



Quarterly Macroeconomic Report

Q4 2022

**Expert survey results and
market overview**



Important note

We are conducting our eleventh quarterly survey on macroeconomic indicators among leading reputable economists (including economists with experience in central banks) and professors of macroeconomics, representatives of international development institutions, commercial banks, brokerage firms to obtain a balanced and consistent view of the most significant factors for the economy of Kazakhstan.

This survey is dedicated to the forecast of macroeconomic indicators in horizons from 1 to 5 years, including:

- BRENT crude oil price
- USD/KZT, USD/RUB, RUB/KZT exchange rates
- inflation in Kazakhstan
- NBRK base rate

We understand that the fact of disclosing the identity of the experts may affect the quality of the responses. In order to maximize the objectivity of opinions, this survey was conducted confidentially. The names and positions of the respondents were disclosed only if a formal permission was obtained from them.

The quarterly macroeconomic review is a regular publication that provides a snapshot of the macroeconomic situation in Kazakhstan. The survey of respondents was conducted at the end of February 2022. All forecast values, as well as textual material presented in the report for the fourth quarter of 2022, reflect the macroeconomic situation in Kazakhstan and in the world, considering the events that occurred in the period of November - February 2022.



Introduction



Natalya Lim

Partner

Eurasia Advisory Leader

"The difficulty lies not so much in developing new ideas as in escaping from old ones."

John Maynard Keynes

We present to you the tenth issue of the quarterly macroeconomic research for the fourth quarter of 2022. This is an extended issue, where you will find a lot of new information regarding inflation of the food basket, real income of the population, statistics on changes in the USD/KZT, RUB/KZT exchange rates, oil rates and prices. I would like to sincerely thank all our experts who have been regularly sharing their opinions with us over the years. With our work, we would like to provide all readers with an independent, professional and objective view of the real macro-situation in Kazakhstan.

The survey pool of participants is the same - reputable economists, financiers, as well as representatives of the scientific community of Kazakhstan.

Respectfully,
Natalya Lim



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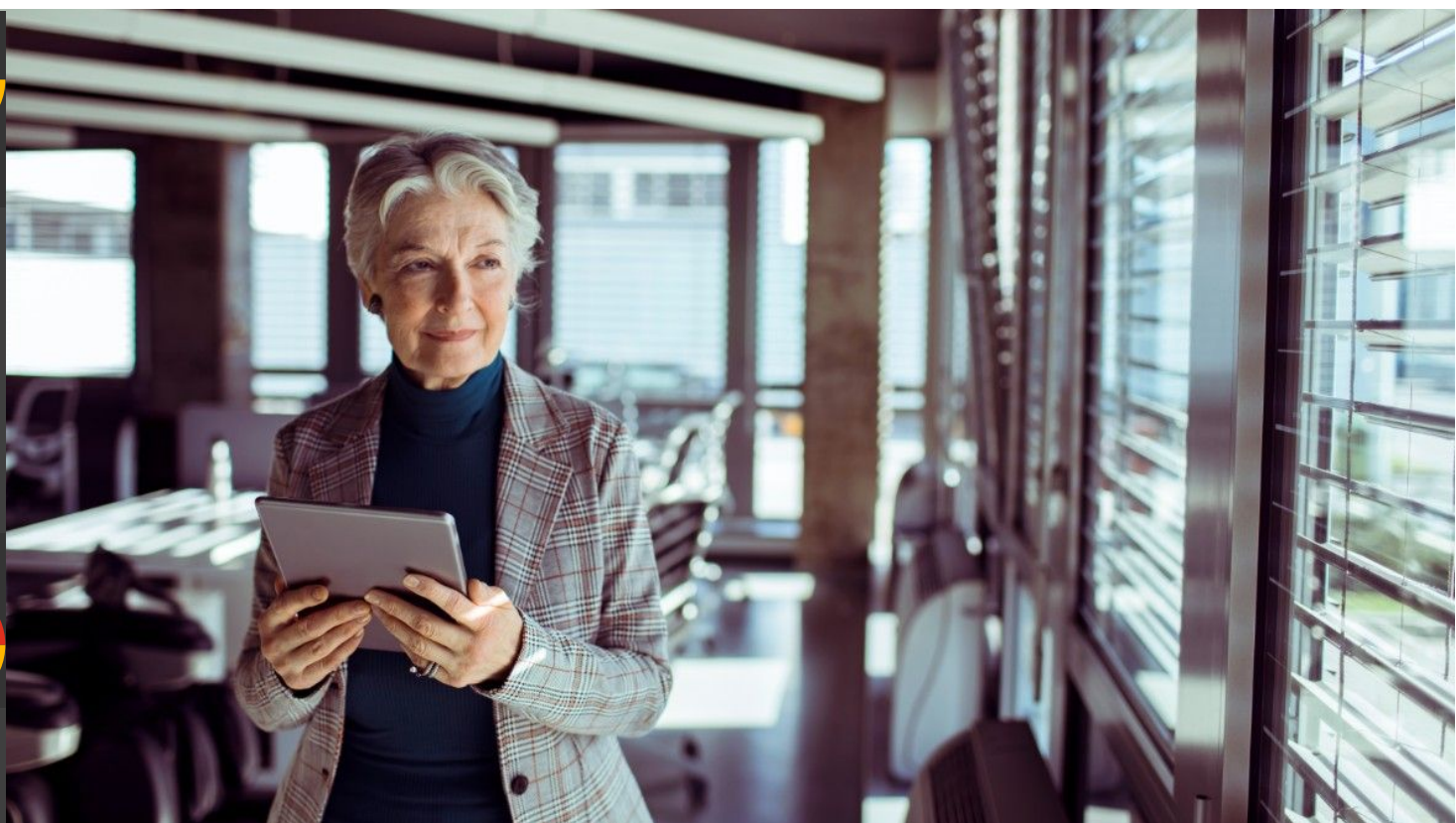


