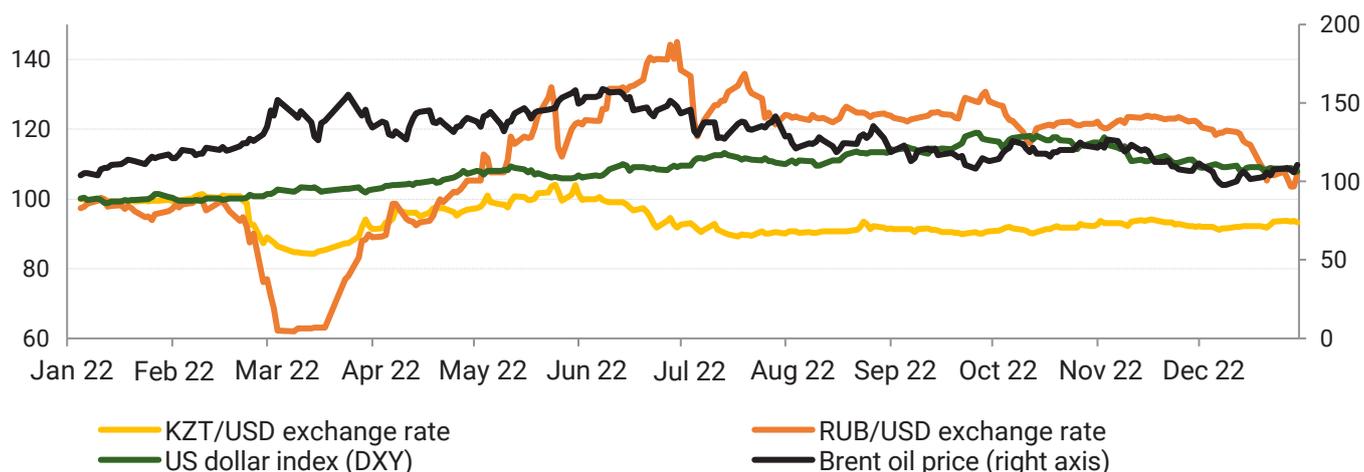
During the year, the energy price dynamics was volatile and had an upward trend in the first half of the year. The limited supply in the oil market, due to lagging from the permitted quotas production volumes of the OPEC+, as well as supply problems because of the geopolitical situation, led to an increase in oil prices. Exacerbation of concerns about a slowdown in the global economic growth and recession risks in developed countries negatively affected commodity markets in the second half of 2022. At the end of 2022, the price of Brent oil increased by 10.5% from 77.8 to 85.9 US dollars per barrel, demonstrating in some periods a rise above 100 US dollars per barrel, which supported the exchange rate of the national currency. Average Brent oil price in 2022 was 99.04 US dollars per barrel.

The weakening of the tenge exchange rate was caused by the global tightening of monetary conditions following a significant increase in pro-inflationary pressure. This resulted in a global strengthening of the US dollar and some growth in demand for foreign currency in the domestic market. The growth of the US dollar index (DXY) in September 2022 led the dollar to reach parity with the euro, and then appreciate against the Euro area currency for the first time since December 2002. Due to the easing of the Fed's rhetoric against lower inflation in the US, the dollar index (DXY) began to decline and reached a level of 103.5 points by the end of December 2022 (the increase since the beginning of the year amounted to 8.2%).

In the domestic market, the growth in demand for foreign currency was largely observed during the periods of high uncertainty associated with geopolitical events and sanctions imposed against Russia. Given the imposed sanctions, the unprecedented volatility of the exchange rate of the Russian ruble against the US dollar in the first half of the year had a negative impact on the dynamics of the tenge exchange rate.



Figure 1.3.3.1 Movement of the Russian ruble and the tenge against the US dollar, oil price and the US dollar index (December 31, 2021 = 100)



In order to ensure financial stability and prevent destabilizing fluctuations of the tenge exchange rate, a set of measures had been undertaken to stabilize the foreign exchange market.

The National Bank's foreign currency interventions with the net amount of 1.4 bln US dollars in 2022 allowed to reduce unjustified impact of excessive movements of the ruble exchange rate on the tenge and were conducive to the proper functioning of the foreign exchange market in the period of crisis.

To limit a speculative pressure on the tenge exchange rate in certain periods, trading on the Kazakhstan Stock Exchange platform in the USD-KZT currency pair was conducted in the form of Frankfurt auction.

The national currency was also supported by the FX sales of quasi-sovereign sector entities within the framework of adopted regulatory requirement for a mandatory sale of foreign exchange export proceeds. From March 2022, this requirement was raised from 50% to 75%, which helped increase the supply of foreign exchange in the domestic market. The volume of sales by the quasi-sovereign sector entities during 2022 totaled 5.1 bln US dollars.

FX sale to facilitate transfers from the National Fund to the national budget of 4.3 bln US dollars in 2022 also promoted equilibrium in the foreign exchange market.

Restrictions were imposed on the export of foreign cash, which allowed reducing the pressure of speculative demand and controlling an excessive export of foreign exchange currency. The National Bank provided the supply of foreign cash to the domestic market.

Additionally, the National Bank provided a coordination of the transactions of quasi- sovereign companies in the foreign exchange market to ensure an even distribution of foreign exchange operations and the intra-group netting to minimize the impact on the foreign exchange market.

Owing to the above measures and high energy prices, the exchange rate of the tenge appreciated to 414.79 tenge per US dollar in May 2022 from the record lows of 512.17 tenge per US dollar in March.

Besides, an active communication policy was pursued. On a regular basis, the National Bank was reporting the situation in the foreign exchange market in detail and in a timely manner with a thorough explanation of main reasons and factors that affected the dynamics of the national currency exchange rate.

During 2022, due to the measures taken and the exchange rate flexibility, the foreign exchange market quickly adapted to external shocks and was balanced in terms of supply and demand with a moderate level of volatility. In the second half of the year, the National Bank did not conduct foreign currency interventions.

1.4 ENSURING FINANCIAL STABILITY

1.4.1 AN OVERVIEW OF MEASURES TAKEN TO ENSURE FINANCIAL STABILITY

In 2022, the financial sector of the Republic of Kazakhstan was functioning in the environment of heightened uncertainty amid adverse internal and external shocks. The tragic January events associated with massive social protests in the country paralyzed the business activity in a number of cities, including the country's financial center. In late February, geopolitical tensions in the region intensified due to events in Ukraine, whose consequences exerted an immediate effect on Kazakhstan through several channels, including the exchange rate and the banking sector. The abovementioned adverse factors tested the country's financial sector for strength. In turn, the National Bank, the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market and the Government of the Republic of Kazakhstan promptly reacted to the events and took the necessary measures for smooth functioning of the financial sector and minimization of the impact of internal and external factors. This enabled to adapt the financial sector to the emerged challenges and preserve financial stability.

In January, under the state of emergency, the financial system was brought back to normal within a few days; the main banking services to the population were gradually restored; the National Bank ensured an uninterrupted supply of foreign cash and local currency to the market, and carried out operations to provide liquidity through the Kazakhstan Stock Exchange and made interventions in the foreign exchange market. Banks have given borrowers the opportunity to defer loan payments². The Figure 1.3.4.2 measures taken helped prevent long-term failures in the financial system operation and realization of risks to financial stability in general, as well as to preserve confidence in the national currency.

With an aim to preserve confidence of the population in deposits in the national currency amid increasing volatility of the tenge, on February 23, 2022, the National Bank and the Government announced about the Tenge Deposit Protection Program³ ("the Program"), which

implies the accrual of 10% lump-sum compensation to accounts of individuals in the tenge. The key condition for receiving compensation was the presence of a deposit in the participating bank by the end of the working day on February 23, 2022 and its retention for the next 12 months. The costs of financing of the Program are distributed between the state budget and the National Bank on a parity basis (50%/50%). Based on the results of the Program, compensation was paid to more than 2.6 mln depositors. The total amount of compensation was 306.6 bln tenge.

The announcement of the Program was a timely and necessary mechanism for neutralizing the risks in the banking sector, having a positive impact on strengthening the stability of funding and the banking sector, as well as increasing the attractiveness of the tenge deposits.

The consequences of the geopolitical crisis also exerted serious pressure on the country's banking sector. In the context of increased volatility in the financial market, the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market has introduced a temporary special procedure for compliance with certain prudential ratios of banks, including liquidity ratios and foreign currency exposure limits.

The imposition of sanctions against the biggest Russian banks significantly complicated the operations of their subsidiary banks operating in Kazakhstan by early 2022 ("Alfa Bank" JSC subsidiary bank, VTB Bank (Kazakhstan) JSC subsidiary branch, "Sberbank Kazakhstan" JSC subsidiary bank). Subsidiaries of Russian banks encountered a significant contraction in assets and an outflow of deposits, a reduction in the client base, which necessitated the sale of their assets to other banks.

Thus, "Alfa-Bank" JSC was purchased by "Bank CenterCredit" JSC, renamed as "Eco Center Bank" and removed from the sanctions list. In September 2022, "Eco Center Bank" JSC was reorganized through merger with "Bank CenterCredit" JSC. Shareholders of "VTB Bank (Kazakhstan)" JSC subsidiary branch provided additional capital to the subsidiary bank for its further

² The Order of the Chairman of the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market dated January 10, 2022 No. 8 "On Measures to Support Individuals and Corporate Entities that were Affected as a Result of Imposition of the State of Emergency"

³ Approved by the Government Decree of the Republic of Kazakhstan dated August 27, 2022 No. 614 "On Approval of the Rules for Payment of Compensation (Premium) on Deposits of Individuals in the National Currency (the Tenge)"



operation. In turn, "Sberbank Kazakhstan" JSC SB was bought by "Baiterek NMHC" JSC and renamed as Bereke Bank. Timely measures taken enabled to curb negative consequences of the imposed sanctions against Russian banks to the banking sector of Kazakhstan. At the same time, in March 2023, the US Department of Finance excluded Bereke Bank from the Office of Foreign Assets Control (OFAC) SDN sanctions list.

As of end-2022, bank assets went up by 18.4%, or 6.9 trln tenge, amounting to 44.6 trln tenge (a growth of 20.7%, or 6.5 trln tenge in 2021). High-quality liquid assets of banks at end-2022 equaled 13.5 trln tenge, having increased by 15.1% compared to 2021, or 30.2% of total assets (31.1% at the end of 2021). The bank loan portfolio went up by 20.1%, or 4.1 trln tenge and amounted to 24.3 trln tenge (a growth of 28%, or 4.4 trln tenge in 2021).

The size of corporate portfolio (including small and medium-sized business) as of end-2022 made up 10.7 trln tenge, having increased by 16.7%, or 1.5 trln tenge (13.8%, or 1.1 trln tenge in 2021). In 2022, most banks adapted their digital credit products to the government concessional lending programs for SMEs (government guarantees on loans and interest rate subsidies), which led to the growth in demand for E-credit products from small and medium-sized businesses, individual entrepreneurs in particular, in 2022.

Bank retail portfolio in 2022 continued to grow at a high pace. Thus, an increase in the retail loan portfolio of banks during 2022 was 31.3% – to 13.2 trln tenge versus 40.9% and 10 trln tenge in 2021. The largest growth is observed in such segments as consumer lending and mortgage loans. Expansion in consumer loans in 2022 accounted for 25.1% (versus 35.2% in 2021) as a result of high demand from the population and active marketing campaigns run by banks. In 2022, the mortgage loan portfolio amounted to 4.8 trln tenge, having increased by 39.6% (2021 – 38.3%). Government housing programs for the population and an opportunity to use pension savings for housing improvement became the key factors in building up mortgage loan portfolio by banks.

In 2022, the volume of loans past due 90+ days increased by 0.1 trillion tenge, or 21.8% (in 2021, the volume of such loans decreased by 0.4 trillion tenge, or 38.2%). A similar trend was observed in terms of created provisions,

which amounted to 1.64 trln tenge as of January 1, 2023, having increased by 16.5%, or 0.2 trln tenge over 2022 (in 2021, provisions decreased by 0.4 trln tenge, or 23.2%).

As of January 1, 2023, the share of loans past due 90+ days amounted to 3.0% of the corporate portfolio of banks, having decreased by 0.4 pp in 2022 (in 2021, the share decreased by 5.2 pp to 3.4%). A reduction in the percentage of overdue debt of the corporate sector is mainly stemming from the growth of new loans in the loan portfolio of banks.

In 2022, the share of loans past due 90+ days in the retail portfolio of banks was 3.74% compared to 3.51% at the end of 2021.

Bank liabilities amounted to 39.3 trln tenge, having increased by 18.9%, or 6.2 trln tenge over the year. Deposits of individuals and corporate entities, which grew by 26% (3.5 trln tenge) and 16.7% (2 trln tenge), respectively, account for the largest growth. Bank owners' equity amounted to 5.2 trln tenge, having increased by 15.3%.

A significant portion within the structure of bank funding has traditionally been represented by customer deposits that amounted to 31.6 trln tenge at the end of 2022 (a 21.5% growth), or 80.3% of the banking sector liabilities, where term deposits account for 60.2% and current accounts – for 30.3%.

At January 1, 2023, capital adequacy ratio k1 was 18.5% (19.3% on January 1, 2022), tier one capital ratio k2 – 21.7% (23.4% on January 1, 2022), which is far in excess of the ratios set forth by the laws. Also, as of January 1, 2023, all banks were meeting minimum liquidity coverage ratios (LCR) and net stable funding ratios (NSFR).

At the same time, as of end-2022, the microfinance market where key performance indicators had increased by more than 50% over the year, continued to expand. Microfinance organizations and credit partnerships served as the growth drivers. During 2022, total assets of the microfinance market entities went up by 34.4%, or by 540.1 bln tenge, the loan portfolio (excluding impairment reserves) increased by 34.2% (460.3 bln tenge), liabilities – by 47.3% (476.6 bln tenge), and owners' equity – by 11.3% (63.5 bln tenge).

Along with the growing dynamics of microloans provided, the share of delinquencies on such loans has slightly declined. Thus, in 2022, the percentage of overdue microloans decreased by 0.7 pp (from 10.7% to 10.0% among all the microfinance market entities). This reduction occurred due to a significant increase in the share of credit partnerships with a low indicator of overdue debt in the total loan portfolio of the microfinance market against a high level of debt of microfinance organizations. Thus, in the first two quarters of 2022, the percentage of past due microloans issued by microfinance organizations went up from 13.6% to 16.3%. However, as a result of the restrictive measures taken by the regulator (lowering the maximum interest rate, strengthening the requirements to the debt ratio, amendment of prudential requirements, forgiveness of troubled debt), this indicator had adjusted to the level of 15.4% as of January 1, 2023.

At the instruction of the Head of State, in order to ensure affordable and stable financing of the real sector of the economy, the following measures were implemented:

- 1) prudential ratios have been eased by extending the effective period of lowered risk weights on SME loans in calculating capital adequacy, and minimum liquidity coverage ratios (LCR) and net stable funding ratios (NSFR) were lowered;
- 2) easing of bank collateral policies by raising liquidity ratios on some types of collateral and classifying certain types of security as liquid collateral;
- 3) revising the loan impairment triggers associated with decreased proceeds, lower current ratio, a loss of a large client;
- 4) canceling a mandatory examination of the results of independent appraisal of collateral in the form of real estate for loans, whose size does not exceed 0.1% of a bank's equity;
- 5) optimizing the procedure for calculation of risk per one borrower.

The measures taken are expected to nurture a further expansion of lending to the real sector of the economy in the context of deteriorating macroeconomic situation. At the same time, the above easements are of temporary nature and will be in effect until 2024.

The Financial Stability Council of Kazakhstan.

Within the scope of promoting financial stability, four sessions of the Financial Stability Council of the Republic of Kazakhstan were held in 2022. The Council, among others, discussed the aspects of the financial sector regulation, wherunder the approaches to the mechanism for determining the annual effective interest rate on unsecured consumer loans and a project for the development of a framework for special regulatory regime were on the agenda. The list of banks for an off-site review of their asset quality and supervisory stress testing in 2022, as well as their structure and the schedule for performing the Financial Sector Assessment Program (FSAP) were approved by the Council. As part of the formulation of macroprudential policy and the improvement of analytics tools, the results of monitoring the indicators necessary for making a decision regarding the counter-cyclical capital buffer, the results of development of the Financial Stability Index, which allows a comprehensive assessment of the financial sector stability in Kazakhstan, as well as preliminary conclusions of the Financial Stability Report for 2021 were submitted for consideration of the Council.

1.4.2 DEPOSIT MARKET

During 2022, deposits of residents in depository organizations went up by 14.1%, amounting to 30.9 trln tenge, including deposits in the national currency – by 22.0% to 21.1 trln tenge, and in foreign currency – by 0.2% to 9.8 trln tenge.

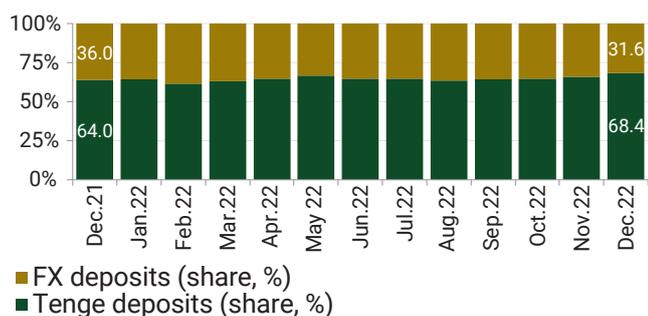
Deposits of legal entities increased by 10.5% to 15.3 trln tenge. Within their structure, deposits in the national currency expanded by 17.6% to 10.2 trln tenge, while foreign currency deposits decreased by 1.4% to 5.1 trln tenge. As a result, during 2022 dollarization of deposits of legal entities declined from 37.6% to 33.6%.

Deposits of individuals went up by 18.0% – to 15.6 trln tenge, including deposits in the tenge – by 26.3% – to 11.0 trln tenge, in foreign currency – by 2.0% – to 4.6 trln tenge. Over the year, dollarization of deposits of individuals declined from 34.4% to 29.7%.

Overall, deposit dollarization in the banking system during 2022 declined from 36.0% to 31.6% (Figure 1.3.4.1).

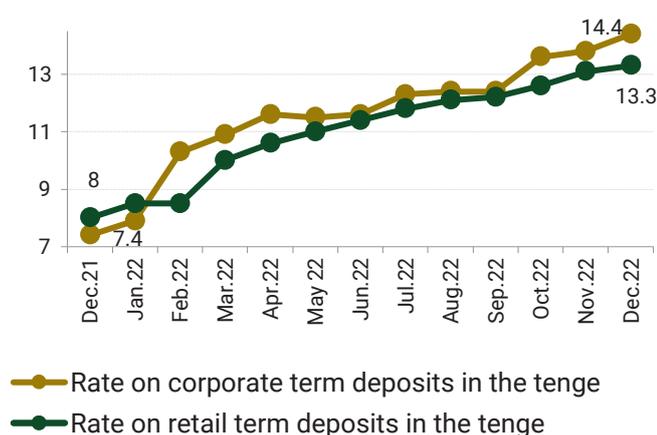


Figure 1.3.4.1 Dollarization of residents' deposits



In 2022, the weighted average interest rate (according to the monetary statistics methodology) on term deposits of non-banking legal entities in the national currency went up from 7.4% to 14.4%, and on term deposits of individuals – from 8.0% to 13.3% (Figure 1.3.4.2).

Figure 1.3.4.2 Dynamics of interest rates on term* deposits in the tenge, %



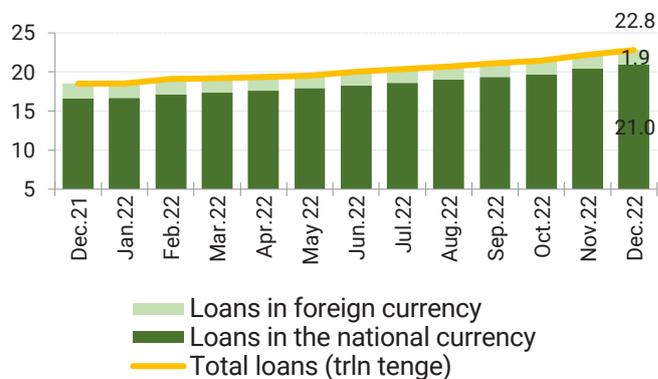
* according to the National Bank methodology on statistical deposit classification

1.4.3 CREDIT MARKET

During 2022, bank credits to the economy went up by 23.3%, amounting to 22.8 trln tenge. Long-term lending in 2022 grew by 17.5% – to 18.8 trln tenge and short-term lending – by 60.8% – to 4.0 trln tenge. The percentage of long-term credits within the structure of bank loan portfolio made up 82.6% (in December 2021 – 86.7%).