Survey Overview and Objectives

Fourteen experts took part in this survey. Many interviewed respondents gave us detailed comments that formed the basis of the descriptive part of this report.

In order to obtain a comprehensive and balanced picture, we invited experts from various fields. Our respondents include reputable economists, professors of macroeconomics, representatives of international financial institutions, commercial banks, and brokerage firms.

The experts were asked to answer questions regarding the impact of geopolitical, exogenous factors on the economy of Kazakhstan. In addition, respondents were interviewed regarding forecast expectations for the price of BRENT oil, USD/KZT, USD/RUB, RUB/KZT exchange rates, inflation in Kazakhstan and the base rate of the National Bank of the Republic of Kazakhstan in time horizons of one to five years. This horizon was chosen to obtain medium-term projections.



The results of the survey are forecasts for key macroeconomic indicators, which often form the basis of financial and economic models of companies (including commercial banks and investors). These forecasts are often used by economic departments to compare and calibrate the baseline values that are included in their calculations.

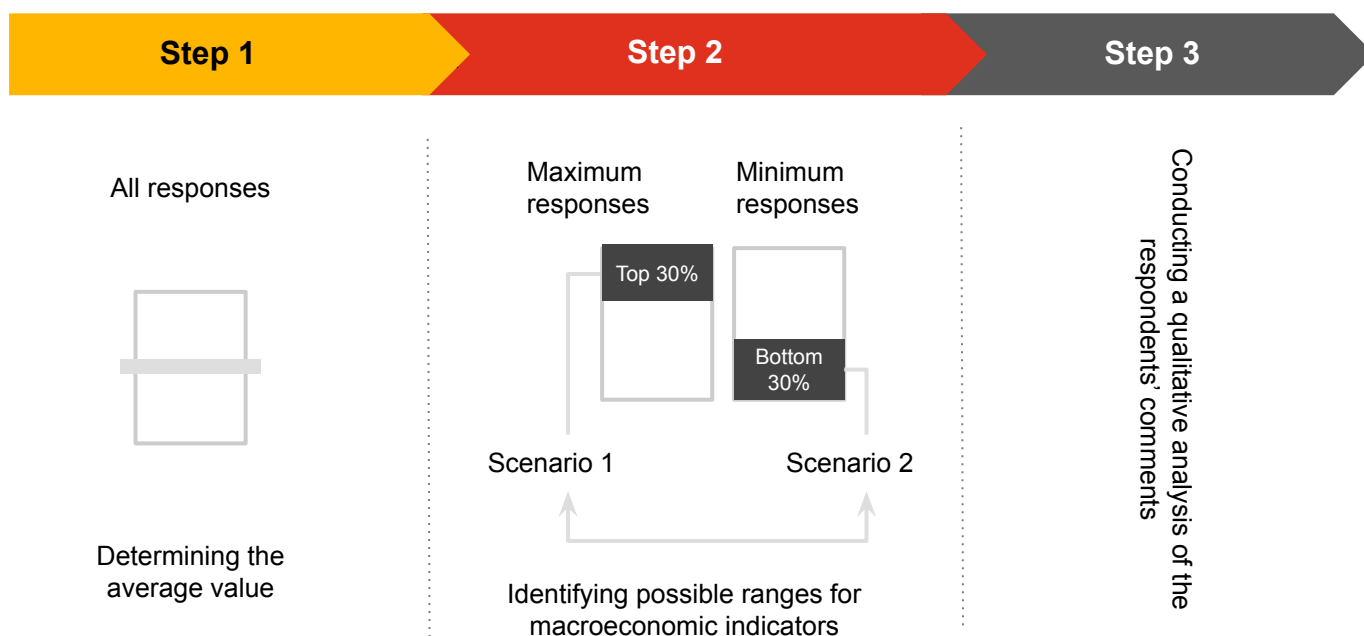
Conducted regularly, such comparisons can improve the quality of the models used and facilitate a more flexible response to dynamic changes in the economic environment.

In our practice, we have encountered situations when calculation models, despite the level of their detailing and elaboration, did not provide businesses with the necessary insights to make decisions that could preserve the company's capital.

With this survey, we hope to provide readers with a structured, systematic, and regularly updated array of data on macroeconomic indicators based on the best expert estimates in the market. The survey of respondents was conducted at the end of February 2022.

Our Approach to Analyzing Survey Results

As we analyzed the respondents' answers, we noticed quite significant differences in opinions on many questions, which is expected in studies where experts represent different fields (economists, traders, scientists, bankers) and, accordingly, have access to different sources of information. Aggregating opinions, covering most of the professional participants in the financial market, as well as scientific experts and leading economists in Kazakhstan, allowed us to predict several scenarios for the development of the economy of Kazakhstan. For these purposes, PwC Kazakhstan asked respondents to provide their views in the range of minimum and maximum possible values for issues where it was relevant (oil prices, exchange rates, inflation), and used several approaches to analyze the results. In addition to the standard averaging of all responses, we also took the top 30% of the maximum responses and the bottom 30% of the minimum responses to identify the most optimistic and most pessimistic scenarios.



Key Findings:

Economy of Kazakhstan

Page 9

Stage of “recovery and growth”

64% of respondents believe that Kazakhstan is at the stage of economic recovery or growth

Oil prices

Page 12

Below \$99 per barrel

50% of respondents expect that the price of Brent crude in the next 12 months will not exceed \$99 per barrel

Exchange Rates

Page 16

Up to 490

58% of respondents expect the USD/KZT rate to be less than 490 in the next 12 months

Inflation (CPI)

Page 23

Less than or equal to 14.5%

58% of respondents expect inflation to be less than or equal to 14.5% in the next 12 months

NBRK Base Rate

Page 29

Less than or equal to 16.75%

100% of respondents expect the NBRK base rate to be less than or equal to 16.75% in the next 12 months



Year Review:

Macroeconomic statistics: comparison of 2021 and 2022

- **GDP:** The change in GDP in Tenge at the end of 2022 was 21.0% compared to 18.8% at the end of 2021
- **Inflation:** The inflation rate in 2022 was 20.3% compared to 8.4% in 2021
- **Base rate:** The value of the base rate at the end of 2022 was fixed at 16.75% (+/- 1 p.p.) compared to 9.75% (+/- 1 p.p.) at the end of 2021
- **Oil price:** Average oil price for 2022 was \$100.93/bbl compared to \$70.86/bbl for 2021 average

	2021	2022	
USD/KZT	426.12	460.48	+8.1%
USD/RUB	73.65	68.57	-7.0%
RUB/KZT	5.79	6.96	+20.2%

Source: Annual weighted average rate based on NBRK, Bank of Russia data

Main Events - Kazakhstan 2022



Geopolitical situation: In January 2022, the largest protests in the history of the country took place at the beginning of this year, subsequently known as the "January events". The total amount of damage* amounted to Tenge 125.3 billion, in particular (which was less than 1% of GDP in 2022): Tenge 95.3 billion - to private business, 30.0 billion - damage to public buildings.