Credits in the national currency during 2022 expanded by 26.4% – to 21.0 trln tenge, credits in foreign currency went down by 3.1% – to 1.9 trln tenge (Figure 1.3.5.1). All in all, during 2022, a relative share of credits in the tenge in the total lending volume increased from 89.7% to 91.9%.

Figure 1.3.5.1 Bank credits to the economy, trln tenge



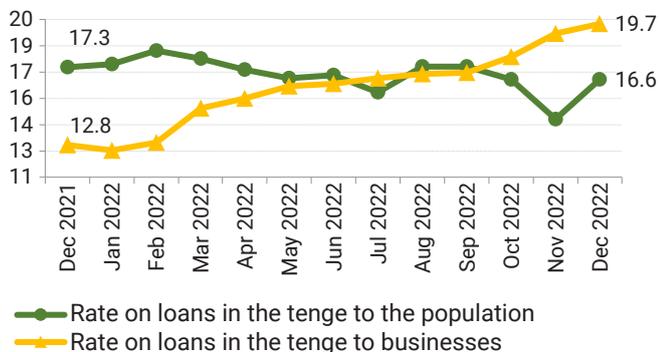
Loans to individuals in annual terms grew by 31.3% – to 13.2 trln tenge, and their relative share increased from 54.3% to 57.8%. Consumer lending and mortgage lending serve as the key growth drivers. Consumer loans have growth amid high inflation expectations, large marketing campaigns and installments offered by banks. However, the annual growth slowed down from 40.1% in December 2021 to 25.3% in December 2022. Affordability of mortgage programs from Otbasy Bank and as part of the “7-20-25” program led to acceleration in mortgage lending from 38.0% to 41.8%.

Banks continued to provide credits to the real sector of the economy, despite high uncertainty in the external sector. Loans to businesses in 2022 went up by 13.9% – to 9.6 trln tenge, to SMEs – by 22.8% – to 4.5 trln tenge. The growth was observed in all sectors except construction (a 6.8% decline) and communication (12.8%). The largest growth was observed in such sectors as transport (a growth of 46.3%), industry (22.9%), agriculture (17.7%) and trade (13.0%).

Given the increase of the base rate to 16.75% and acceleration of inflation in 2022, the weighted average interest rate on loans to business entities provided in the national currency went up from 12.8% in December 2021 to 19.7% in December 2022. Due to marketing campaigns from big banks offering

a purchase of goods by installment and concessional mortgage programs, an interest rate on loans to the population in the national currency decreased from 17.3% to 16.6% (Figure 1.3.5.2).

Figure 1.3.5.2 Weighted average interest rates on bank loans provided in the tenge, %



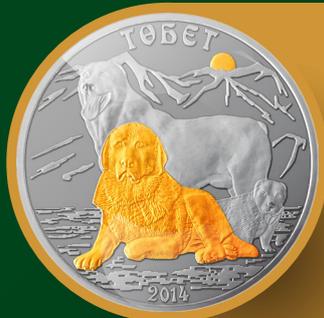
In order to provide users with complete statistical information about credits to the economy, from August 2022, the National Bank started to form and publish information about credits to the economy in broad definition on a quarterly basis; the information

covers a wider range of lenders in addition to second-tier banks, namely the quasi-public sector entities, mortgage organizations and organizations engaged in microfinancial business.

Given the extension in the composition of lenders, the volume of credits to the economy as of January 1, 2023 grew by 21.7% and amounted to 28.9 trln tenge, thus exceeding credits provided to the economy by second-tier banks by 6.0 trln tenge. The volume of loans in the national currency increased by 25.0% – to 26.3 trln tenge, and that in foreign currency went down by 3.2% – to 2.7 trln tenge (also because of their foreign currency revaluation).

From October 2022, within the statistics of credits to the economy, a separation was made between credits to business entities and credits to the population (except loans for business purposes), whose share in total loans in a broad definition as of January 1, 2023, amounted to 49.9% and 50.1%, respectively. Credits to businesses in a broad definition during 2022 went up by 12.9% – to 14.4 trln tenge, and credits to the population – by 32.0% – to 14.5 trln tenge.





SECTION 2. NATIONAL BANK'S ACTIVITIES

2.1. PAYMENT SYSTEM DEVELOPMENT

With a view to develop the payment system market, the National Bank made a systematic effort to implement infrastructure solutions set out by the Program for the Development of the National Payment System in the Republic of Kazakhstan until 2025.

In 2022, jointly with the financial market participants the key components of the payment infrastructure – Instant Payments System and Interbank Payment Card System, were launched into industrial operation with the second-tier banks being connected to the platform. By the end of 2022 the system operator went into participant agreements with 10 banks, 8 of which have been linked up to the infrastructure and provide the service of the Instant Payments System to their clients.

In December 2022 the National Bank, in conjunction with the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market and with involvement of the Agency for Protection and Development of Competition of the Republic of Kazakhstan, approved the Concept of the Development of Open API and Open Banking in the Republic of Kazakhstan for 2023–2025. The Concept describes a goal-oriented vision of the technological infrastructure to ensure data exchange between financial institutions upon client's consent, the model interaction between the participants of the process and requirements to them, implementation stages of open banking interfaces and the required infrastructure, regulatory approaches.

In 2022 the Identification Data Exchange Center service, to which 76 financial organizations are connected (15 banks and 61 non-bank organizations) continued its operation. During 2022 the service had processed over 16.5 mln requests from the financial organizations through.

In 2022 the introduction of the digital tenge was further explored. As part of the study, works had been performed to expand the technological platform: a MVP – minimum viable product – was developed, arrangements were made to ensure an offline chain, smart contracts with the market participants had been designed and used. In addition, the economic aspects were analyzed and a pilot project involving consumers, market participants and trade and services enterprises had been tested.

In June 2022 the Digital Tenge Hub collaborative platform was established, to ensure broad involvement of stakeholders.

In accordance with international practice a decision-making model for the introduction of the digital tenge has been developed, including a comprehensive analysis of the benefits and costs of introducing the digital national currency in Kazakhstan. In December 2022 the National Bank published a final report with a recommended decision on the introduction of digital tenge, and within the framework of the approved model a decision about the phase-by-phase introduction of the digital tenge by 2025 was made.

The measures taken will help improve the availability of financial services for communities and businesses, reduce transaction costs, speed up payments within the country, increase the percentage of cashless payments and transparency of cash flows, and will also ensure the security and stability of the financial market.

2.1.1 PAYMENT SYSTEMS

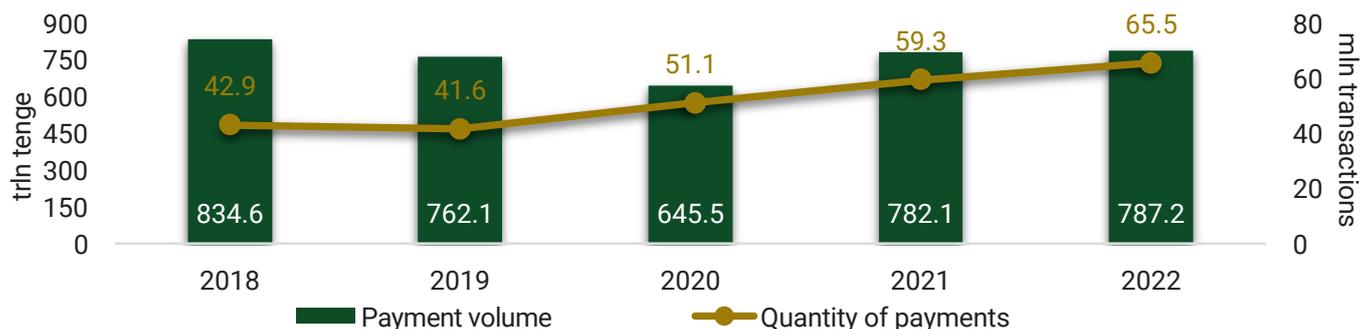
19 payment systems are functioning within the territory of the Republic of Kazakhstan, of which the Interbank System of Money Transfers and the Interbank Clearing System belong to the National Bank; the remaining payment systems are privately owned and are presented by card payment systems and money transfer systems. The National Bank's payment systems are oriented at payments in the national currency within the territory of the Republic of Kazakhstan and process a significant portion of the cashless payments in the country.

The level of the uninterrupted operation of payment systems is an indicator of efficient functioning of the National Bank's payment systems. Operability coefficients of the National Bank's payment systems in 2022 on average equaled 99.85% for the Interbank System of Money Transfers and 99.95% for the Interbank Clearing System.

The volumes of the payments processed through the National Bank's payment systems in 2022 keep growing (Figure 2.1.1.1), with the daily average quantity of the transactions processed through the payment systems equaling 266,400 and amounting to 3.2 trln tenge.



Figure 2.1.1.1 Dynamics of payment flows in the National Bank's payment systems



Interbank System of Money Transfers

At the end of 2022 31 financial organizations, including all infrastructure entities of the financial market were the members of the Interbank System of Money Transfers. In 2022, 21.8 mln payments amounting to 776.9 trln tenge were processed through the system. Compared to 2021, the payment volume increased by 0.5%, and the quantity of electronic payment messages processed through the system went up by 15.8%.

The largest growth in payment volumes falls on payments into the budget and payouts from the budget (a 47.1% growth) and payments for services (a 20.0% growth). Furthermore, volumes of operations with securities show a decline (by 47%).

In 2022 an average amount of one payment in the Interbank System of Money Transfers equaled 35.6 mln tenge and decreased compared to 2021 by 13.3% (by 5.4 mln tenge). The largest share in terms of the quantity of payments was among payments of up to 3 million tenge (82.4%), and the bulk of payments in terms of the volume – payments above 1 billion tenge (the share is – 84.7%).

The system mainly processed payments on interbank operations with short-term deposits (45.6%), securities operations of Kazakhstani residents (29.8% of the total volume of payments), for goods and services (8.4%) and on operations with foreign exchange and precious metals (8.0%).

Interbank Clearing System

At the end of 2022, 22 financial organizations were the members of the Interbank Clearing System. In 2022, 43.7 mln electronic payment messages of 10.3 trln tenge were processed through the system. Compared to 2021, the quantity of payment messages in the clearing system went up by 7.9%, and the payment amount increased by 18.8%. An average amount of one payment in 2022 had increased by 10.1% and equaled 236 000 tenge.

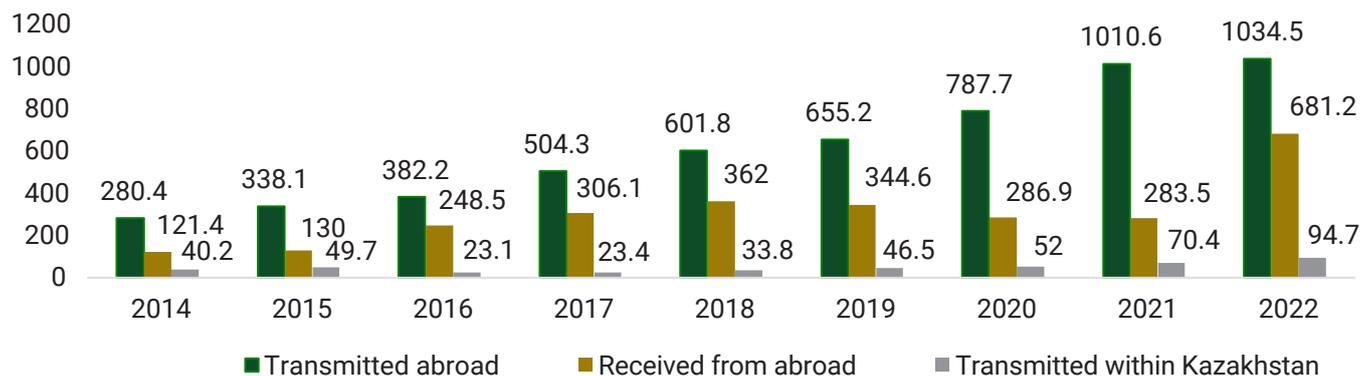
The bulk of payments in the clearing system falls on payments of economic entities for provided services (the share in the total volume of payments accounted for 27.4%) and for goods and intangible assets (the share – 25.7%); along with that, payments on interbank operations with short-term loans amounted to 15.0%.

International money transfer systems

At the end of 2022, 8 international remittance systems have been functioning within the territory of Kazakhstan: Gold Crown, Western Union, UniStream, Contact, Faster, MoneyGram, UPT and Ria Money Transfer.

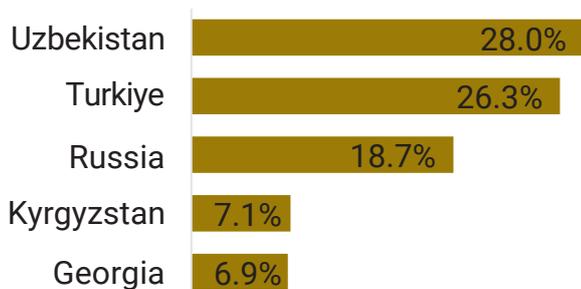
At year-end 2022 money transfers have been growing (Figure 2.1.1.2), due to the effort of banks to fine-tune the cashless payment infrastructure, implement innovation technologies, improve the quality and expand financial services provided to the clients in online mode, thus enabling to maintain the growth trends in terms of the volumes of cashless payments and money transfers.

Figure 2.1.1.2 Dynamics of the change in volumes of money transmitted via money transfer systems, in bln tenge



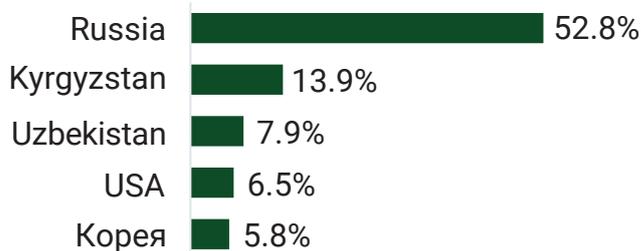
At year-end 2022 the volume of money **transmitted abroad** via international money transfer systems increased by 2.4%, an average amount of one transfer abroad was 415 400 tenge, with the most popular destinations: Uzbekistan and Turkiye.

Figure 2.1.1.3 Transfers from Kazakhstan



During the same period, money transfers **from abroad to Kazakhstan** were 2.4 times larger than in 2021; an average amount of one transfer from abroad also grew by 39% and equaled 412 900 tenge, with Russia being the leader among the sending countries.

Рисунок 2.1.1.4 Переводы в Казахстан



The growth of money transfers with the use of international money transfer systems **across Kazakhstan** was 34.5% (an average amount of one transfer – 178 900 tenge).

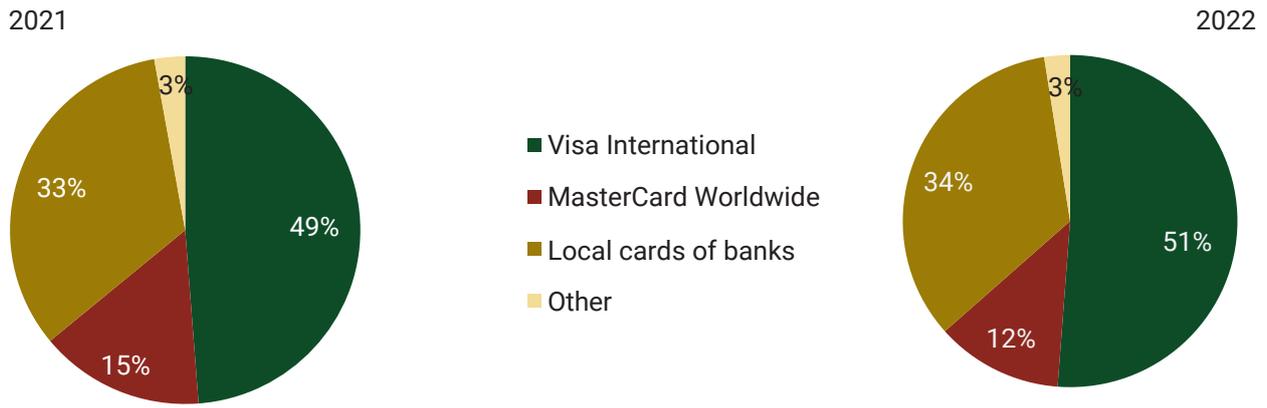
2.1.2 PAYMENT SERVICES MARKET

Payment services are provided by banks, organizations engaged in certain types of banking operations and non-bank payment organizations.

Payment Cards

18 banks and the “KazPost” JSC are issuing payment cards in Kazakhstan. At the end of 2022, 65.1 mln payment cards were circulating in the country (the annual growth of 9.8%), of which – 51.3 mln debit cards, 11.8 mln credit cards, 2.1 mln debit cards with a credit limit and pre-paid cards.

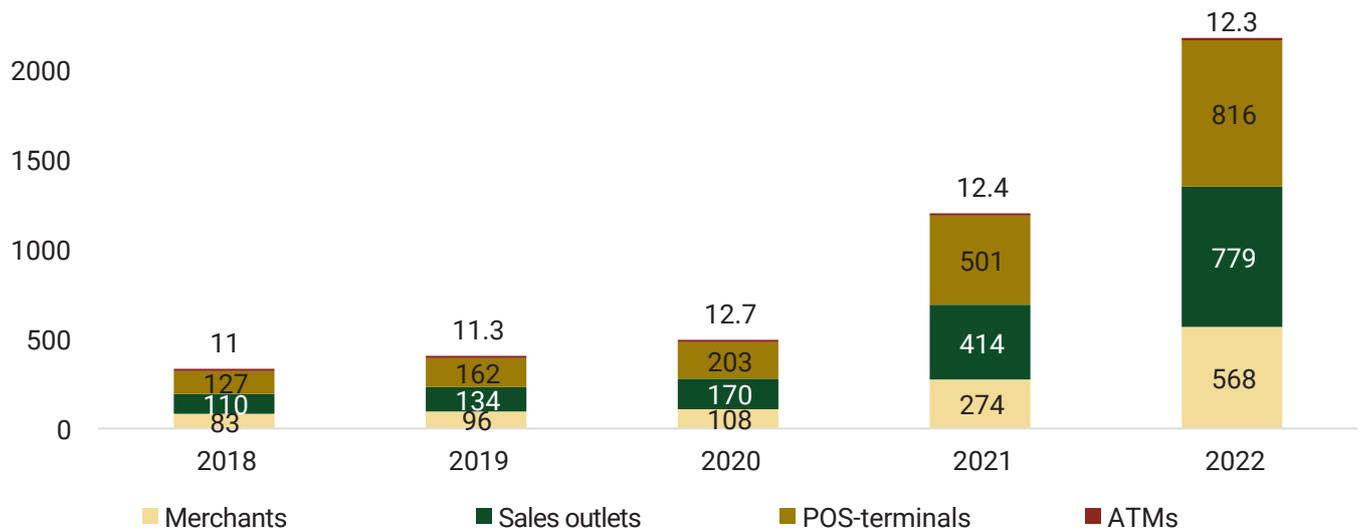
Figure 2.1.2.1 Share of payment cards of international payment systems in the total volume of cards in circulation



The infrastructure of payments for goods and services with the use of payment cards expands significantly. The number of sales outlets that accept payment cards more than doubled. At the end of 2022:

- 815 501 POS-terminals at the merchants (a 1.6 times growth compared to 2021) at 778 988 sales outlets (Figure 2.1.2.2);
- 12 391 ATMs, of which 56.6% are ATMs with the cash-in functionality were functioning within the territory of the Republic of Kazakhstan.

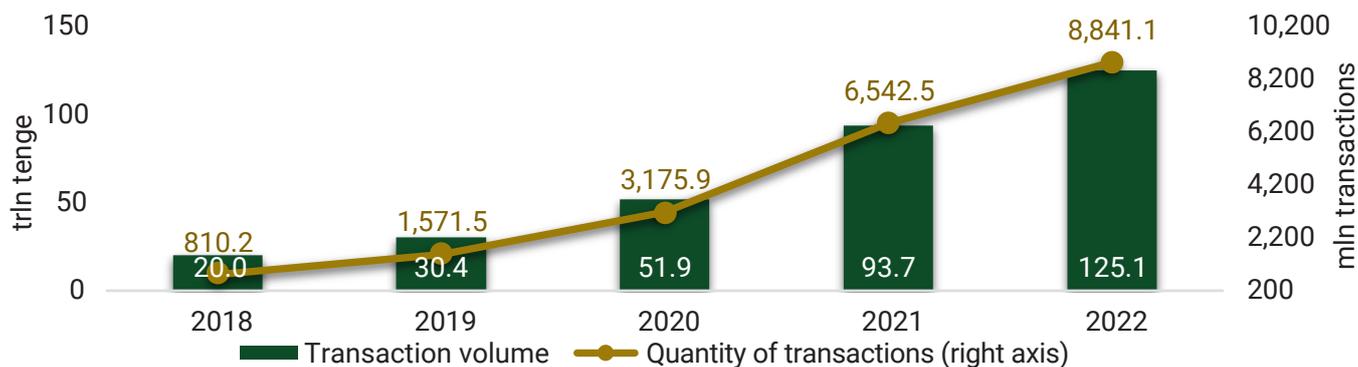
Figure 2.1.2.2 Infrastructure of the payment services market



During 2022 the quantity of transactions with the use of payment cards of Kazakhstani issuers went up

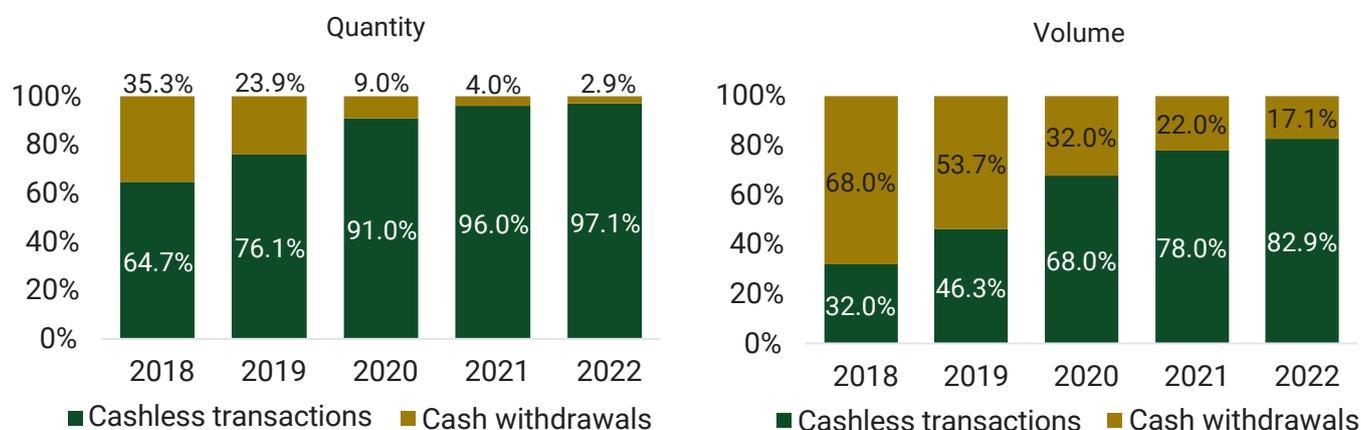
by 35.1%, and the growth in terms of transaction volume was 33.5% (Figure 2.1.2.3).

Figure 2.1.2.3 Quantity and volume of operations conducted with the use of payment cards of Kazakhstani issuers



The development of digital technologies promoted growth in the share of cashless operations (Figure 2.1.2.4).

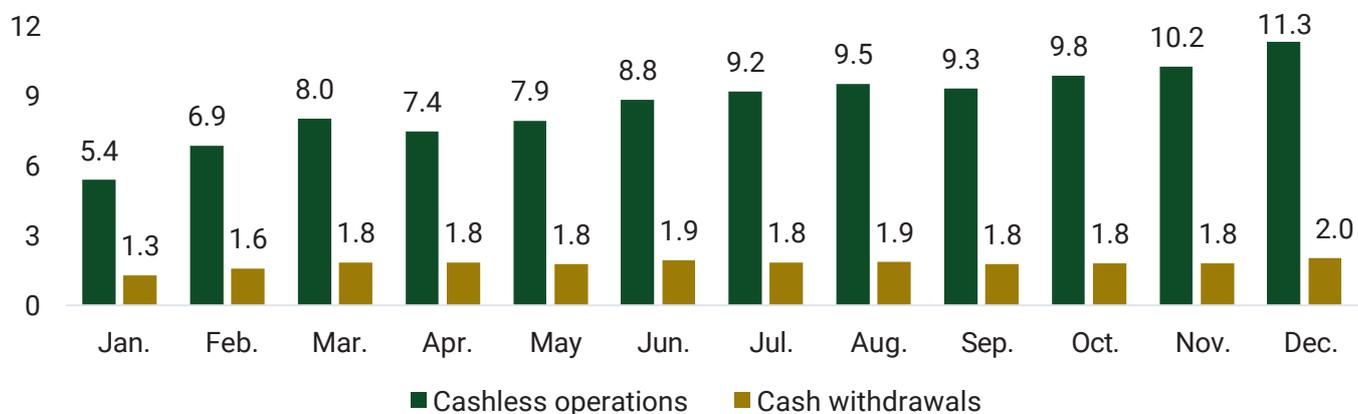
Figure 2.1.2.4 The share of transactions in total quantity, by transaction type, as %



In 2022 an overall quantity and volume of cashless operations with the use of payment cards grew by 36.9% and 41.9%, respectively, and equaled 8.6 bln transactions of 103.8 trln tenge.

In 2022, the quantity of cash withdrawals from payment cards decreased by 6.2% and equaled 254.3 mln operations. During 2022, holders of payment cards cashed out 21.4 trln tenge (Figure 2.1.2.5).

Figure 2.1.2.5 Dynamics of the volumes of operations with the use of payment cards in 2022, in trln tenge



Since the beginning of 2022, the activity in using bank online channels increased by 19%. At the end of 2022 the number of active users of online/mobile banking was 22.9 mln individuals.

Payment Services of Payment Organizations

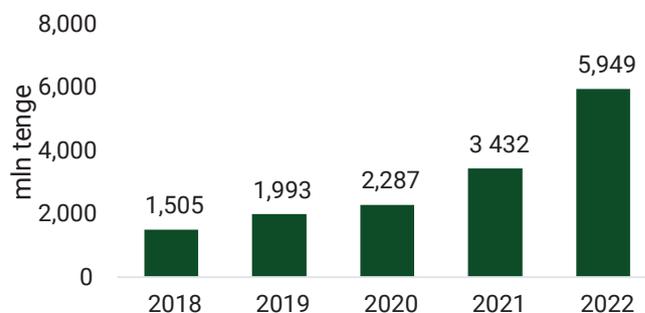
At the end of 2022 the National Bank registered 105 payment organizations providing certain types of payment services⁴ to clients.

At year-end 2022, the quantity of transactions processed through the services of payment organizations increased by 12.0% and amounted to 598.3 mln transactions. Meantime, at year-end 2022, the growth in volume of operations was 73.3% (Figure 2.1.2.6).

Payment organizations acted as operators of 24 of electronic money systems out of 27 systems functioning in Kazakhstan, and 3 electronic money

systems are operated by the second-tier banks and the "KazPost" JSC. At year- end 2022, operations with electronic money totaling 514 bln tenge were conducted via the services of payment organizations, accounting for 75.1% of the overall turnover of all functioning electronic money systems.

Figure 2.1.2.6 Volumes of operations conducted via services of payment organizations



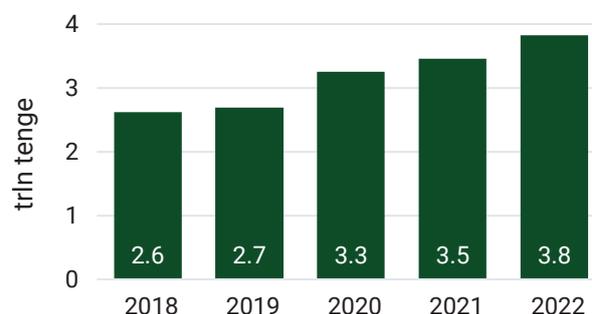
2.2 CASH CIRCULATION

2.2.1 CASH ISSUANCE AND CIRCULATION

During 2022, the amount of cash in circulation expanded by 10.8% (Figure 2.2.1.1).

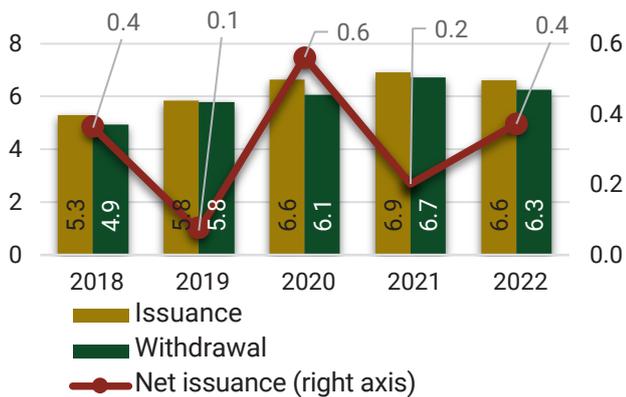
One of the reasons for the growth of cash in circulation is the overall upturn in the economic activity of the country. Moreover, during the state of emergency in the country, the National Bank met an ongoing demand for cash from the economy and provided support to banks amounting to 323.9 bln tenge. Thus, during the state of emergency, 10 919 ATMs, or 86.1% of their total number across the country, were replenished with cash.

Figure 2.2.1.1 Cash in circulation



⁴ оплата через платежные терминалы, распространение электронных денег и обработка операций с их использованием, процессинг операций с использованием платежных карточек посредством интернета и мобильных приложений

Figure 2.2.1.2 Issuance of cash into circulation and its withdrawal from circulation, trln tenge



* Difference between issuance and withdrawal of cash from circulation

Banknotes of the national currency account for the largest portion of cash in circulation. At the end of 2022, banknotes in circulation amounted to 3.7 trln tenge; the amount of circulating coins was 91.2 bln tenge (Figure 2.2.1.3).

Despite the growth of total cash in circulation, there is a steady level of the quantity of banknotes per capita. The average quantity of banknotes per capita in the last five years was 26 banknotes. On average, over the last five years, the annual growth rate of circulating coins per capita accounted for 6% (Figure 2.2.1.4).

Figure 2.2.1.4 Quantity of banknotes and circulating coins per capita, pcs



Over the last five years, the average rate of collection of banknotes to cash desks of the National Bank branches has been 95% (Figure 2.2.1.5).

Figure 2.2.1.3 Share of banknotes and coins in circulation**

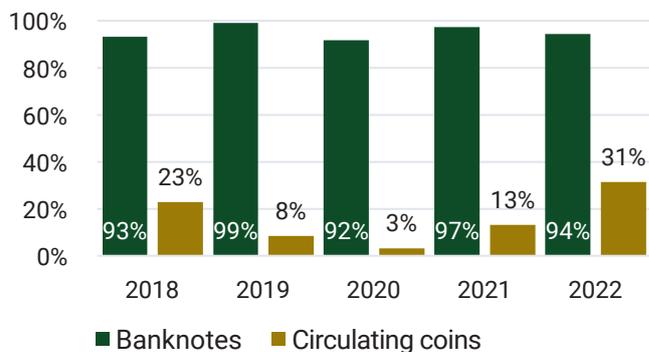


■ Banknotes ■ Circulating coins ■ Other*

* Collectible and investment coins as well as cash withdrawn from circulation

** of nominal amount in circulation

Figure 2.2.1.5 Ratio of the withdrawn amount to the issuance



Operations to load ATMs in 2022 continue to account for the largest share (48%) within the structure of cash circulation in banks, over the year the growth has made up 4.6% (Table 2.2.1.1).



Table 2.2.1.1 Cash circulation in banks⁵

Cash flows through cash desks of banks	In 2022 (bln tenge)	In 2021 (bln tenge)	Change over the period	
			bln tenge	%
Receipts to bank cash desks	41,886.6	37,980.2	3,906.4	10.3%
from sale of goods, services and works by corporate entities	6,962.1	6,063.9	898.2	14.8%
to deposit accounts of individuals	7,658.5	8,669.3	-1,010.8	-11.7%
from foreign exchange sales	3,500.9	5,234.5	-1,733.6	-33.1%
from individuals on one-time transfers	422.7	262.0	160.7	61.4%
on repayments from individuals and corporate entities	531.5	519.3	12.2	2.4%
other receipts	22,810.9	17,231.2	5,579.7	32.4%
Withdrawals from bank cash desks	42,667.0	42,078.5	588.5	1.4%
for payment of goods, services and works by corporate entities	2,896.6	2,006.7	889.9	44.3%
from deposit accounts of individuals	7,282.6	9,090.8	-1,808.2	-19.9%
for foreign exchange purchases	1,718.7	2,093.1	-374.4	-17.9%
for one-time transfer	193.4	74.3	119.1	160.3%
for payments of wages, retirement benefits and allowances	220.8	647.1	-426.3	-65.9%
to load ATMs	20,683.9	19,777.4	906.5	4.6%
loans to individuals and corporate entities	295.9	352.2	-56.3	-16.0%
other withdrawals	9,375.1	8,036.9	1,338.2	16.7%

Modernization and Optimization of Business Processes of Cash Management

The National Bank continues two new cash centers construction project in the cities of Astana and Aktobe. In the future, cash supply to the regions of Kazakhstan will be carried out from three regional cash centers: in the city of Almaty and two projected centers in the cities of Astana and Aktobe.

The construction is scheduled to begin at the end of 2023; new cash centers are planned to be launched before the end of 2026.

Regulation of Maximum Amounts of Cash Withdrawals from Bank Accounts of Business Entities⁶

During 2022, a total amount of 3.9 trln tenge in cash was withdrawn from bank accounts of business entities⁷, where the sum of cash withdrawals in excess of the established limits equaled 259.9 bln tenge, or 6.7% of the total amount.

The overall amount of cash withdrawals (since June 2020) by corporate entities above the established

limits (for payment of goods, services and completion of works) does not exceed 7.2%. In 2020, during the period from June to December, 85.3 bln tenge (or 8.3% of the total amount withdrawn) was withdrawn, in 2021 – 225.4 bln tenge (7.4%), and in 2022 – 259.9 bln tenge (6.7%). This demonstrates practicability of established thresholds.

2.2.2 BANKNOTES AND COINS

On the 1st of October 1, 2022, the National Bank issued a banknote of 20 000-tenge denomination. The 20 000-tenge banknote supplemented the existing series of circulating banknotes of the national currency entitled “Қазақ Елі” (Kazak Country), which is currently represented by denominations of 500, 1 000, 2 000, 5 000, 10 000 tenge.

Collectible Coins

In 2022, 5 319 500 pieces of collectible coins were minted and issued, of which 29 500 pieces were made of silver, 140 000 pieces – from curpo-nickel alloy and 5 150 000 pieces – from nickel silver/nickel brass alloy.

⁵ According to the data from the Report on Operations with Cash as approved by the Board Resolution of the National Bank of the Republic of Kazakhstan dated April 21, 2020 No. 54 “On Approval of the List, Forms and Deadlines of Reports Submitted by Second-Tier Banks and the Submission Rules” dated April 21, 2021, No. 48

⁶ Joint NBK’s Board Resolution dated December 21, 2020 No. 151, Board Resolution of the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market dated December 22, 2020 No. 125 and the Order of the Minister of Finance of the Republic of Kazakhstan dated December 22, 2020 No. 1223 “On Approval of the Rules for Cash Withdrawals from Bank Accounts by Corporate Entities”. Joint NBK’s Board Resolution of December 21, 2020 No. 150 and the Order of the Minister of National Economy dated December 23, 2020 No. 95 “On Approval of the Maximum Amounts of Cash Withdrawals from Bank Accounts of Business Entities as Well as those Business Entities which are not Subject to the Requirement on Cash Withdrawals from Bank Accounts”.

⁷ corporate entities and individual entrepreneurs

In 2022, the Bank continued to sell collectible coins via the pilot platform of www.kazcoins.nationalbank.kz online shop. In 2022, 348 649 pieces of collectible coins were sold via the online shop.

Forensic Analysis of Banknotes and Coins

In 2022, the National Bank conducted forensic analysis of suspicious currency notes: 2 656 banknotes and 2 398 coins worth 18.2 mln tenge (Table 2.2.2.1).

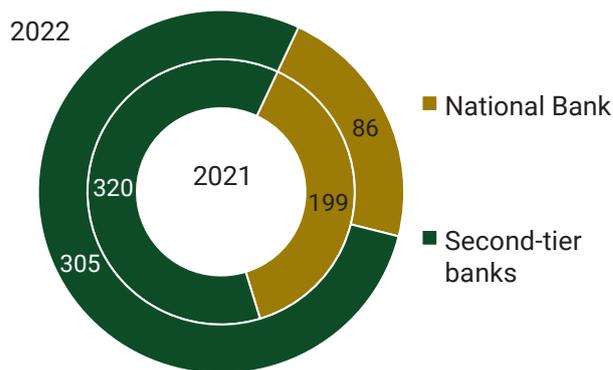
Table 2.2.2.1 Forensic analysis of suspicious currency notes, for 2021 – 2022

Forensic analysis of suspicious currency notes	2021		2022	
	quantity, pieces	amount, tenge	quantity, pieces	amount, tenge
Recognized as counterfeit	199	729,300	86	333,250
Recognized as invalid	472	1,419,600	603	3,805,800
Recognized as having production defect	5	6,000	5	41,100
Recognized as valid and exchangeable	2,717	8,922,200	4,360	14,009,699
Total	3,393	11,077,100	5,054	18,189,849

During 2022, the National Bank and banks detected 391 currency notes in the amount of 1,237 250 tenge, including 386 banknotes and 5 coins (Figure 2.2.2.1). The quantity of detected counterfeit currency notes in 2022 decreased by 24.7% compared to 2021. The analysis of quantity of counterfeit currency notes by denominations and years of issuance showed that the following denominations were forged most frequently: 2000 tenge banknotes – 238 pieces (60% of the total quantity of detected counterfeit banknotes), 10 000 tenge – 55 banknotes (14%), 500 tenge – 50 banknotes (12.8%) (Figure 2.2.2.2).

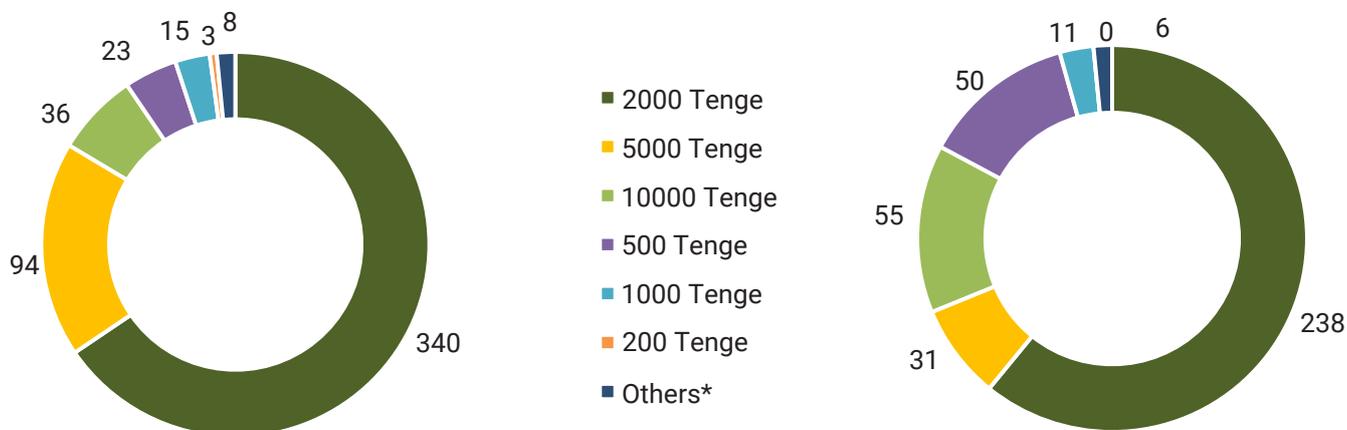
(in the European Union countries – 15 counterfeit banknotes, in the Russian Federation – 4 counterfeit banknotes).