*Tengrinews.kz [with reference to the press service of the National Chamber of Entrepreneurs "Atameken"; First Deputy Prime Minister Roman Sklyar](#)



S&P rating: As of 12 December 2022, the S&P rating agency notes the sovereign credit rating of the Republic of Kazakhstan at the level of "BBB-" with a "Stable" outlook. A strong fiscal position, significant external reserves, favorable conditions on the oil market are factors supporting the credit rating.

*Based on the rating of [S&P Global](#)



People's IPO: In December 2022, subscriptions for KazMunayGas shares were completed as part of an IPO on the exchange of the Astana International Financial Center (AIX) and the Kazakhstan Stock Exchange (KASE). The total amount of applications amounted to Tenge 153.9 billion.

- applications from citizens of Kazakhstan - approximately Tenge 74.6 billion (48.5%);
- applications of Kazakhstani legal entities - approximately Tenge 72.7 billion (47.2%);
- applications of foreign individuals and legal entities - approximately Tenge 6.6 billion (4.3%)

*Center for business information Kapital.kz [with reference to the press service of the national company.](#)



Trade turnover: The volume of sales of goods in Kazakhstan in 2022 increased by 20% and amounted to Tenge 50.8 trillion, compared to 2021, which is significantly higher than in previous periods. At the same time, the volume of the retail e-commerce market* grew by almost 18% compared to the first half of the year and amounted to Tenge 501 billion.

*From the analysis by [PwC Kazakhstan](#)



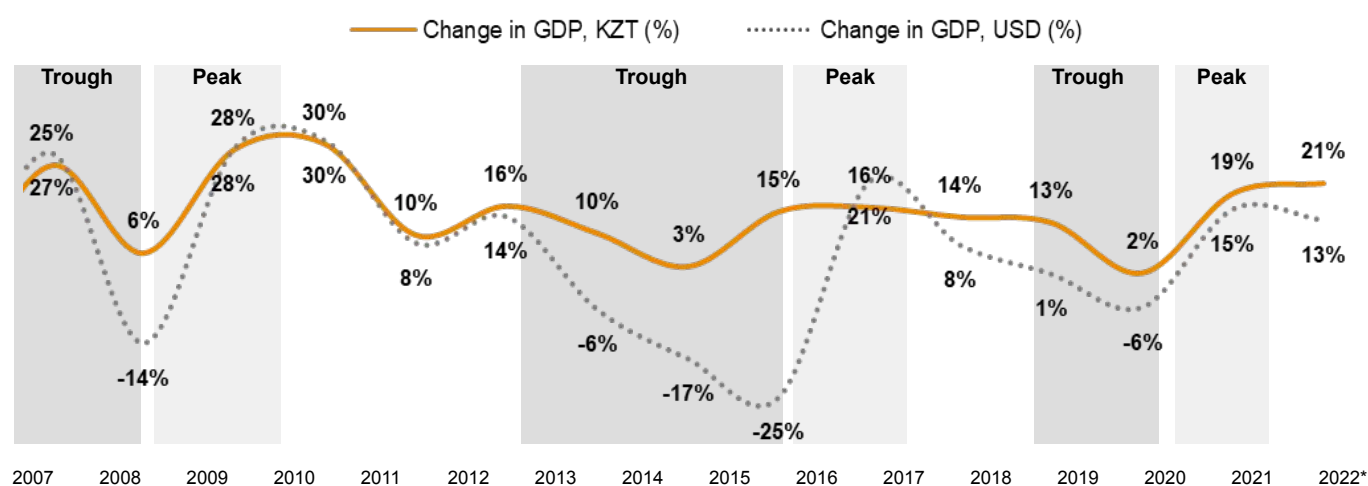
ESG: In 2022, Kazakhstan adopted the concept of investment policy until 2026. The concept contains obligations at the state level to develop and implement ESG principles in the national planning system. Also, according to the ESGI index published in 2022, following the results of 2021, Kazakhstan outperformed all the countries of the EAEU and Central Asia in the implementation of ESG principles and took 51st place.

*According to the rating of [ESGI](#)

Economy and investment climate of Kazakhstan

At what stage of the economic cycle, in your opinion, is the economy of Kazakhstan currently?