Figure 2.2.2.1 Counterfeit currency notes, detected during 2021 – 2022



The largest quantity of counterfeit banknotes was detected in the city of Almaty – 255 pieces, or 65.2% of the total quantity of counterfeit banknotes detected. In other regions, 136 pieces, or 34.8% were detected. As of the end of 2022, there were approximately 0.5 forged banknotes per one million of authentic banknotes in circulation. This number is considered as a low level of counterfeiting as compared to other countries

Figure 2.2.2.2 Counterfeit currency notes detected during 2021–2022, by denomination



*The "Others" category includes the data on 50, 100 and 20 000 tenge

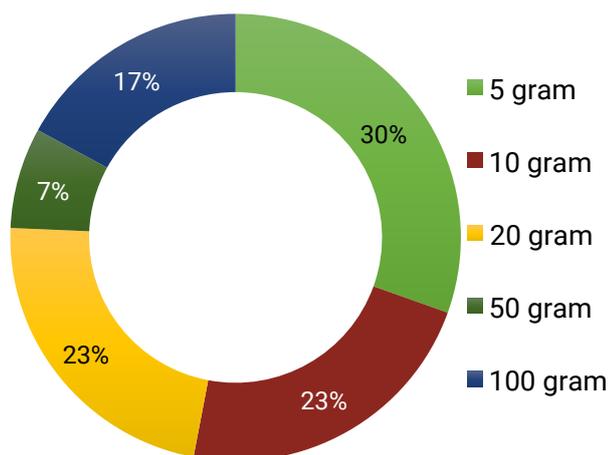


2.2.3 BULLION COINS AND MINTED BARS FROM REFINED GOLD

The program on purchase and sale of minted bars from refined gold for the population was launched by the National Bank in 2017. Gold bars are realized via four banks and exchange offices.

In 2022, banks and non-bank exchange offices realized 37 940 minted bars with a total weight of 1.1 ton.

Figure 2.2.2.3 Volume of minted bar sales, by types



The most popular bars among the buyers in 2022 were the bars with the weight of 5 grams. Mainly, minted bars are popular in the cities of Almaty, Astana and Atyrau.

Altogether, from the start of the sales of minted bars, 112 845 gold bars with a total weight of 3.8 tons were sold to the population, 18 589 minted bars with a total weight of 467 kilograms were repurchased, which accounts for 16% of the total volume of realization of minted bars. Practically all minted bars accepted for repurchase are sold to the population without their return to the National Bank branches.

The issuance of the National Bank's bullion coins "ALTYN BARYS" and "KÚMIS BARYS" commenced from November 2009 with different weighting characteristics. Bullion coins are sold and accepted for repurchase via the National Bank branches.

During 2022, the National Bank branches realized bullion coins to the population such as: from gold – 3,139 pieces, with a weight of 76.4 kg, from silver – 6 200 pieces, with a weight of 610.6 kg. Overall, since 2009, gold bullion coins – 32 945 pieces, with a weight of 1.2 tons, silver bullion coins – 55 606 pieces, with a weight of 6.6 tons have been sold.

In 2022, the most popular among gold bullion coins were those of 10-tenge denomination (30.5%), and among silver coins – 1 tenge-denominated (40.3%). Bullion coins are popular mainly in the cities of Almaty and Astana.

2.3 CURRENCY REGULATION AND CURRENCY CONTROL

In 2022, 3 785 account numbers were assigned within the framework of accounting registration of foreign exchange contracts for capital movement and notifications of foreign bank accounts.

Export revenues are the main source of foreign currency supply in the domestic foreign exchange market of Kazakhstan, so the currency legislation establishes the requirement of repatriation (the due date is determined based on the terms and conditions of a foreign exchange contract).

Table 2.3.1

Movement type	Number of account numbers assigned to the foreign exchange contracts								
	2021				2022				Increase, %
	Mixed	Commodity	Service-based	Total	Mixed	Commodity	Service-based	Total	
Imports	1,406	49,104	8,677	59,187	1,461	66,994	12,566	81,021	36,9
Exports	327	13,069	8,066	21,462	604	27,545	12,057	40,206	87,3
Total	1,733	62,173	16,743	80,649	2,065	94,539	24,623	121,227	50,3

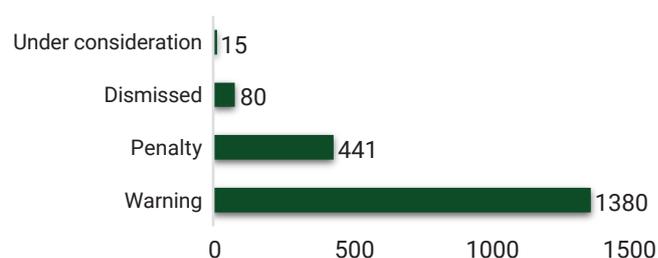
In 2022, as part of improvement and updating of the legislation in the field of currency exchange regulation and control:

- in order to implement the use of digital documentation service at the National Bank branches, include branches of non-resident banks into the scope of entities that provide information on loans borrowed from non-residents, specify the procedure for account registration of foreign exchange contracts on capital movement and accounts at foreign banks the Rules for submission of information by branches (representative offices) of foreign non-financial organizations and the Rules for monitoring foreign exchange operations were amended⁸;
- the work on the development of the law enforcement practice of operations in accordance with the AIFC Regulations⁹ and the establishment of information exchange on foreign exchange operations conducted at the AIFC platform, on improvement of the legal basis for currency operations in the AIFC was carried out.

The Government of the Republic of Kazakhstan decided to further sell part of the foreign currency proceeds on the domestic foreign exchange market by the quasi-public sector entities.

As part of the currency control, in 2022 the National Bank identified administrative offenses in the field of currency legislation, to which appropriate penalties were applied (Figure 2.3.1).

Figure 2.3.1 Administrative proceedings initiated, by corrective actions



In 2022, the National Bank made compliance check of 9 with the currency legislation. The authorized banks were held administratively liable for the violations of the currency legislation, in particular, 28 warnings and 4 fines were issued. Also, in accordance with the Law of the Republic of Kazakhstan “On Currency regulation and currency control” 5 requirements were issued to the audited entities to eliminate the identified violations of the currency legislation.

Activities in the framework of work on combating illegal capital outflow from the country

In 2022, by order of the President of the Republic of Kazakhstan, to ensure monitoring, due diligence and control of all transactions and persons unreasonably withdrawing funds from the country, the National Bank, the Agency of the Republic of Kazakhstan on Regulation and Development of the Financial Market

⁸ Resolutions of the National Bank Board dated February 28, 2022 No. 12 and No.13 “On Amendments to the Board Resolution of the National Bank of the Republic of Kazakhstan dated March 30, 2019 No.41 “On approval of the Rules for Submission of Information by V ranches (Representative Offices) of Foreign Non-financial Organizations Operating in the Republic of Kazakhstan” and “On amendments to the Board Resolution of the National Bank Republic of Kazakhstan dated April 10, 2019 No. 64 “On approval of the Rules for Monitoring Foreign Exchange Operations in the Republic of Kazakhstan”

⁹ Rules for currency exchange regulation and submission of information on foreign exchange operations conducted at the AIFC No.6 dated 10.11.2021



and the Financial Monitoring Agency of the Republic of Kazakhstan made a joint order "On strengthening control measures over conducting cross-border financial operations"; based on which the National Bank carried out control of cross-border transactions. In September, taking into account the practice developed within the framework of the order and the inclusion of its key elements in the operating AML/CFT framework, the joint order was canceled.

On a systematic basis, the Bank was engaged in analyzing cross-border transactions to identify unusual currency transactions within the framework of the current legislation of the Republic of Kazakhstan, compliance with currency repatriation requirements.

To counteract the outflow of money on foreign economic transactions of residents, measures were initiated to improve the efficiency of foreign currency, tax and customs controls and fight the illegal capital outflow from the country, whereunder the National Bank, together with the Government, worked to improve the mechanism of exports-import foreign currency control, in particular, to transfer of the function of control over the implementation of the requirement to repatriate money from the National Bank to the state revenue authorities.

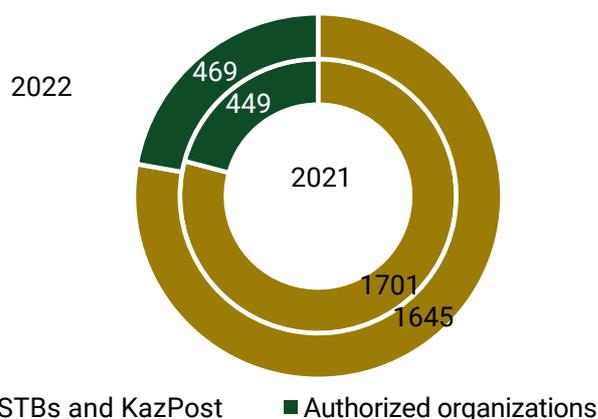
Also, the National Bank, jointly with the Government, has begun work on the implementation of the Presidential Decree No. 3 dated November 26, 2022 "On Measures to return the state illegally withdrawn assets" in terms of developing a framework to counteract the illegal removal of capital from the country, with its legal reinforcement.

In 2023, the National Bank will proceed with the analysis of the state of foreign exchange market and improvement of the methodology for regulation of export-import operations; in addition, revision of conceptual approaches of the existing system of currency exchange regulation based on today's realities in the global economy will be considered.

Organization of Exchange Transactions with Foreign Cash and Control and Supervision of the Exchange Office Operations

In 2022, in order to ensure a sufficient volume of foreign currency cash in the domestic foreign exchange market, as well as in order to minimize the risks of overflow of foreign currency cash across the borders of the Republic of Kazakhstan, the National Bank, in collaboration with stakeholder government authorities, drafted the Presidential Decree of the Republic of Kazakhstan dated March 14, 2022 No. 830 "On measures to Ensure Financial Stability of the Republic of Kazakhstan" (hereinafter – Decree).

Figure 2.3.2 Количество обменных пунктов



The Decree instituted a ban on the export of foreign cash in an amount exceeding the equivalent of 10,000 US dollars (or) refined gold (including bullions), with exceptions for certain operations of the National Bank, banks and gold processing enterprises.

Also, as part of implementation of the Decree, Decrees of the Government of the Republic of Kazakhstan were prepared¹⁰, which allowed banks to export accumulated Russian rubles from the Republic of Kazakhstan to convert them into a cashless form and replenishment of bank correspondent accounts at foreign banks.

¹⁰ Decree of the Government of the Republic of Kazakhstan dated July 18, 2022 No. 490 "On Certain Aspects of Ensuring Financial Stability of the Republic of Kazakhstan" and the Decree of the Government of the Republic of Kazakhstan dated December 28, 2022 No. 1079 "On Certain Aspects of Ensuring Financial Stability of the Republic of Kazakhstan"

In order to reduce speculative transactions in the foreign exchange market, as well as to cover the risks of the financial market participants due to increased volatility of the exchange rate the National Bank in 2022 increased the deviation limits of foreign currency purchase from sale rate of cash for transactions carried out through the exchange offices, for the US dollar – from 6 to 15 tenge, and the Euro – from 7 to 20 tenge, valid until January 1, 2023.

As of January 1, 2023, the National Bank conducted 836 inspections of authorized organizations¹¹, including based on the lists – 195, unscheduled – 303, and documentary inspections – 338.

As of January 1, 2023, 245 cases of administrative offense were initiated in connection with violation of requirements to exchange operations with foreign cash, of which: penalties were imposed on 157 cases in the form of fines equaling 57.9 mln tenge, where fines imposed by the National Bank amounted to 23.3 mln tenge, and by courts – 34.6 mln tenge, 76 – in the form of warnings, 7 cases are at the stage of consideration, and 5 cases were dismissed due to a lack of evidence. Apart from the above, 124 supervisory response measures were applied to authorized organizations (of which 68 advisory supervisory response measures, 56 written orders), as well as 1 sanction was imposed in the form of revocation of the license for operations with foreign cash.

In the covered period, 4 banks had been inspected in respect of their compliance with the requirements to the conduct of exchange operations with foreign cash. Based on the inspection findings, administrative penalties in the form of warning were imposed on these banks and banks were required to remedy the violations detected as a result of inspection.

Work on combating money laundering and financing of terrorism

As part of the work on the preparation by the Republic of Kazakhstan for the second round of the Mutual Evaluation of the Eurasian Group on Combating Money Laundering and Financing of Terrorism (hereinafter – the EAG) in order to obtain positive results

on recommendations of the Financial Action Task Force on Money Laundering (hereinafter – FATF), the National Bank made the following effort in 2022:

- participated in forums, field meetings and training courses with international experts-appraisers from the EAG;
- conducted training courses to prepare the staff of exchange offices for interviews with the EAG international experts-appraisers;
- participated in field meetings with experts-appraisers to discuss interim findings of the technical compliance and effectiveness of risk-based supervision;
- explanatory letters were prepared on interim drafts of the mutual evaluation report, answers were given to questionnaires on the technical compliance of the policy of regulating the activities of authorized organizations with the FATF recommendations and the assessment of effectiveness of the result of supervisory and preventive measures for the supervisory authorities of the EAG member states within the framework of the project “Improving the Mechanisms of a Risk-Based Approach in Supervisory Activities”.

According to the results of the field mission, which took place from 12 to 30 September 2022 in Astana, the rating of the Republic of Kazakhstan was upgraded from “partially compliant” to “strongly compliant” in accordance with the following criteria:

- conducting a customer due diligence;
- examining whether a customer or a beneficial owner belongs to or is affiliated with a foreign public official;
- taking control measures and procedures on management of risks associated with AML/CFT and their minimization;
- regulation and supervision of credit-financial institutions including the establishment of qualification requirements for exchange office managers;
- applying a risk-based approach as part of control and supervision of the exchange office operations.

In 2023, the National Bank will proceed with bringing the Internal Control Rules in conformity with the FATF recommendations and comments made by the EAG experts-appraisers.

¹¹ Authorized organizations refer to financial organizations of the Republic of Kazakhstan that are not banks and are licensed by the National Bank to organize exchange operations with foreign cash



2.4. ASSET MANAGEMENT

2.4.1 MANAGEMENT OF THE NATIONAL BANK'S GOLD AND FOREIGN EXCHANGE ASSETS

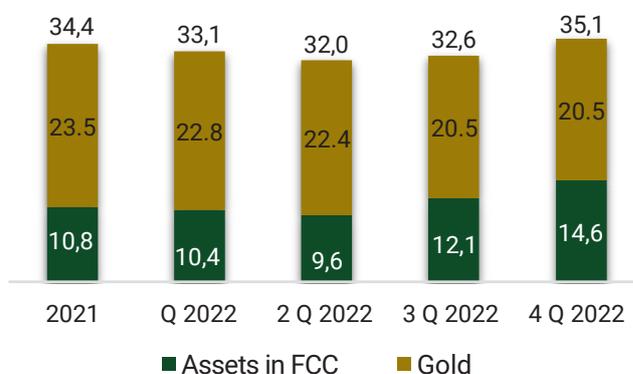
Gold and foreign exchange reserves of the National Bank are created for ensuring internal and external stability of the national currency out of the National Bank assets, which have high liquidity in the international markets. Gross gold and foreign exchange reserves of the National Bank as of end-2022 amounted to 35.1 bln US dollars, which exceeds the resulting figure for 2021 by 0.7 bln US dollars, or by 2.03%.

The buildup of the National Bank's gold and foreign exchange reserves was affected by the increase in foreign exchange portion of the assets. At the same time, with an aim to diversify gold and foreign exchange assets, during the year the gold portion in the reserves was reduced through a gradual sale of the precious metal in foreign markets resulting in an increased volume of assets in freely convertible currency.

The structure of gold and foreign exchange reserves includes assets in FCC, gold as well as net claims of the Republic of Kazakhstan on the IMF denominated in SDRs. Assets in foreign currency, and gold

and alternative instruments are included in the structure of gold and foreign exchange assets.

Рисунок 2.4.1.1 Gold and foreign exchange reserves, bln US dollars



Gold and foreign exchange assets of the National Bank are managed in accordance with the Investment Strategy for Management of the National Bank's Gold and Foreign Exchange Assets, which implies the classification by the following portfolios depending on the goals in respect of yield, liquidity and asset integrity (Figure 2.4.1, Table 2.4.1).

Figure 2.4.1 Structure of gold and foreign exchange assets of the National Bank

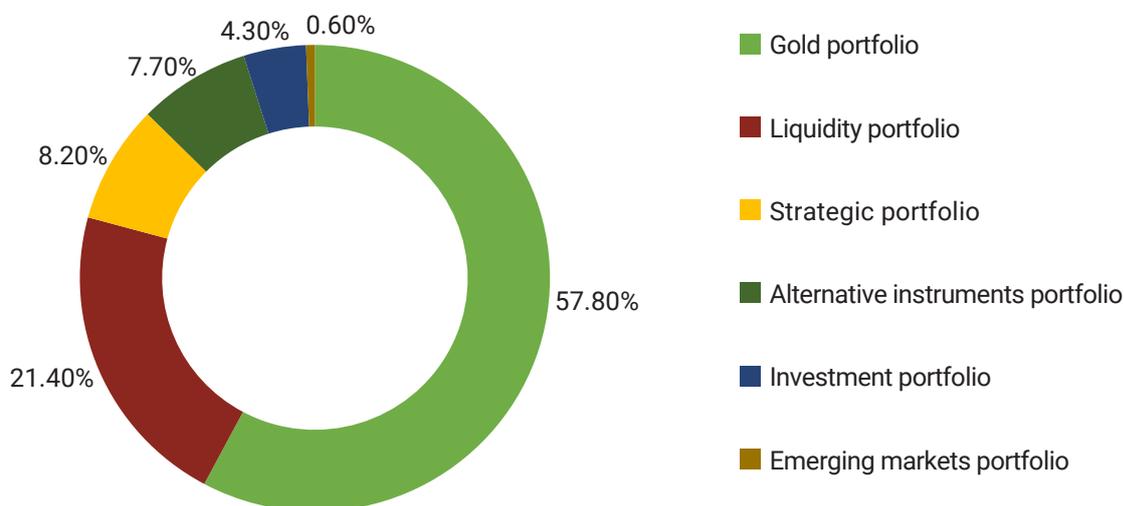


Table 2.4.1 Portfolios market values as of end-2022

Portfolio	Market value, bln US dollars
Investment portfolio	1.5
Strategic portfolio	2.9
Gold portfolio	20.6
Emerging markets portfolio	0.2
Liquidity portfolio	7.6
Alternative instruments portfolio	2.7

Purposes of the investment portfolio are to ensure asset integrity and to increase their profitability in the near and medium term perspectives. Assets in the portfolio are invested in the developed markets government bonds and have the following structure: in the US dollars – 62.0%, Euro – 12.5%, British pounds – 12.5%, Australian dollars – 8.0%, Canadian dollars – 5.0%.

The return on the investment portfolio expressed in terms of the currency basket in 2022 accounted for (-)1.94%, and on its benchmark portfolio – (-)2.30%. The resulting excess return was positive¹² and equaled 36.0 basis points.

The return on the investment portfolio expressed in the US dollars was (-)4.83%, while the return

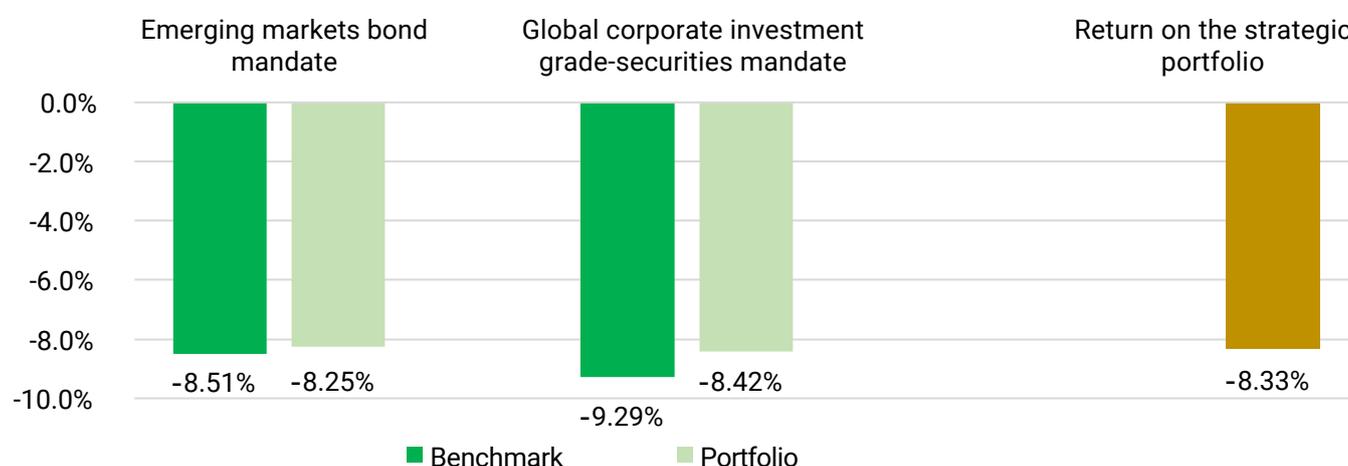
on the benchmark portfolio made up (-)5.18%. Excess return in the US dollars equaled 35.0 basis points.

It is noteworthy that excess returns on the investment portfolio managed by the National Bank itself were attained amid unfavorable market environment in 2022.

The purposes of the strategic portfolio are to provide a return on assets in the medium- and long-term perspectives and to diversify gold and foreign exchange assets.

In 2022, the return on the strategic portfolio accounted for (-)8.33% (Figure 2.4.2). Excess returns on the Emerging markets bond mandate was 26.0 basis points, and on Global corporate investment-grade securities mandate – 86 basis points.

Figure 2.4.2 Returns on the strategic portfolio mandates



Funds in the emerging markets portfolio have been invested into assets denominated in the Chinese Yuan. In 2022, the return on portfolio in the Chinese Yuan had been at 2.41%, in the US dollars – (-)6.11%.

The liquidity portfolio of gold and foreign exchange assets is held for conducting money market operations

for the purpose of monetary policy implementation, for maintaining a high level of liquidity as well as for servicing the government's external debt. Generation of excess returns is not the purpose of the liquidity portfolio asset management.

¹² The difference between the actually achieved level of profitability and the level of profitability of the benchmark portfolio



The alternative instruments portfolio is held for diversification and increase in return on gold and foreign exchange assets in the long term. Assets in this portfolio may be invested into such areas as private capital, hedge funds, and funds of funds, real estate, infrastructure and equities. The return on the alternative instruments portfolio from the transition to the reference-portfolio approach as of end-2022 had been at 10.44% (in annual terms) with the return on reference-portfolio of 4.50% (in annual terms).

The gold portfolio consists of the internal gold and external gold; assets in this portfolio are also placed on deposits with maturity up to one year. Assets in gold are managed with a view to ensure integrity and to have a cushion against a possibility that attractiveness of foreign currency assets in the international financial markets would go down. In 2022, the return on the gold portfolio in the US dollars was 0.44%. The return on the gold portfolio placed with deposits accounted for 0.14% in Troy ounces, and for 8.87% – in the US dollars¹³.

2.4.2 MANAGEMENT OF THE NATIONAL (OIL) FUND'S ASSETS

The main objectives of investment operations in managing the National Fund's assets is integrity, maintaining an adequate liquidity level, and ensuring profitability in the long-term perspective with an adequate risk level. Ensuring the long-term profitability of the National Fund assets provides for short-term fluctuations in profitability.

According to the National Fund's main goal and functions, its structure is made up of the stabilization portfolio and savings portfolio.

The total market value of the National Fund's portfolio as of end-2022 equaled to 57.9 bln US dollars, including the volume of foreign currency portfolio of 55.7 bln US dollars.

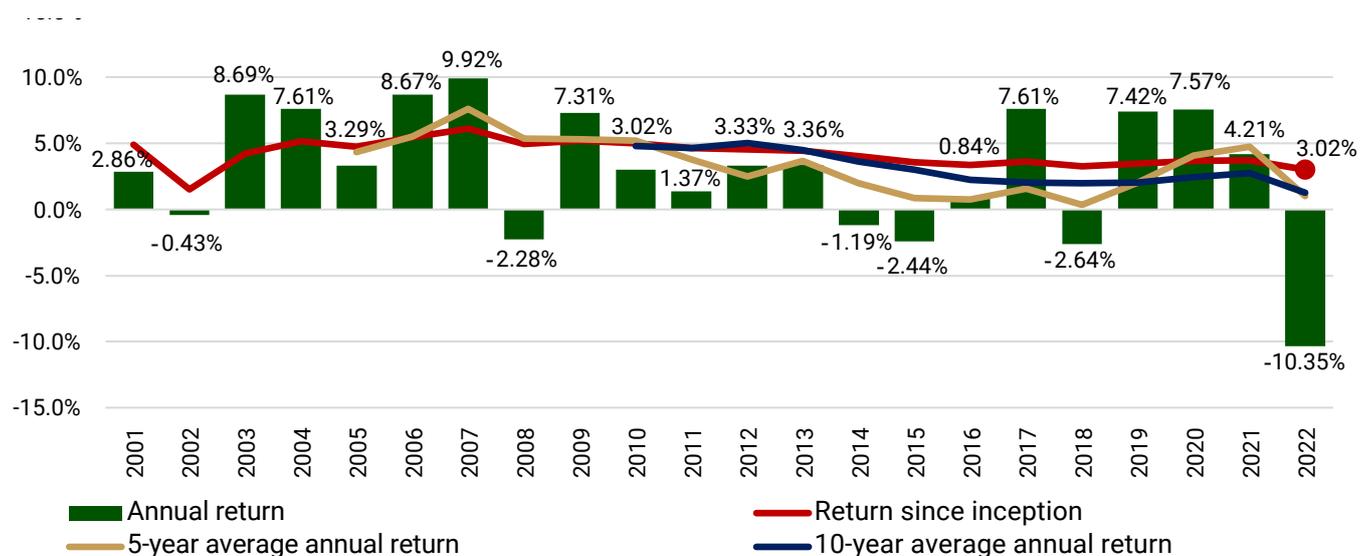
Market values of stabilization and savings portfolios within foreign currency portfolio of the National Fund were 9.6 bln US dollars (17.30%) and 46.1 bln US dollars (82.70%), respectively.

Returns are calculated in the National Fund's base currency – US dollars.

It should be mentioned that the situation in financial markets had direct effect on the market revaluation and the size of the National Fund's investment income. Thus, as of end-2022, returns accounted for (-)10.35%, or (-)5.8 bln US dollars. It is important to emphasize that these losses of the National Fund for 2022 are unrealized and were incurred as a result of negative revaluation of assets and currencies.

In general, the strategy of the National Fund management is of a long-term nature and is aimed at strict compliance with the approved strategic asset allocations, therefore, profitability performance of the National Fund is assessed over a long-term horizon. Thus, investment return of the National Fund since its inception until December 31, 2022, amounted to 15.1 bln US dollars, and profitability of the National Fund equaled 90.06%, which makes up 3.02% in annual terms (Figure 2.4.3).

Figure 2.4.3 Return on the National Fund's portfolio in the US dollars



¹³ Deposits were not opened during the period from May 17 to September 21, 2022

In 2022, assets in the stabilization portfolio under own management were invested into the money market instruments and fixed income securities, mainly US Treasury securities.

Return on the stabilization portfolio from January 1 to December 31, 2022, made up 1.15%; during the same period, the return on the benchmark portfolio (Merrill Lynch 6-month US Treasury Bill Index) accounted for 1.34%. The resulting negative excess return of (-)0.18% was driven by the necessity of frequent rebalancing to meet the parameters of the benchmark portfolio in the face of rapid growth in interest rates and deteriorating liquidity, as well as by significant volumes of foreign exchange sales in order to make transfers to the national budget.

Return on the savings portfolio from January 1 to December 31, 2022 was (-)11.71%.

The return on the "Developed markets government bonds" mandate management from the beginning of the year to December 31, 2022, was (-)10.56%. The return on the benchmark portfolio made up (-)10.84%. Thus, in 2022 positive excess returns based on the results of the management of this mandate accounted for 0.28%.

The portfolio of "Emerging markets government bonds" mandate consists of:

- 1) emerging markets government bonds portfolio under external management. The return on the asset management was (-)17.18%, while the return on the benchmark portfolio made up (-)16.67%;
- 2) the Chinese Yuan portfolio managed by the National Bank itself. The return on the Chinese Yuan portfolio from its inception until the end of 2022 was (-)6.1%. There is no benchmark for this portfolio.

The return on the "Investment-grade corporate bonds" mandate management made up (-)12.92%, whereas the return on the benchmark was (-)12.70%.

Negative excess returns on the "Emerging markets government bonds" mandate of (-)0.50%, and on the "Investment-grade corporate bonds" mandate of (-)0.22% are mainly related to an unfavorable market environment. Due to high uncertainty in the global markets during the last year, the above asset classes were especially volatile.

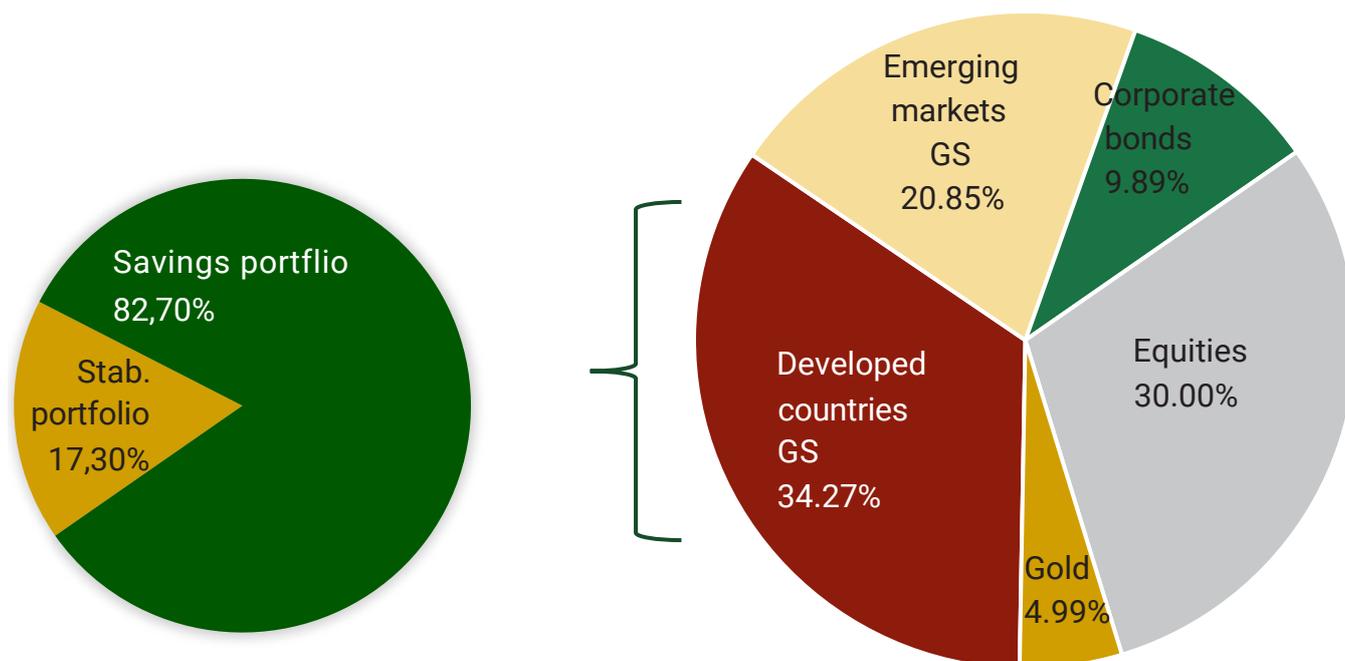
The return on the "Global equities" mandate management was (-)15.17%, whereas the return on the benchmark made up (-)17.62%. Sizable positive excess returns of 2.45% in relation to the benchmark portfolio was achieved mainly owing to the use of the multi-factor investment strategy.

Due to the specifics of the "Global tactical asset allocation" mandate and the transition to a new modified model of custodial safekeeping, the mandate management was resumed only in May 2022. Therefore, the return on the results of management of this mandate type was calculated for the incomplete year 2022 and made up (-)3.23% with the return on the benchmark of (-)4.11%. The management resulted in an excess returns of 0.89%.

As part of 2022 long-term goal the transition from a conservative to a balanced strategic asset allocation of the National Fund's savings portfolio has been completed. Thus, in 2022, the portions of higher-earning asset classes were increased: emerging markets government bonds – to 20.85%, corporate bonds – to 9.89%, equities – to 30.00%, and gold – to 4.99%.



Figure 2.4.4 National Fund structure as of end-2022



In order to diversify the portfolio, ensure safety and stability of assets, as well as due to increased volatility and correction risks in the equities market, the benchmark portfolio for equities under passive management was supplemented with defensive strategies such as Minimum Volatility – up to 10%, Quality – up to 20% and ESG Leaders index – up to 20%.

The concept of socially responsible or ESG (environmental, social and corporate governance) investing is becoming increasingly popular among investors, being driven by a growing significance of the ESG factors, rising demand from investors as well as the regulatory pressure. Moreover, with global warming continuing and the public interest in social equality, the importance of ESG investing acquires a special status, leading to the need to treat ESG as a new risk factor in the assessment process of the issuers and their securities.

The introduction of ESG investing is also envisioned in the corporate bond portfolio by excluding investments in companies with increased greenhouse gas emissions, coal mining companies and tobacco manufacturers.

As part of an active equity management in order to increase long-term returns the equities portfolio under active management was reallocated in favor of managers with multi-factor strategies with a 48.4% share by the end of 2022.

In order to protect the portfolio from a significant fall in the equities market, hedging instruments were applied through the use of option strategies, with realized gains of 26.9 mln US dollars in 2022.

2.4.3 MANAGEMENT OF PENSION ASSETS OF THE UNIFIED ACCUMULATIVE PENSION FUND

As of the end of 2022 the total amount of pension assets of the Unified Accumulative Pension Fund under the fiduciary management of the National Bank amounted to 14.6 trillion tenge, or 99.7% of pension savings, having increased by 1.6 trln tenge, or 12.1% during 2022 (Table 2.4.1).

Table 2.4.1 Structure of pension assets investment portfolio of the Unified Accumulative Pension Fund under fiduciary management of the National Bank

Item	Present value at January 1, 2022, bln tenge	Share at January 1, 2022, %	Present value at January 1, 2023, bln tenge	Share at January 1, 2023, %	Change over the period, %
Government securities of the Republic of Kazakhstan	5,104.8	39.1%	7,268.5	49.7%	42.4%
Securities of issuers of the Republic of Kazakhstan	3,165.9	24.3%	2,956.0	20.2%	-6.6%
Securities of foreign issuers	2,922.8	22.4%	2,808.8	19.2%	-3.9%
Deposits at banks of the Republic of Kazakhstan	251.7	1.9%	200.4	1.4%	-20.4%
Cash on investment accounts	434.8	3.3%	27.8	0.2%	-93.6%
Assets under external management	1,382.5	10.6%	1,355.4	9.3%	-2.0%
Other assets	215.7	1.7%	4.9	0.0%	-97.7%
Total	13,046.6*	100.0%	14,621.9	100.0%	12.1%

* – Including liabilities payable on completed transactions in the amount of 431.6 bln tenge.

Table 2.4.2 Investments based on investment areas approved by the Council for Management of the National Fund of the Republic of Kazakhstan for 2022

Investments	Volume, bln tenge
Government securities of the Republic of Kazakhstan issued by the Ministry of Finance of the Republic of Kazakhstan	2,425.1
Bonds issued by banks of the Republic of Kazakhstan	26.6
Total	2,451.7

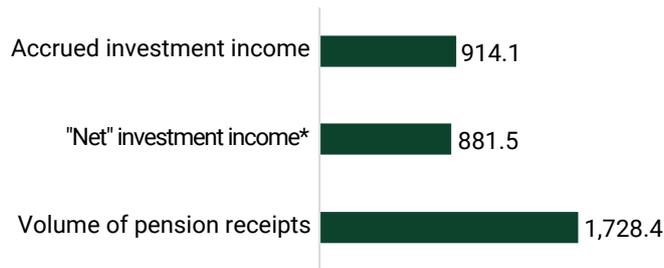
Pension assets denominated in foreign currency are invested in accordance with the target strategic allocation of the foreign currency portfolio as defined by the Investment Declaration of the Unified Accumulative Pension Fund that became effective from January 1, 2022. As of the end of 2022 the structure of foreign currency portfolio of pension assets has been within the allowed deviations from the target strategic allocation. Thus, as of January 1, 2023 the share of bonds of developed countries equaled 25.7%, emerging markets bonds – 15.7%, corporate bonds – 14.7%, equities – 15.5%. The amount of funds transferred to external management in 2022 equaled to 150.0 mln US dollars under the 'Global equities' mandate. The work on bringing the existing structure of foreign currency portfolio to its target strategic

allocation has been performed on a stage-by-stage basis and will be continued in 2023.

In 2022 the work was underway to improve the investment strategy and increase the safety of pension assets, and in order to implement the recommendations of the Supreme Council under the President of the Republic of Kazakhstan on Reforms, amendments were made to the Investment Declaration of the Unified Accumulative Pension Fund. The amendments provide for index investment of a part of a sub-portfolio of equities of a foreign exchange portfolio in accordance with the ESG principles as well as the application of ESG principles when index investing in corporate bonds of a foreign currency portfolio.

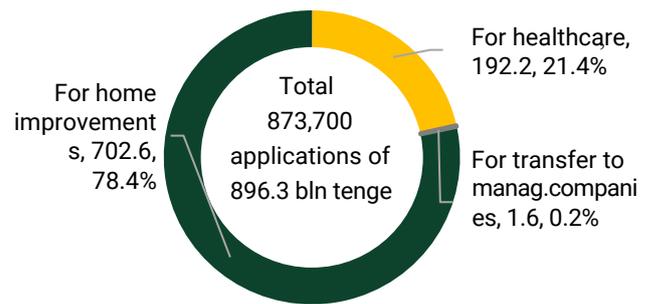


Figure 2.4.5 Return on pension assets of the UAPF, bln tenge



* - Distributed to accounts of contributors of the Unified Accumulative Pension Fund

Figure 2.4.6 The number of executed applications from contributors in 2022, bln tenge



Total amount of early withdrawals from February 2021 – 3.50 trln tenge

Despite negative returns on most asset classes, the existing investment strategy enabled to generate positive return on pension assets of 6.55% as of the end of 2022, whereas many international institutional investors had negative results in asset management and incurred substantial losses.

2.4.4 FINANCIAL RISKS MANAGEMENT

The National Bank, with an aim to reduce financial losses arising from risk realization, updates methodologies and approaches to control risks on an ongoing basis.

A list of credit quality requirements is put forth for each issuer and counterparty, alongside with establishment of limits on operations, geographical concentration, and limitation in terms of currencies and a benchmark selection.

In 2022, a number of limitations on the risks of the financial derivatives active operations had been designed. A proposed system sets the threshold of possible losses for each active position on financial derivatives, as well as mechanisms of its implementation to ensure transparency and optimize the use of financial derivatives.

The risk scope for portfolios of gold and foreign exchange assets (Table 2.4.4.1) and investment operations of the National Fund have been revised (Table 2.4.4.2).

The actual level of Value-at-Risk parameter for one year with 95% probability for the total portfolio of gold and foreign exchange assets was no more than 15.53% in the reporting period, with gold making the largest contribution to VaR (about 90%).

Table 2.4.4.1

Portfolio	Risk parameters	Established levels	Actual levels
Strategic portfolio	Value-at-Risk for one month with 95% probability	10%	2.03%
Liquidity portfolio	Weighted average maturity	1 год	0.17 года
Investment portfolio	Deviation of the portfolio duration from the benchmark portfolio duration	+30%/- 40%	(-)2.96%
	Expected variability of the deviation in the return on portfolio from the return on the benchmark portfolio (Tracking error)	2%	0.32%

Table 2.4.4.2

Portfolio	Risk parameters	Established levels	Actual levels
Portfolio of developed countries government bonds (Savings portfolio)	Expected variability of the deviation in the return on portfolio from the return on the benchmark portfolio (Tracking error)	2%	0.18%
	Deviation of the portfolio duration from the benchmark portfolio duration	+30%/- 40%	(-)2.78%
Portfolio of emerging markets government bonds (Savings portfolio)	Expected variability of the deviation in the return on portfolio from the return on the benchmark portfolio (Tracking error)	4%	0.67%
	Deviation of the portfolio duration from the benchmark portfolio duration	+30%/- 40%	-8.71%
Equities portfolio (Savings portfolio)	Expected variability of the deviation in the return on portfolio from the return on the benchmark portfolio (Tracking error)	3.75%	0.88%
Stabilization portfolio	Weighted average maturity	1 year	0.58 year

The National Bank conducted an ongoing assessment of expected credit losses both on its own and the National Fund assets and kept creating provisions against such

losses¹⁴. In addition, on a quarterly basis, the National Bank was setting internal credit ratings for second-tier banks of the Republic of Kazakhstan¹⁵.

2.5 ANALYTICAL AND STATISTICAL ACTIVITIES

2.5.1 NATIONAL BANK'S RESEARCH AND ANALYTICS

The research and analytical activity is a paramount part of the decision-making process at the National Bank.

Within the scope of areas presented in the Research Program of the National Bank for 2021 – 2022, the National Bank staff prepared working papers that were published on the National Bank's official website in the "Research" Section as well as a number of articles in the National Bank periodical – the "Economic Review".