Chart 1. Changes in GDP by production method in KZT and USD (%)

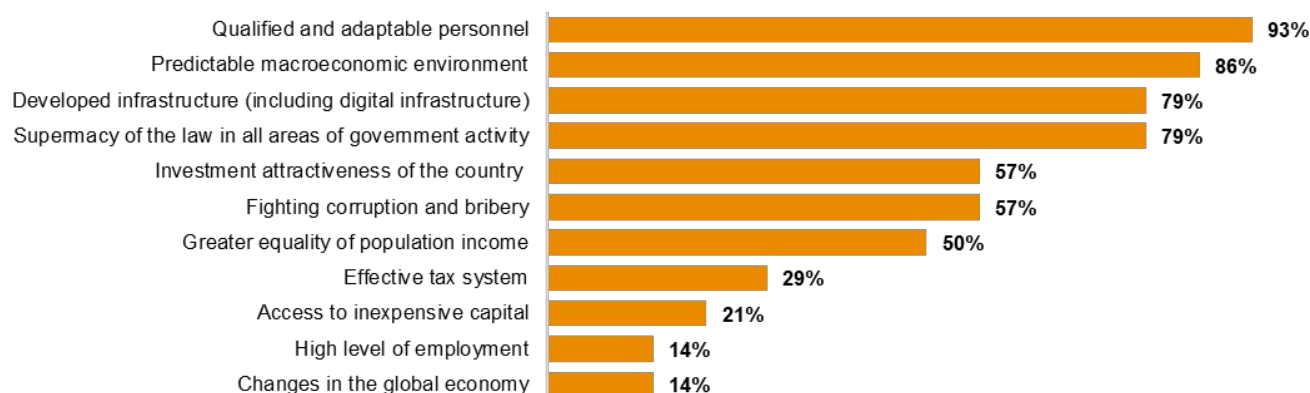


Source: PwC Kazakhstan Macroeconomic Survey, Q4 2022. Based on data from stat.gov.kz. 2022* - current data

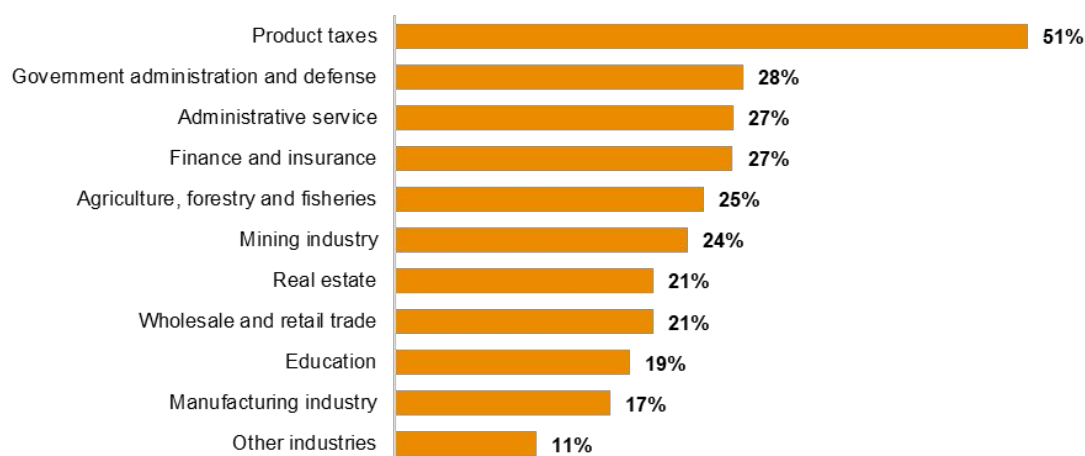
Over the past few years, the world economy has faced a huge number of shock events that have not left without consequences for both the global economy and the economies of individual countries, in particular Kazakhstan. While the long-term consequences of the COVID-19 pandemic are still affecting the whole world, the military conflict between Russia and Ukraine that began in early 2022 provoked a new crisis. Food and energy markets have been disrupted, and food insecurity and malnutrition have worsened in many developing countries. High inflation reduces the real income of the population, provoking a crisis in the cost of living around the world. At the same time, the climate crisis is taking a heavy toll on many countries: extreme heat, forest fires, floods, hurricanes, earthquakes and other natural disasters are causing enormous humanitarian and economic damage.