In 2022, the National Bank conducted a number of studies to explore the nature of inflation and inflation expectations. In the paper "How Producer Prices Affect the Consumer Inflation in Kazakhstan", a relationship between the producer price index and the consumer price index in Kazakhstan was studied. The empirical analysis showed that in a short term, the producer price index serves as a leading indicator for the consumer inflation and over time, in the medium-term horizon, the producer price index depends on consumer prices.

The outcomes of the study entitled "Assessing the Anchoring of Inflation Expectations in Kazakhstan" showed that inflation expectations of the population are unanchored, while the degree of anchoring decreased in recent years reflecting the sensitivity to short-term fluctuations in macroeconomic indicators. Inflation expectations of professional analysts are also unanchored; however, the degree of their anchoring is higher than of expectations of the population.

A study entitled "Financial Literacy and Household Inflation Expectations" was conducted, where the main finding was that financial literacy of the population plays an important role in shaping objective inflation expectations in the economy and this emphasizes the need to increase financial literacy of the population and to adapt the central bank communication policy to a broader audience including the groups with low financial literacy.

The study of "The Impact of Competitive Environment on Pricing" tested for the presence of relationship between the competitive environment and pricing in Kazakhstan. The outcomes of the study showed

¹⁴ in accordance with the International Financial Reporting Standard 9 "Financial Instruments", based on financial assets credit ratings assigned by an international rating company and the Standard & Poor's default probability table

¹⁵ based on the methodology for assessing the classic financial indicators of a bank and the credit rating set by international rating agencies, as well as on the assessment of the bank's loan portfolio



the presence of positive relationship between the level of imperfect competition and the price level and also provided a better insight into the influence of competitive environment on pricing processes.

Besides, in 2022 the National Bank's staff continued to improve the model toolkit for forecasting. As part of the "The Dynamic Factor Model of Inflation for Kazakhstan" study, unobserved variables were identified that reflect the influence of various aspects (external factors, supply and demand), and a quantitative assessment of their influence on inflationary processes was made by building an OLS model. Additionally, the assessment of contribution of individual factors was made by adding various variables to the OLS model with further grouping by nature of origin. A vector autoregression (VAR) model was also built to evaluate the variance decomposition in order to interpret the relationships between variables described by the model. According to the results of the study, the main contribution to the dynamics of inflationary processes is made by an external factor, which is associated with a high level of imports, as well as by a seasonal factor and inertia factor, which indirectly reflects the presence of structural imbalances and restrictions.

In the paper entitled "The System of Short-Term Forecasting of GDP by Expenditure at the National Bank of the Republic of Kazakhstan", the existing demand-side forecasting system of GDP and the Combined Estimation Aggregate Demand Forecasting Model (COMPAS), which is a system of econometric models, where forecast estimates are combined by weighting root mean square errors (RMSE) of each model over the testing period. Modernization of this model was carried out by changing some model classes, methods of combining forecasts, as well as the inclusion of exogenous parameters in different forecasting periods.

As part of improvement of the Quarterly Projection Model (QPM), variables of inflation expectations for food and non-food inflation were incorporated into the model equations, which enabled to explicitly set the path of inflation expectations for various scenarios. In addition, the long-term parameters of world food inflation and the weighted inflation of trading partner countries, as well as the parameters of long-term equilibrium of the real effective exchange rate, were slightly changed. Based on such changes, the predictive features of the model were improved.

The National Bank, together with the "Payment and Financial Technologies Development Center" JSC proceeded with upgrading the information system for monitoring and analyzing consumer prices – the NBK Price Tracker: expanded the regional coverage, included new products for price tracking, carried out work to improve machine-learning models for classifying a pool of goods.

The National Bank continued research cycle dedicated to the analysis of foreign economic activity. In particular, in the study "Volatility of Export and Import Prices", the conclusion was made that the floating market exchange rate is a stabilizing factor, which indirectly affects the current account dynamics through price changes for non-primary and consumer goods.

As part of the works to expand the coverage of statistics on international trade of Kazakhstan and reduce errors and omissions in the balance of payments, the studies "Evaluation of the "Grey" Imports of Cars in the Balance of Payments" with an aim account for the import of cars by individuals with foreign registration numbers, and "Accounting for Cross-Border Electronic Trade in the Balance of Payments Statistics" with an aim to record the volume of cross-border electronic trade in goods purchased by individuals via the Internet, based on bank reporting on payments with the use of payment cards in the context of MCC codes were carried out.

In 2022, the National Bank conducted a series of research dedicated to macroprudential regulation in Kazakhstan. Thus, in the "Prudential Liquidity Requirements and the Risk-Based Approach" study, a review of Kazakhstan's practice of implementing prudential liquidity ratios (LCR and NSFR) as recommended by the Basel Committee on Banking Supervision as well as of consistency of Kazakhstan's ratios with the Basel standards was made; the effect of alternative interpretations was assessed; meaningfulness and effectiveness of ratios in reflecting funding risks and improving the market practices of liquidity management, their interaction with other ratios and dependence of the regulatory and competitive environment were discussed. Besides, sensitivity to shocks was analyzed.

The paper "Retail Deposit Market in Kazakhstan: Problems and Solutions" presents the analysis of the Kazakhstani deposit market, describes main problems in its regulation, including the problems of unhealthy competition, the impact of poorly capitalized banks on the deposit market, including

deposit rates, the main stages of the deposit market regulation and the reasons for reforming the interest rates of the “Kazakhstan Deposit Insurance Fund” JSC, and also studies international experience in the regulation and development of the deposit market.

In 2022, the National Bank conducted a number of studies on the topic of “The future of the payment system”. In the study titled “The key Trends in the Payment Industry”, an analysis of the latest trends in the payment industry was carried out, taking into account the experience of various countries and their central banks, namely, new and successfully applied payment services, tools and models for the provision of payment services were discussed, and the results of their implementation were analyzed. The study “Analysis of Reforming the National Payment System of Kazakhstan” presents an analysis of the world experience in payment systems reform including the experience of establishing the national payment system of Kazakhstan, reviews the main factors and reasons for reforming the national payment systems by countries, provides an assessment of reforms carried out and the relevant conclusions.

A series of studies is dedicated to the analysis of the current state of cash circulation in Kazakhstan and the prospects for its development. The conclusion of the study “Measures for Regulating Cash Circulation as an Instrument to Combat the Shadow Economy” was that, despite the development of cashless payments, there is a simultaneous tendency of increasing amount of cash in circulation, and cash has advantages over alternative payment instruments in terms of liquidity. The regulation of cash by setting limits on the amount of withdrawals showed the first results of effectiveness in reducing the risks of corporate entities’ involvement in tax evasion schemes and increasing the transparency of operations of business entities, and also contributed to the expansion in the use of cashless payments, stimulating the reduction of the shadow economy and corruption in the country. At the same time, this is not a panacea; it is preferable to direct the main efforts to identifying and combating the sources of shadow turnover.

In order to study the factors that form the demand for cash in Kazakhstan, a research titled “Improving the Models to Project the Volume of Cash in Circulation in the Republic of Kazakhstan” and a sociological study “Medium-Term Prospects for the Use of Cash by Economic Entities” were conducted. According to their results

the main factor in the formation of demand for cash is GDP which is the main indicator of economic activity and the quality of life of the population. At the same time, out of GDP components, trade has a significant impact on the change in the demand for cash. The public poll showed that 60% of the interviewed still use cash in their everyday payments; 30-40% – is the average percentage of cash in the turnover of business entities; cash accounts for 35% of expenses made by the interviewed.

The study titled “Development Prospects of the National Bank’s Bullion Coins and Minted Bars as an Instrument of Investment” was aimed at analyzing the market for bullion coins and certified minted bars of refined gold of the National Bank and considering the use of international experience in developing this market. The analysis showed that the market of minted bars in Kazakhstan is developing at a rapid pace, while the bullion coin market has seen an insignificant increase in demand in recent years. International experience shows that during the pandemic, the markets in the US, Japan, Germany, Austria and the UK saw the growth in demand for precious metal products, including bullion coins and minted bars.

At the end of 2021, the National Bank provided 8 research grants to entities engaged in the academic and scientific-research activities for study of the issues of central bank independence and achieving the inflation target; the effectiveness of measures for import substitution and diversification; the household debt, heterogeneity and financial stability; segmented labor market and cyclical elasticity of demand for qualification; private equity market in Kazakhstan and prospects for its development; mechanisms for protecting qualified and unqualified investors in the securities market; cyclical shocks and fiscal multipliers of budget spending. In 2022, cooperation with grant beneficiaries was finalized and the outcomes of conducted research were posted on the National Bank’s official Internet resource in the “Competitive Selection Results” subsection of the “Research Grants of the National Bank” section.

In order to ensure transparency of decisions about the base rate and make communication more efficient, press releases and analytical and research materials were published. The results of the analysis of key macroeconomic factors that influence inflationary processes as well as the forecasts of macroeconomic parameters used in making decisions on the level



of the base rate were published in the quarterly "Monetary Policy Report". In order to increase public awareness and that of the academic and economic community regarding the expectations associated with the external sector of the economy, the forecast of the current account of the balance of payments was included in the Report.

A monthly analysis of inflationary processes and inflation components in the past month, including the factors fundamental to these tendencies, are reported in the "Inflation Trends" periodical. In 2022, sections devoted to seasonally adjusted inflation and core inflation as well as to the dynamics of external food prices were included into the publication.

In 2022, the National Bank continued to publish a quarterly "Financial Market Overview" with detailed analysis of the financial market and a monthly press release "On the Situation in the Financial Market" with description of the analysis of key markets of the financial sector (deposit, credit, foreign exchange, and money market, monetary aggregates and securities market) as well as the analysis of the payment systems, pension system and international reserves. In the course of the year, the quality of furnished information was improved by providing more in-depth analytics of the dynamics of indicators.

The results of systemic risks analysis and a study in the field of financial stability, including the analysis of macroeconomic conditions, the government securities market, the real estate market, as well as an assessment of credit risk and other risks to financial stability, taking into account the impact of the COVID-19 pandemic, were published in 2022 in the Financial Stability Report of Kazakhstan for 2021. In addition, the results of a survey of banks on lending were published to determine the demand for and supply of credit resources in the market.

The review on the Business Activity Index has been improved: the mining industry was singled out from April 2022; from October 2022, the review presentation form has been changed, a dashboard has been built to improve visualization and view more detailed information on indicators of the change in business cycle by sector. To ensure relevance of the estimates obtained, the timeline for publication of reviews on the National Bank website has been significantly reduced. Since October 2022, a review on the Business Activity Index

has been published on the website of the "Kazakhstan Stock Exchange" JSC, and data series are also posted in the Thomson Reuters information base.

In the field of external sector, four quarterly official publications of the National Bank "Kazakhstan: Balance of Payments and External Debt" were prepared and published in 2022. As part of improving the forecast of the current account of the balance of payments, the technique of forecasting the income balance was fine-tuned by separating dividends and reinvestments payable by sectors of the economy followed by the construction of econometric models.

The research capacity of the National Bank staff was increased through participation in online conferences and webinars, through technical assistance arranged and provided by international financial institutions, central banks of other countries.

In 2022, the "KPMG Tax and Advisory" LLP finalized the provision of services in conducting a research entitled "Pricing of Food Products in the Supply Chain". Based on the outcomes of research, materials were presented with the assessment of the cost of goods production, definition of the structure of food price, study of food pricing mechanisms in the wholesale and retail markets by regions of Kazakhstan. At the same time, an analysis of the state of competition in food markets, the role of the government in pricing of food products, an analysis of the influence of external factors on domestic prices and a quantitative assessment of the contribution to the price change pace as a result of supply and demand shocks were presented.

As part of the technical assistance to improve the analysis and forecasting system at the National Bank, a partnership program was signed between the National Bank and the Bank of Korea. The technical assistance includes discussions on improving macroeconomic analysis, the forecasting and modeling process, the application of big data for forecasting and policy analysis. Within the framework of the technical assistance, one of the topics also included the study of the Bank of Korea's experience in terms of building structural macroeconomic models, including the dynamic stochastic general equilibrium (DSGE) model. The work on building a system for assessing the impact of external shocks on the Kazakh economy was initiated.

The International Monetary Fund provided a technical assistance in developing a methodology for macro stress testing of the corporate loan portfolio of second-tier banks. As part of the stress testing, two macroeconomic models of credit risk were built. The first model was based on financial indicators of large and medium-sized enterprises in the real sector, and the second model – on corporate portfolio quality metrics according to the Credit Register.

2.5.2 STATISTICAL ACTIVITIES

The National Bank's statistical activities are based on international standards and principles of statistical accounting, as well as on the standards and practices of working with data from foreign central banks and international statistical organizations.

In 2022, the National Bank took an active part in the arrangements of the Government of the Republic of Kazakhstan to build a national data platform of government authorities and implement other digital technologies, including within the framework of international cooperation.

Monetary and Financial Market Statistics

At the end of 2021, the transition to a data-centric format of administrative data collection from banks enabled to expand the list of published information on the credit market and ensure the comparability of data used for supervisory and statistical purposes. In 2022, the National Bank made a publication on the credit and deposit market, on the banking sector indicators based on updated data sources.

In order to ensure full statistical coverage of lending operations to the real sector of the economy, the National Bank made an effort to expand the composition of statistical information and to provide users with more detailed data. The implementation of these changes was preceded by work to improve the quality of data on loans provided by banks and organizations engaged in microfinance business.

In 2022, the data on credits to the economy in a broad definition was posted on the official Internet resource of the National Bank, covering, in addition to banks, a wide range of lenders – national development institutes and microlending organizations, as well as data on loans from the banking sector, including banks and the “Development Bank of Kazakhstan” JSC.

In 2023, as part of an ongoing effort to expand the presented statistics, the National Bank will start posting data on credits to the economy by the banking sector on the official Internet resource, with a breakdown of borrowers by types of business entities, by types of economic activity, as well as in the context of lending purposes (objects of financing).

On an ongoing basis, the NBK cooperates with the Eurasian Economic Commission of the Eurasian Economic Union in terms of convergence of the methodology, improving the quality of data and presenting statistical information on monetary statistics and financial market statistics in accordance with the approved formats and deadlines.

The implementation of the digital agenda of the Eurasian Economic Union within the framework of statistical activities is carried out through the adoption of digital technologies for the exchange of statistical information based on the SDMX standard. The National Bank was one of the first central banks of the Eurasian Economic Union member countries to join the effort on testing the SDMX standard for monetary statistics reports. In 2022, data on the credit market and exchange rates were sent to the Eurasian Economic Commission using the SDMX format.

Developing the Toolkit for Report Gathering and Data Dissemination

Along with an ongoing effort to design the platforms for gathering and processing the data of the financial market entities, in 2022 a number of arrangements were made to optimize the methodology requirements.

In 2022, the project on the direct load of transaction data on operations with securities of the Central Securities Depository to the National Bank Data Warehouse and the development of appropriate data marts was finalized; in future, this project is planned to be scaled up onto other financial market participants. This decision enabled to significantly reduce the load on respondents and increase the efficiency of obtaining information and handling the data; as a result of implementation, the number of reporting forms submitted by a respondent was reduced. Taking into account the reduction in the reporting of credit bureaus in connection with the optimization of supervisory processes, the total number of reports for these respondents was reduced by 75% (from 24 to 6 reporting forms).



In addition, the work was continued to converge and unify the indicators of credit information to implement the tasks of the National Bank's Credit Register and the Database of credit histories prepared by credit bureaus; the concept of technological implementation of a common set of indicators for collecting credit information was elaborated.

In implementing the Presidential Decree of the Republic of Kazakhstan dated April 13, 2022 No. 872 "On Measures to De-bureaucratize the Activities of the Government Office" and the effort carried out by the Ministry of Digital Development, Innovation and Aerospace Industry to design the portal of the government information

and analytical system, the work has been done to prepare the National Bank data for subsequent posting on the portal of the "Smart Data Ukimet" government information and analytical system on a regular basis.

The National Bank will continue to develop the Business Database of Financial Market Entities, including in cooperation with the competent authority in charge of regulation and development of the financial market, credit bureaus and supervised organizations; to design direct data load tools, which will facilitate the use of modern analytics, increase the depth of research and expand the potential for application of innovations and modern regulatory technologies.

2.6 DEVELOPING FINANCIAL TECHNOLOGIES AND ENSURING CORPORATE SECURITY

2.6.1 DEVELOPING FINANCIAL TECHNOLOGIES

In 2022, the National Bank continued to implement the Concept for Financial Technologies and Innovations Development for 2020 – 2025 and carried out a number of activities.

As part of development of the Open API and Open Banking, the Concept for Development of the Open API and Open Banking for 2023 – 2025 was approved; a project of open data models for information standards and a draft standard on information security were prepared.

In the area of "Creation of platforms for the development of financial technologies in the financial market", the National Bank, together with representatives of the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market, established a working group for elaboration of a special regulatory regime in order to effectively develop innovations and design unified platforms (panels) for considering proposals from the market participants.

In June 2022, jointly with the Corporate Foundation of Astana Hub International Technopark of IT Startups, the Blockchain Center project office was established to support the blockchain industry in the region through the development of human capital in the industry

and digital projects built using the distributed ledger technology.

Also, in order to develop the digital financial infrastructure by providing interaction with the financial market participants, independent experts, technology providers and international organizations, the Digital Tenge Hub collaborative platform was launched with an aim to conduct a comprehensive study of introduction of Kazakhstan's digital currency.

At the same time, in 2022, as part of the development and implementation of geo-distributed data centers, the National Bank conducted a technical survey of SD-WAN technology, elaborated technical requirements for budgeting (the implementation is planned to begin in 2023); additional computing capacities and backup systems were built and set, and stand-by critical IT services were organized.

In addition, the National Bank, with an aim to implement the Program for the National Bank Digitalization for 2021 – 2022, as part of asset management, commissioned the Asset and Risk Management System.

Measures were taken to purchase an ERP system, based on the approved criteria for choosing a supplier of licensed software and works to automate the processes of administrative and economic activities, cash circulation and personnel management. In addition,

as part of the design work on implementation of RPA (Robotic Process Automation) technologies, design work was carried out on the acquisition and implementation of licensed software for robotizing business processes on the National Bank's budgeting and procurements. The licensed software has been put into commercial operation from March 31, 2022.

In order to ensure the disaster tolerance of IT services in the banking sector, full-scale activities were carried out to plan the transition to geo-distributed data processing centers. In order to comprehensively assess the technical capacities for locating the main and backup Data Processing Center of banks, the composition of a working group was approved¹⁶ consisting of representatives of banks, Financial Institutions' Association of Kazakhstan, state organizations and telecom companies. A number of discussions were held on the proposals of telecommunications operators regarding technical capacities for placing the main and backup Data Processing Center of banks in various localities within the territory of the Republic of Kazakhstan, based on the existing telecommunications networks and energy resources. In addition, a survey of 20 banks was conducted and consolidated requirements for the Data Processing Center were formulated.

In 2023, the implementation of projects to develop the target architecture of the National Bank corporate data warehouse, the transition to geo-distributed data processing centers in order to ensure the resiliency of the National Bank infrastructure, the development of a consolidated solution for the transition of banks to geo-distributed data processing centers, and the implementation of activities related to the acquisition and implementation of ERP system – selection of a supplier, conclusion of a contract and implementation of business process automation in accordance with the terms of the contract (the number of realized business processes by the "Digital Kernel" IS) will be continued.

2.6.2 CORPORATE SECURITY

In order to realize the assignment of the President of the Republic of Kazakhstan, in 2022 the National

Bank implemented a unified technological platform on collection, monitoring and responding to cyber incidents in the financial sphere ("the UTP").

As part of the UTP development was ensured a stack of technological solutions for responding to information security incidents, as well as information security systems and tools for preventing leaks of confidential information, vulnerabilities scanning, complex threats detecting, intrusions preventing, protecting informatization objects from DDoS and targeted cyberattacks

In order to the fulfillments of the Action Plan on realization of the Concept for the Financial Sector Development until 2030¹⁷, in 2022 was connected to the UTP 112 participants of the payment services market.

At present, 159 organizations are connected to the UTP (in 2022 – 112 organizations, in the 1st quarter of 2023 – 47 organizations) and 556 events were published that are aimed at warning and preventing from cyber threats and vulnerabilities in the safety of informatization facilities of the financial sector.

At the same time, within the framework of the functioning and development of the UTP, on the basis of the National Bank, the activity of the Cybersecurity Center is ensured with three lines of expert support, including the functionality of Threat Intelligence, imitation of hacker attacks on the information and communication infrastructure of the National Bank, collection of digital evidence and forensic analysis. In doing so, the work of the Cybersecurity Center is focused on improving the level of security of the National Bank's infrastructure and its subsidiaries from new challenges and threats to cybersecurity.

According to the results of 2022, in the National Bank did not have implemented information security incidents that resulted in violations or failures in the operation of information and communication infrastructure facilities.

In accordance with the Cybersecurity Strategy of the Financial Sector of the Republic of Kazakhstan

¹⁶ Approved by the Order No. 99 dated 03.05.2022 "On the Establishment of an Interdepartmental Working Group on the Deployment of the Main and Backup Data Processing Centers of Second-Tier Banks"

¹⁷ Approved by the Presidential Decree of the Republic of Kazakhstan dated September 26, 2022 No. 1021



for 2020 – 2022¹⁸, as well as the Action Plan of Activities to Implement the Cybersecurity Strategy of the Financial Sector of the Republic of Kazakhstan for 2021 – 2022¹⁹, by the National Bank had been assigned to be carried out eighteen activities. The planned activities were carried out is complete, including the development of information materials on the safe payments via the Internet, a number of information messages on the prevention of Internet fraud were published in the media.

In order to expand cooperation and exchange international experience in building the information security management system, the National Bank held online meetings with representatives of central banks of the Russian Federation, Israel, Georgia and Serbia. In addition, work was continued to raise awareness, create cyber culture and digital literacy among employees of the National Bank system.

Apart from that, the National Bank was included in the working group of central banks from the Eurasian Economic Union member countries that is engaged in ensuring information security of the financial market and counteracting cyber attacks.

The National Bank took part in the round table discussion entitled “On interaction of government agencies, financial and non-profit organizations in combating Internet fraud”, independently identified a number of resources with the signs of fraudulent activity on the global Internet (social networks, ad services). In order to prevent discreditation of the National Bank activities, requests were sent to the competent authorities to block the detected online resources. Based on the results of the check, all resources have been blocked.

In accordance with the requirements of the Law of the Republic of Kazakhstan “On Counteracting Terrorism”, the Resolution of the National Bank Board dated November 28, 2022 No. 116 res “On Approval of the Guidance for Organizing Anti-Terrorist Protection of the National Bank of the Republic of Kazakhstan’s Facilities Vulnerable to Terrorism” was adopted. At the same time, the National Bank, in collaboration with special authorities and law enforcement agencies, specialized organizations in the National Bank representative office, its organizations and branches, carried out preventive and training activities to increase awareness in the field of anti-terrorist protection

2.7 INTERNATIONAL COOPERATION AND COMMUNICATION POLICY

2.7.1 INTERNATIONAL COOPERATION

In 2022, the National Bank participated in Spring Meetings and Annual Meetings of the Board of Governors of the IMF and the World Bank Group in April and October. During their course, issues pertinent to the monetary policy, global inflation, introduction of the central bank digital currency, geo-economic situation in the region and prospects of bilateral cooperation were discussed.

Furthermore, bilateral discussions were held with IMF and WB senior officials, central banks (European Union, the US, Switzerland, Singapore, Armenia, Hungary, Poland) and also with representatives of international rating agencies and the National Bank counterparts.

In July, the National Bank’s senior management attended the IMF Swiss Constituency meeting. The meeting summarized the results of activities over 30 years, as well as the prospects for further development and promotion of interests of the member countries in Swiss Constituency, and bilateral meetings were held with the IMF’s leadership and the Swiss Federal Department of Finance.

In May and September, the National Bank hosted the IMF missions in accordance with Article IV of the IMF’s Articles of Agreement. Following the visit of the IMF mission prepared an overview of the current financial and economic development of Kazakhstan. The IMF’s Concluding Statement acknowledged the National

¹⁸ Approved by the Joint Board Resolution of the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market dated July 20, 2020 No. 69 and the National Bank dated July 20, 2020 No. 89

¹⁹ Approved by the Joint Order of the National Bank Governor dated March 4, 2021 No. 37 and the Chairman of the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market dated March 4, 2021 No. 82

Bank's commitment to inflation targeting and the right course to full-fledged inflation-targeting regime. According to the IMF Mission main tasks of the National Bank include the rejection of non-core objectives and protection its independence.

As part of the assistance to the IMF in establishing Regional Capacity Development Center for the Caucasus, Central Asia and Mongolia in Almaty (the "Technical Assistance Center"), the National Bank conducted work on approval of the draft Memorandum of Understanding between the Republic of Kazakhstan and the IMF on the Technical Assistance Center with government agencies of the Republic of Kazakhstan. The signing of the Memorandum is scheduled for 2023. During 2022, the National Bank employees took part in 10 regional workshops, 27 webinars organized by the Technical Assistance Center and also were the speakers at webinars on such topics as "The Central Bank digital currency" and "Improving the consumer price index".

In 2022, the National Bank continued obtain technical assistance from international financial organizations and foreign central banks.

In 2022, the Bank ensured coordination of 35 areas of technical assistance from 23 foreign central banks and 2 international financial organizations (IMF, EBRD) on operational risk management; bank stress testing; mortgage and consumer credit market analysis; lending of last resort facility; application of countercyclical capital buffer; improvement of the effectiveness in National Fund assets management; strategic asset allocation and financial risks assessment; improving analysis and forecasting; liquidity provision; central bank digital currencies and financial technology regulation ; development and implementation of the common anti-fraud monitoring system and ensuring information security; design of the problem loans sale.

In addition, a number of consultations on personnel and payroll management, as well as cash management were received from central banks and mints in 21 countries.

As part of collaboration with the Government and international rating agencies on the sovereign rating of Kazakhstan, consultations were held to assess the effectiveness of pursued macroeconomic policy, based on which Fitch Ratings and S&P Global Ratings confirmed the sovereign rating of Kazakhstan at "BBB"

with a "stable" outlook and at "BBB-" with a "negative" outlook, respectively.

In 2022, the National Bank held meetings with representatives of development banks, other international financial organizations and central banks of the UAE, Hungary, the US, Korea, Germany, Switzerland, Sweden and the CIS countries to discuss the macroeconomic situation, monetary policy as well as the prospects for expanding bilateral cooperation.

On November 15, 2022, in Almaty, the National Bank, together with the Financial Institutions' Association of Kazakhstan and the Agency of the Republic of Kazakhstan for Regulation and Development of the Financial Market, organized the X Congress of Kazakhstan financiers. During the Congress, topical issues of crediting the economy, the stock market and investment opportunities, matters pertinent to the financial and real sector, development of the payment system and insurance were discussed. The Congress was attended by speakers from among the government authorities of the Republic of Kazakhstan, professional participants of the financial market and local offices of international financial organizations. The event was covered in the media, as well as on the Internet resource of the Congress, fincongress.kz.

In 2022, working meetings, consultations between the National Bank and the Central Bank of the Russian Federation were held on a regular basis at high and expert levels in order to discuss topical issues of bilateral cooperation. In addition, the senior management of the National Bank took part in a number of meetings at the level of heads of Government of the Republic of Kazakhstan and the Russian Federation. The National Bank staff took part in the meeting of the Kazakh-Russian Intergovernmental Commission on the Baikonur space complex.

In November 2022, the National Bank Governor participated in the panel discussion – "Macroeconomic Stability and Sustainable Growth: a New Phase of Structural Changes" – of the Uzbekistan Economic Forum entitled "People at the Heart of Economic Reforms", organized by the Government of Uzbekistan together with the IMF, World Bank, European Bank for Reconstruction and Development, Asian Development Bank and the Swiss National Bank. In addition, during the visit to Uzbekistan, bilateral meetings were held



with the CEOs of the Agency for Strategic Reforms of the Republic of Uzbekistan, Central Bank of Uzbekistan, the Deputy Prime Minister of the Republic of Uzbekistan in charge of Financial and Economic Affairs and Poverty Reduction, and other counterparts.

Within the framework of strengthening the Kazakh-Chinese cooperation, on September 20, 2022, the National Bank and the People's Bank of China signed a Memorandum of Cooperation, which provides for the possibility of developing mutual settlements in the yuan in Kazakhstan. The Memorandum reinforces the agreements between central banks on clearing and data exchange on the development of cross-border settlements in national currencies. In order to implement the Memorandum, on September 30, 2022, the People's Bank of China decided to designate the "Commercial and Industrial Bank of China in Almaty" JSC as a clearing bank for operations in the yuan within the territory of the Republic of Kazakhstan.

In 2022, an active effort was made to strengthen multilateral cooperation within the framework of regional integration associations. In order to continue cooperation within the EAEU, the National Bank representatives took an active part in the meetings of the high-level Working Group consisting of ministers of economics, finance ministers and heads of national (central) banks, which resulted in the adoption of measures to increase stability of the economies of the EAEU member states, including ensuring macroeconomic stability, and of recommendations for a further use of foreign currencies in mutual trade of the EAEU member states.

On September 29, 2022, a regular meeting of the Advisory Council on Monetary Policy of National Banks of the EAEU member states was held chaired by the National Bank. During the meeting, implementation of monetary policy in the EAEU member states, development of the banking sector and financial markets were discussed. The National Bank and Payment and Financial Technologies Development Center informed about the progress in implementation of the digital tenge pilot project.

Representatives of the National Bank also participated in the working meetings of the Organization

of Turkic States in order to coordinate the approval of the Agreement on the establishment of the Turkic Investment Fund.

The National Bank, in implementing the decision of the Supreme Eurasian Economic Council "On the temporary procedure for transferring amounts of import customs duties, special, anti-dumping and countervailing duties" dated May 18, 2022 No. 1, carried out work to agree on the draft Protocol on Amendments to the Treaty on the EAEU dated May 29, 2014 with regard to the transfer of the amounts of import customs duties between the EAEU member states due to the impossibility of and restrictions for making settlements in the US dollars because of sanctions imposed against Russia and Belarus (from February 28, 2022 for settlements with the Central Bank of the Russian Federation, from March 14, 2022 for settlements with the National Bank of the Republic of Belarus).

In addition, on a regular meeting of the Council of Heads of State of the SCO Member States held on September 16, 2022, the Road Map for a gradual increase in the share of foreign currencies in mutual settlements between the SCO member states was approved.

In 2022, the work was carried out to update the legal framework of international agreements. The Protocol on the Termination of the Agreement on the Establishment of the Interstate Monetary Committee that was signed on May 25, 1995, was brought into effect by the Presidential Decree of the Republic of Kazakhstan dated June 30, 2022 No. 949.

In 2022, work was made to implement the legislative initiatives on the secondment of the National Bank employees to foreign establishments of the Republic of Kazakhstan²⁰.

²⁰ The Presidential Decree of the Republic of Kazakhstan dated May 18, 2022 No. 895 enforced amendments to the Presidential Decree of the Republic of Kazakhstan dated January 13, 2014 No. 722 "On approval of the Rules for formalizing, issuing, replacing, surrendering, withdrawing, recording, storing and destroying diplomatic and official passports of the Republic of Kazakhstan and the list of officials of the Republic of Kazakhstan who are issued diplomatic and official passports of the Republic of Kazakhstan".

2.7.2 COMMUNICATION POLICY

During 2022, the National Bank on a regular basis was taking effort to inform general public, financial organizations, and expert community about its activities through various communication channels.

In total, over 300 information materials in various formats were published during the reporting period. Of the total number of publications, almost one third (more than 90) were reports, interviews and comments of the National Bank senior management. The topics of the speakers' presentations were focused on the monetary policy guidelines, the situation in foreign and domestic markets, state of gold and foreign exchange reserves, development of the digital payment system, data on inflation trends and inflation expectations of the population.

To ensure transparency of decisions on the base rate and to improve communication efficiency, 8 press releases as well as analytical and research materials were published. The National Bank's decisions on the base rate were accompanied by press briefings of the National Bank senior management with the participation of media representatives. With the aim to ensure wide coverage, these events were held in a hybrid format with online broadcasting via the National Bank Youtube channel.

Seven briefings were conducted in total in 2022 in accordance with the Schedule of the Decision-Making on the Base Rate. Two more decisions of the regulator on the base rate were accompanied by an interview with the senior officers explaining the factors underlying the decision, dynamics and inflation forecast as well as measures taken by the National Bank to ensure stable and affordable lending to the real sector of economy as part of execution of instructions of the President of the Republic of Kazakhstan.

During 2022, the National Bank also actively covered the stages of implementation of the Digital Tenge project, building a digital financial infrastructure/developing the National Payment System in Kazakhstan, and measures to make the asset management of the National Fund and the Unified Accumulative Pension Fund more efficient.

At the same time, work was carried out to increase the number of infographics and other explanatory

materials; to launch thematic sections in the National Bank's official accounts on social media aimed at informing various target audiences about the factors affecting return on assets of the National Fund and the Unified Accumulative Pension Fund, the dynamics of the foreign exchange market and the current account of the balance of payments, and forecasts for inflation; projects for the implementation of new financial technologies, etc.

In order to improve the National Bank's communications with professional market participants and the expert community, in 2022, 10 round tables were held with the media experts and financial experts in the form of discussions. Building a dialogue with the expert community is meant to reduce the information asymmetry between actions of the regulator and the market response.

In 2022, the National Bank continued to communicate actively with the media: answers to more than 400 inquiries from the Kazakhstani and foreign media were prepared.

The official National Bank Internet resource continues to be the main source of information about the financial market for the media and professional market participants. National Bank's website traffic showed an upward trend. The sections most frequently viewed by users were "Statistics", "Monetary Policy", "Press Center and Research". Since the beginning of the year, the website's audience composed two million users, number of visits being 6.1 million.

The total coverage of the National Bank's official pages on social media during the year amounted to more than 95 thousand users, while the monthly audience more than doubled. The share of video content on social media, particularly video comments and videos with participation of National Bank experts, remained high. Video publications on Facebook and Instagram received up to 7.5 thousand views each.

In order to ensure maximum openness and transparency, the National Bank will continue adhere to the standards of communication policy in its activities and inform the public through its channels and platforms about the ongoing work in the main areas of its activities.



2.7.3 PUBLIC SERVICES

In 2022, the National Bank provided 175 public services (in an electronic form).

Based on monitoring activities, no violations were identified; public services were provided on time in accordance with the requirements of regulations of the Republic of Kazakhstan governing the provision of public services.

The quality of public services is monitored on a monthly basis. In 2022, timely and high-quality submission of the National Bank's report on internal control over the level of public services to the competent authority was ensured.

On November 30, 2022, an online webinar was conducted for the staff of regional branches of the National Bank of the Republic of Kazakhstan entitled: "Compliance functions in regional branches of the National Bank of the Republic of Kazakhstan", as part of the webinar, the topic of "Questions related to the provision of public services" was discussed.



SECTION 3.
ORGANIZATIONAL
DEVELOPMENT
OF THE NATIONAL BANK

3.1 ORGANIZATIONAL STRUCTURE AND STAFFING

The National Bank is making an ongoing effort to improve its performance based on the strategic priorities of the National Bank and international practice, including by establishing an optimal and dynamic organizational structure of the National Bank and creating conditions for the human capital development as a determinant for successful development of the National Bank and attainment of its strategic goals and objectives.

At the end of 2022, the National Bank's structure included 23 business units in the head office (21 departments and 2 stand-alone divisions), Permanent Representative Office of the National Bank in the city of Almaty, 21 branches and 3 republican state-owned enterprises under its jurisdiction (Table 3.1.1).

Table 3.1.1 Staff size of the National Bank

1	Staff size at end period			
	Staffing table, number of individuals		Staff listing, number of individuals	
	2021	2022	2021	2022
Head office	838	832	749	768
Representative office	48	54	47	52
Branches	1,192	1,275	1,206	1,238
Sub-total:	2,078	2,161	2,002	2,058
National Bank's organizations (RSOes)	912	964	879	878
Grand total at the National Bank:	2,990	3,125	2,881	2,936

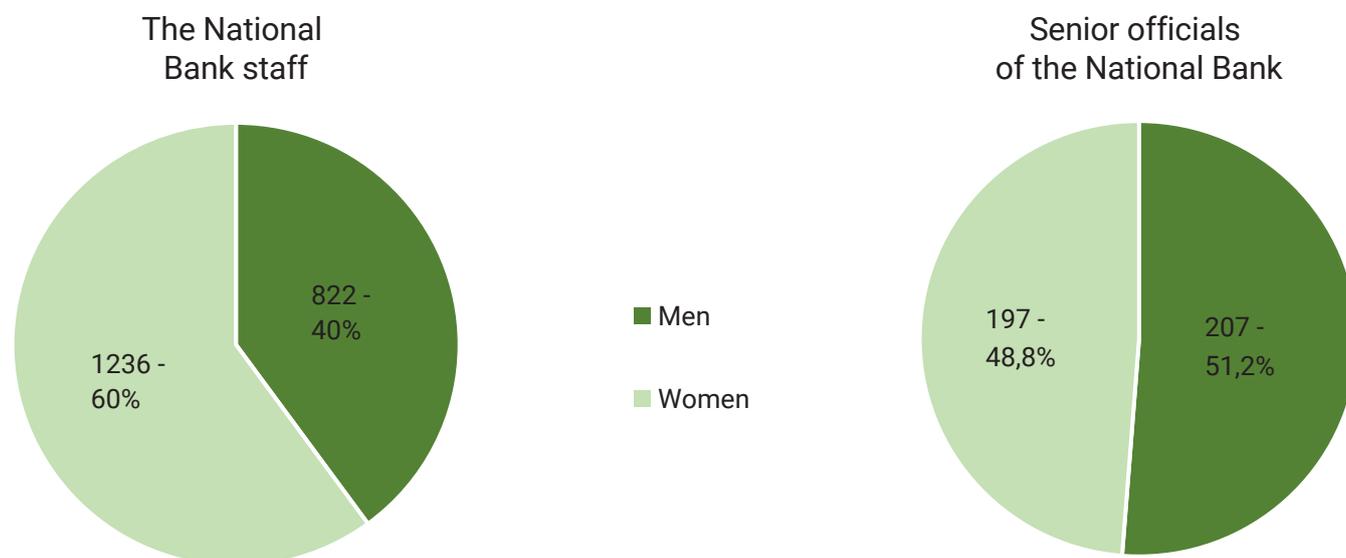
The number of women among the National Bank staff was 1,236 individuals (60%), including 473 individuals (62%) in the head office, and 730 individuals (59%) in the branches.

The average age of the National Bank staff in the head office was 38 years old, and in the branches 43 years old.

The gender distribution among the managerial staff was as follows: the number of female executives was 197 individuals (48.8%), including 84 individuals (43.5%) in the head office, and 104 individuals (53.3%) in the branches.

During 2022, the rate of the staff turnover at the National Bank was as follows: in the head office – 10.9%, and in the branches – 7.4%.

Figure 3.1.1 Gender composition of the National Bank staff



With an aim to build the employee pool, in 2022 the selection of the highly qualified staff for employee positions of the National Bank was conducted. Based on the selection, 9 graduates from the master's school with the autonomous organization of education (AOE) "Nazarbayev University" and 11 master students from the Narkhoz (National Economy) University who have undergone training under the National Bank's grant as well as 25 candidates with foreign education were employed.

Staff Training Programs for the Republic of Kazakhstan, Personnel Training and Development

During 2022, the National Bank made a comprehensive effort to train professional staff for the National Bank and other government authorities and financial organizations of the Republic of Kazakhstan.

The National Bank coordinates the following education projects:

- within the framework of cooperation with the AOE "Nazarbayev University", an agreement on training under the MSc in Finance program was concluded and 20 education grants were provided; three employees of the National Bank were sent to undergo training under the Executive MBA programme;
- 22 grants were allocated as part of cooperation with the "Narkhoz University" NJSC for training under

such programs as "Financial Analyst", Financial Risk Management", "Macroanalytics and Forecasting", "Actuary"; based on academic performance, 20 master students were transferred to the second academic year of 2021 – 2023 years of training;

- as part of cooperation with the "Astana IT University" LLP, 11 employees of the National Bank were sent to study under the "Financial Technology and Digital Business Transformation" MBA program.

The National Bank entered into the Memorandum with the "Kazakh-British Technical University" JSC and is engaged in development of joint programs on such focal areas as "Financial technologies", "Macrofinance and the data science", "Financial risk management and the data science".

The National Bank maintains a professional level of its human capital to efficiently attain its strategic goals and objectives as the country's central bank:

- in 2022, 2 614 employees of the head-office and branches of the National Bank had undergone training (including distance learning), of which: 606 – at the National Bank premises; 896 – in training centers of Kazakhstan; 1 112 – abroad;
- the system of distance learning was implemented: five e-learning courses on soft skills and digital skills; four majors courses on key areas of the National Bank operations were brought up-to-date.

3.2 COMPLIANCE CONTROL

In 2022, the operations of some of the National Bank business units were analyzed in order to detect corruption violations and to examine the reasons and conditions that were conducive to such violations. Based on the internal analysis of activities of the National Bank business units, no corruption risks were identified.

Preventive work on creating awareness among the National Bank staff about the necessity of compliance with the requirements of anti-corruption legislation and anti-corruption standards of the National Bank was carried out on an ongoing basis, including

a training webinar on compliance risks for the National Bank regional branches. There was a regular mailshot with a reminder of conditions for combating corruption and adhering to ethical standards.

With an aim of an ongoing monitoring of corruption violations, the functioning of anticorruption@nationalbank.kz e-mail and hotline services for receiving voice messages about corruption violations committed by the National Bank employees and the conflict of interest present in their activities, was ensured. There were no complaints about corruption actions



or violations by the National Bank employees of ethical standards received via the abovementioned channels.

As part of control over the actions (inaction) of employees of the National Bank system, in 2022, five complaints were considered related to the supervision and control of the National Bank over the activities of authorized organizations that have the right to organize exchange operations with foreign currency. Violation of the rights and infringement of applicants' interests have not been detected.

The National Bank, in an effort to improve the mechanisms of combating money laundering and financing of terrorism, made relevant amendments to the policy of anti-money laundering and anti-terrorism financing (twice during the year).

At the end of the year, a training seminar was held for employees of the National Bank branches, where, among other things, the topic of anti-money laundering was discussed.

In accordance with the changes provided for by the legislation on public services and on combating corruption, the Resolution of the Board of Directors of the National Bank of the Republic of Kazakhstan dated August 27, 2022 No. 54 "On Amendments to the Resolution of the Board of Directors of the National Bank of the Republic of Kazakhstan dated July 28, 2017 No. 107 "On Approval of Anti-Corruption Standards of the National Bank of the Republic of Kazakhstan" was passed.

The National Bank, in ensuring an ongoing monitoring and analysis of procurements carried out by the National Bank business units on the procurement portal. During the reporting period, more than 53 procurement transactions totaling over 9 bln tenge were monitored.

Based on the analysis of procurements, in order to minimize compliance risks, proposals were developed to improve the rules and procurement processes through the National Bank's procurement portal.

3.3 OPERATIONAL RISK MANAGEMENT

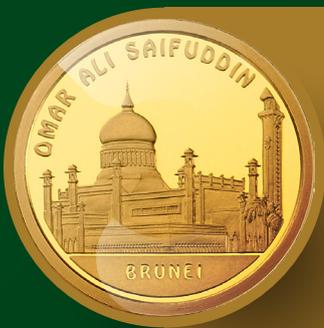
The operational risk management at the National Bank is based on an adapted model of three lines of defense and the principles of the Committee of Sponsoring Organizations of the Treadway Commission²¹, which involves a continuous review of approaches, their appropriate mechanism, which predetermines the effective management of operational risks. The enhanced role of the second line of defense, which analyzes the existing processes of the National Bank and implements the elaborated recommendations regarding risk minimization, is an essential element of the model adjustment to the National Bank's activities. As part of the risk management, the risks inherent to the National Bank's processes were identified and analyzed, whereby relevant measures were taken that allowed minimizing risks in certain processes.

With an aim to ensure business continuity of the National Bank, in 2022, the National Bank's Disaster Recovery Plan was updated and the plans that provide for business continuity of the National Bank's business processes were revised.

²¹ The Committee of Sponsoring Organizations of the Treadway Commission



APPLICATIONS



APPENDIX 1 TO SECTION 1.2.4

Table 1.2.4.1 Balance of Payments of the Republic of Kazakhstan: Analytical Presentation (mln US dollars)

	2021	2022	2022			
			Quarter I	Quarter II	Quarter III	Quarter IV
Current account	-2,558.7	8,527.6	4,850.0	1,727.1	1,311.0	639.5
Trade balance	24,229.0	36,371.5	12,259.5	8,989.3	7,971.9	7,150.9
Exports	65,790.6	86,129.3	21,916.4	21,104.7	21,221.5	21,886.7
Imports	41,561.7	49,757.9	9,656.9	12,115.4	13,249.6	14,735.9
Services	-2,020.2	-1,493.1	-433.8	-316.6	-170.5	-572.2
Exports	5,886.9	7,922.7	1,471.9	1,864.6	2,310.2	2,276.0
Imports	7,907.1	9,415.8	1,905.7	2,181.2	2,480.7	2,848.2
Primary income	-24,158.3	-25,514.1	-6,852.5	-6,735.0	-6,261.0	-5,665.5
Compensation of employees, net	-1,130.6	-1,276.7	-227.1	-305.1	-323.8	-420.7
Investment income, net	-23,162.7	-24,372.6	-6,659.2	-6,463.7	-5,971.1	-5,278.6
Income payable	2,085.9	3,436.4	474.8	807.9	1,243.9	909.8
Income on direct investments	611.8	1,410.4	68.8	339.4	741.4	260.7
Income on portfolio investments	1,188.3	1,464.4	320.4	368.6	342.9	432.5
Income on other investments	285.7	561.6	85.7	99.8	159.5	216.5
<i>of which Interest on reserves and assets of the National Fund</i>	933.5	1,156.6	253.1	292.1	280.7	330.6
Income payable	25,248.6	27,808.9	7,134.0	7,271.6	7,215.0	6,188.4
Income on direct investments	22,814.8	25,285.4	6,580.9	6,669.8	6,508.3	5,526.4
Income on portfolio investments	1,095.8	1,073.4	236.6	267.9	319.6	249.3
Income on other investments	1,338.0	1,450.1	316.5	333.9	387.1	412.7
Other primary income (net)	135.0	135.1	33.8	33.8	33.8	33.8
Secondary income	-609.2	-836.7	-123.2	-210.6	-229.3	-273.6
Capital account balance	232.5	242.6	30.2	189.9	13.8	8.6
Financial account (excluding reserve assets)	-2,452.7	6,191.5	4,472.2	2,774.2	-448.9	-606.0
Direct investments	-1,895.6	-7,916.5	-1,513.5	-582.6	-6,024.5	204.1
Net acquisition of financial assets	2,653.3	-3,009.0	391.2	1,117.5	-1,349.3	-3,168.4
Net incurrence of liabilities	4,549.0	4,907.5	1,904.7	1,700.1	4,675.2	-3,372.5
Portfolio investments	-3,573.0	13,400.1	191.7	3,818.6	4,227.8	5,162.0
Net acquisition of financial assets	-1,200.0	10,163.8	-253.3	3,064.3	3,876.1	3,476.7
RK Central Bank and general government	-5,826.6	7,144.7	-79.5	3,058.5	3,425.2	740.6
Banks	1,305.3	534.3	-15.2	55.5	140.5	353.5
Other sectors	3,321.2	2,484.8	-158.5	-49.7	310.3	2,382.7
Net incurrence of liabilities	2,372.9	-3,236.3	-445.0	-754.3	-351.8	-1,685.3
RK Central Bank and general government	1,735.4	-1,095.9	-407.9	-183.7	-513.2	8.9
Banks	311.8	-1,007.7	44.7	-354.8	-24.0	-673.6
Other sectors	325.8	-1,132.7	-81.8	-215.7	185.4	-1,020.6
Financial derivatives (net)	105.9	258.9	402.8	-121.3	-130.1	107.5
Other investments	2,910.0	449.0	5,391.2	-340.5	1,477.9	-6,079.6

	2021	2022	2022			
			Quarter I	Quarter II	Quarter III	Quarter IV
Other equity, net	-12.4	16.3	-1.9	19.5	1.2	-2.6
Medium- and long-term debt instruments	-2,887.2	-837.5	-1,705.7	-215.0	2,182.7	-1,099.6
Net acquisition of financial assets	-212.6	1,063.3	218.7	439.4	230.3	174.9
RK Central Bank and general government	-6.0	-1.2	-0.5	0.0	-0.5	-0.2
Banks	124.9	222.8	16.6	71.3	-3.4	138.3
Other sectors	-331.6	841.7	202.6	368.2	234.1	36.8
Net incurrence of liabilities	2,674.5	1,900.8	1,924.4	654.4	-1,952.5	1,274.5
RK Central Bank and general government	2,198.4	69.1	-108.1	-77.6	-83.0	337.8
Banks	-166.9	707.0	1,946.4	90.8	-2,090.9	760.6
Other sectors	643.1	1,124.8	86.1	641.3	221.4	176.0
Short-term debt instruments	5,809.5	1,270.3	7,098.8	-145.0	-706.1	-4,977.5
Net acquisition of financial assets	8,863.2	6,990.6	6,546.7	1,801.7	1,423.3	-2,781.1
Net incurrence of liabilities	3,053.6	5,720.3	-552.2	1,946.7	2,129.3	2,196.4
Net errors and omissions	-2,490.6	2,088.9	-896.0	282.8	1,587.5	1,114.6
Overall balance	2,364.2	-4,667.5	488.0	574.5	-3,361.2	-2,368.8
Financing	-2,364.2	4,667.5	-488.0	-574.5	3,361.2	2,368.8
Reserve assets	-2,364.2	4,667.5	-488.0	-574.5	3,361.2	2,368.8
IMF credits	0.0	0.0				
Exceptional financing	0.0	0.0				



APPENDIX 2 TO SECTION 1.2.4

Table 1.2.4.2 External Debt: Standard Presentation (mln US dollars)

	As at January 1, 2021	As at January 1, 2022	As at April 1, 2022	As at July 1, 2022	As at October 1, 2022	As at January 1, 2023
External debt	163,980.1	164,115.9	159,845.7	164,142.7	160,568.8	160,491.6
Short-term	9,481.0	12,009.6	11,720.5	14,381.2	15,753.9	16,601.2
Long-term	154,499.1	152,106.3	148,125.2	149,761.6	144,814.8	143,890.4
General government	13,885.0	15,859.3	14,153.2	14,283.6	12,939.2	13,390.1
Short-term	24.6	24.3	30.4	35.9	35.2	55.5
Currency and deposits	0.0	0.0	0.0	0.0	0.0	0.0
Debt securities ¹	0.0	0.0	0.0	0.0	0.0	0.0
Loans	0.0	0.0	0.0	0.0	0.0	0.0
Trade credits and advances	24.6	24.3	30.3	35.9	35.0	55.2
Other liabilities	0.0	0.0	0.1	0.1	0.2	0.2
Long-term	13,860.4	15,835.0	14,122.8	14,247.7	12,904.0	13,334.6
Special drawing rights	0.0	0.0	0.0	0.0	0.0	0.0
Currency and deposits	0.0	0.0	0.0	0.0	0.0	0.0
Debt securities ¹	7,202.7	8,748.7	7,187.7	7,527.4	6,417.3	6,336.2
Loans	6,657.8	7,086.3	6,935.1	6,720.2	6,486.7	6,998.4
Trade credits and advances	0.0	0.0	0.0	0.0	0.0	0.0
Other liabilities ²	0.0	0.0	0.0	0.0	0.0	0.0
Central bank	1,329.4	2,535.8	2,519.3	2,214.3	2,043.6	2,171.8
Short-term	828.0	494.6	501.9	270.4	182.8	230.9
Currency and deposits	2.6	7.9	255.1	11.3	11.1	12.8
Debt securities ¹	821.2	483.3	242.9	254.4	166.5	214.4
Loans	0.0	0.0	0.0	0.0	0.0	0.0
Trade credits and advances	4.2	3.4	3.9	4.7	5.1	3.7
Other liabilities	0.0	0.0	0.0	0.0	0.0	0.0
Long-term	501.3	2,041.1	2,017.4	1,943.9	1,860.8	1,940.9
Special drawing rights	500.4	2,040.2	2,016.4	1,942.9	1,859.8	1,939.9
Currency and deposits	0.0	0.0	0.0	0.0	0.0	0.0
Debt securities ¹	0.0	0.0	0.0	0.0	0.0	0.0
Loans	0.0	0.0	0.0	0.0	0.0	0.0
Trade credits and advances	0.0	0.0	0.0	0.0	0.0	0.0
Other liabilities ²	1.0	1.0	1.0	1.0	1.0	1.0
Banks	4,837.4	5,493.8	8,225.3	9,675.6	8,006.0	9,674.6
Short-term	1,312.4	1,837.7	2,659.5	3,409.1	4,199.1	5,658.2
Currency and deposits	1,149.4	1,612.3	1,366.2	1,991.1	3,348.8	4,456.5
Debt securities ¹	0.0	0.0	0.0	0.0	0.0	0.0
Loans	23.9	9.3	1,022.1	987.3	555.8	797.6
Trade credits and advances	0.0	0.0	0.0	0.0	0.0	0.0
Other liabilities	139.1	216.2	271.2	430.6	294.4	404.1
Long-term	3,525.0	3,656.1	5,565.8	6,266.5	3,806.9	4,016.4
Currency and deposits	244.0	226.2	396.7	459.1	748.9	1,462.7
Debt securities ¹	1,568.2	1,888.8	1,758.1	1,403.2	1,360.9	751.8
Loans	1,712.8	1,541.2	3,411.1	4,404.2	1,697.1	1,801.9
Trade credits and advances	0.0	0.0	0.0	0.0	0.0	0.0

	As at January 1, 2021	As at January 1, 2022	As at April 1, 2022	As at July 1, 2022	As at October 1, 2022	As at January 1, 2023
Other liabilities ²	0.0	0.0	0.0	0.0	0.0	0.0
Other sectors³	41,388.0	44,023.1	40,527.4	43,594.4	43,753.7	42,102.3
Short-term	7,316.0	9,653.0	8,528.7	10,665.8	11,336.8	10,656.6
Currency and deposits	0.0	0.0	0.0	0.0	0.0	0.0
Debt securities ¹	0.0	0.0	0.0	0.0	0.0	0.0
Loans	465.2	927.9	868.0	1,069.2	1,591.9	1,224.4
Trade credits and advances	6,787.7	7,616.8	7,533.7	8,774.2	8,871.9	8,758.7
Other liabilities	63.0	1,108.3	127.0	822.4	873.0	673.6
Long-term	34,072.1	34,370.1	31,998.7	32,928.5	32,416.9	31,445.6
Currency and deposits	0.0	0.0	0.0	0.0	0.0	0.0
Debt securities ¹	10,540.2	10,724.1	8,546.8	7,708.9	7,404.2	6,851.1
Loans	21,572.2	21,289.3	21,001.9	23,176.9	22,961.5	22,698.6
Trade credits and advances	1,689.9	1,894.0	1,959.8	1,495.5	1,542.4	1,465.4
Other liabilities ²	269.8	462.7	490.1	547.3	508.8	430.5
Other financial corporations	1,247.2	2,450.2	1,492.4	2,134.7	2,820.1	1,830.2
Short-term	38.2	1,135.7	163.0	617.7	1,341.9	404.0
Long-term	1,209.0	1,314.5	1,329.4	1,516.9	1,478.2	1,426.2
Non-financial corporations, households and nonprofit institutions serving households	40,140.8	41,572.9	39,034.9	41,459.7	40,933.7	40,272.0
Short-term	7,277.8	8,517.2	8,365.7	10,048.1	9,995.0	10,252.6
Long-term	32,863.0	33,055.7	30,669.2	31,411.6	30,938.7	30,019.4
Direct investments: intercompany lending	102,540.2	96,203.9	94,420.5	94,374.9	93,826.2	93,152.8
Debt liabilities of direct investment enterprises to foreign direct investors	82,432.9	79,259.1	77,948.9	77,953.7	77,788.9	77,558.1
Debt liabilities of direct investors to foreign direct investment enterprises (reverse investment)	10,014.6	9,275.0	9,255.8	9,789.5	9,709.5	9,884.6
Debt liabilities between fellow enterprises	10,092.7	7,669.8	7,215.7	6,631.7	6,327.8	5,710.1

¹ Debt securities are recorded at market value (as appropriate).

² Including insurance and pension programs, standardized guarantees as well as other long-term liabilities listed in the structure of an international investment position.

³ Other sectors do not include intercompany lending, which goes as a separate item in the external debt structure.



APPENDIX 3 TO SECTION 1.2.4

Table 1.2.4.3 External Debt of the Republic of Kazakhstan: Absolute and Comparative Indicators

Item	2021	I quarter of 2022	II quarter of 2022	III quarter of 2022	IV quarter of 2022	2022
Absolute Indicators (mln US dollars)						
1. External debt (estimate at the end-of-period)	164,115.9	159,845.7	164,142.7	160,568.8	160,491.6	160,491.6
including intercompany lending	96,203.9	94,420.5	94,374.9	93,826.2	93,152.8	93,152.8
2. External debt, excluding intercompany lending (estimate at the end-of-period)	67,912.0	65,425.2	69,767.8	66,742.6	67,338.8	67,338.8
3. Long-term external debt service (including intercompany lending)	31,986.9	8,158.6	10,515.8	10,935.4	12,374.6	41,984.4
4. Long-term external debt service (excluding intercompany lending)	11,720.8	2,790.4	4,319.2	6,254.5	7,189.9	20,554.0
Comparative Indicators						
1. External debt to GDP ratio (% , including intercompany lending)	83.1	78.8	77.9	74.6	72.6	72.6
2. External debt to GDP ratio (% , excluding intercompany lending)	34.4	32.3	33.1	31.0	30.5	30.5
3. External debt to exports of goods and services for 12 months (% , including intercompany lending)	229.0	199.6	193.0	176.8	170.6	170.6
4. External debt to exports of goods and services for 12 months (% , excluding intercompany lending)	94.7	81.7	82.0	73.5	71.6	71.6
5. Payments for long-term external debt extinction and servicing to exports of goods and services for the period (% , including intercompany lending)	44.6	34.9	45.8	46.5	51.2	44.6
6. Payments for long-term external debt extinction and servicing to exports of goods and services for the period (% , excluding intercompany lending)	16.4	11.9	18.8	26.6	29.8	21.9
7. Interest payments to exports of goods and services for the period (%)	7.7	5.3	6.3	7.0	8.2	6.7
8. National Bank's international reserves to short-term external debt (%)	286.3	282.6	222.2	207.2	211.3	211.3
Reference:						
GDP (bln tenge), for the period ²	83,951.6	19,695.6	20,338.7	25,453.5	36,035.2	101,523.0
GDP for 12 months (bln US dollars) ³	197.4	202.7	210.6	215.4	221.0	221.0
Exports of goods and services for the period	71,677.6	23,388.4	22,969.3	23,531.7	24,162.7	94,052.0
Exports of goods and services for 12 months	71,677.6	80,086.0	85,054.9	90,803.9	94,052.0	94,052.0

¹ Data from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan. Data from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, of Kazakhstan.

² Up-to-date information from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan for 2022 published on February 15, 2023.

³ GDP in the US dollars for the calendar year – data of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan. GDP in the US dollars for 12 months for calculation of comparative indicators for the quarter is derived as the amount of quarterly GDP numbers in the US dollars calculated at the corresponding average exchange rate for the quarter.

LIST OF USED ABBREVIATIONS

JSC	– a joint-stock company
bank	– a second-tier bank
bp	– basis point
GDP	– gross domestic product
GSs	– government securities
EAEU	– the Eurasian Economic Union
EBRD	– the European Bank for Reconstruction and Development
Unified Accumulative Pension Fund	– the “Unified Accumulative Pension Fund” JSC
Kazakhstan Deposit Insurance Fund	– the “Kazakhstan Deposit Insurance Fund” JSC
IMF	– the International Monetary Fund
mln	– million
bln	– billion
AIFC	– the “Astana International Financial Center”
National Bank	– the National Bank of the Republic of Kazakhstan
National Fund	– the National Fund of the Republic of Kazakhstan
UAE	– the United Arab Emirates
OPEC+	– A group of countries that do not have membership in OPEC but cooperate with the Organization and among each other in some matters of oil production and exports
pp	– a percentage point
Repo	– Repurchase agreement
SDR	– Special Drawing Rights
FCC	– freely convertible currency
CIS	– The Commonwealth of Independent States
USA	– The United States of America
trln	– trillion
thous.	– thousand
SCO	– the Shanghai Cooperation Organization
FAO	– UN Food and Agriculture Organization
FATF	– Financial Action Task Force
Fed	– Federal Reserve System of the United States of America
DDoS	– Distributed Denial of Service
ERP	– Enterprise resource planning
ESG	– Environmental, Social, Governance
GBI-EM	– Government Bond Index-Emerging Markets
MCC	– Merchant Category Code
SDN-list	– Specially Designated Nationals List
SDMX	– Statistical Data and Metadata exchange
SDMX	– Statistical Data and Metadata exchange (англ.)