All these factors are likely to continue to influence the global economy in 2023. Despite all the shocks, most experts believe that the economy of Kazakhstan is in the recovery phase or growing (64% of respondents) and only 14% believe that the economy is in recession (decline). Most of the experts identified the factors: “qualified and adaptive staff” and “predictable macroeconomic environment” as the most important factors influencing changes in the economy of Kazakhstan. In addition to the factors shown in chart 2 below, experts also note that commodity prices and imported inflation will also affect the country's economy.

Chart 2. Factors influencing changes in the economy of Kazakhstan (%)



Source: PwC Kazakhstan Macroeconomic Survey, Q4 2022

Chart 3. Change in Kazakhstan's GDP by sectors of the economy, % (12M2022/12M2021)

Source: PwC Kazakhstan Macroeconomic Survey, Q4 2022. Based on data from stat.gov.kz

Throughout 2022, the world experienced persistently high inflation, which provoked aggressive monetary tightening in many developed and developing countries. Rising interest rates and declining purchasing power have dampened consumer confidence and investor sentiment, further dampening near-term growth prospects for the global economy.

The war in Ukraine has a strong impact on the short-term economic outlook for Europe and the Commonwealth of Independent States (CIS). Some CIS countries in 2022 felt the effect of intra-regional relocation of enterprises and citizens, capital inflow, as well as faster-than-expected GDP growth. Kazakhstan was no exception and also experienced a large influx of people arriving from other countries. It is not yet clear whether these movements are temporary or more permanent. Host countries benefit from short-term growth in consumption, but the medium-term impact is associated with greater uncertainty. At the moment, it is not clear whether these movements will lead to a large-scale increase in the number of new enterprises and sustainable economic growth.

Among the sectors that will have the strongest impact on GDP growth in 2022, according to respondents, still remain: mining - 37%, metallurgy, metalworking, engineering - 29%, transport and warehousing - 20%.

At a government meeting, Minister of National Economy A. Kuantyrov noted that, despite external negative factors, in 2022, the economy of Kazakhstan achieved steady growth at the level of 3.1%. It was also noted that positive growth rates were recorded in the construction, agriculture, information and communications, trade, transport and warehousing, and manufacturing sectors.

"Kazakhstan is a raw material producing country, unfortunately, the development of production potential is rather weak in view of the economic benefits of exports," notes Marzhan Melanich

An analysis of data on imports and exports of RK shows that total exports increased by 40%, while imports increased by only 21%. The main drivers of export growth in 2022 were oil and metals. Thus, revenues from oil sales by 2021 increased by 51% to \$46.9 billion (56% of total exports), copper - by 15% to \$3.7 billion, ferroalloys - by 51% to \$3.4 billion. USA, uranium - by 95% to \$3.4 billion, copper ores - by 51% to \$2.4 billion. The growth in imports was associated with an increase in the import of engineering goods by 11% to \$13.2 billion, vehicles - by 44% to \$6.5 billion, food industry - by 19% to \$4.4 billion, chemical industry - by 27 % to \$4.1 billion, etc.

According to official data, the trade surplus was at \$34.3 billion, which is 82% better than in 2021 and 4 times more than in 2020*.

* Based on data from stat.gov.kz. Foreign trade turnover of RK.

Dialogue with experts

What are the main factors, in your opinion, that had the most significant impact on the economy of Kazakhstan in 2022?

“

War-induced reallocations, changes in terms of trade, directions of demand.

- Sabit Khakimzhanov

“

The war between the Russian Federation and Ukraine and the ongoing bear market.

- Olzhas Dzhunusov

“

The oil price and the war in Ukraine.

- Almas Chukin
Partner, Visor Kazakhstan

“

Prices for exported raw materials.

- “Insurance company “Jusan Garant” JSC

“

There are two such factors: the high oil price and the transit export of goods to Russia. Both were expected, but such a scale was difficult to foresee. Both are connected with the war unleashed by Russia. Everything that is caused by a war is difficult to predict, so we will be in a fever, and not always for the better.

- Kairat Mynbayev
Professor, KBTU

“

The military conflict in Ukraine, followed by many factors that affected the economy of Kazakhstan, both positively and negatively. Rising energy prices, political pressure from Russia, including through problems with the CPC, rising consumer prices, disruption of supply chains, shortages of some goods due to parallel imports to Russia, increase in the base rate, influx of Russians to Kazakhstan, sharp rise in the value of the rouble against the Tenge.

- Anonymous

“

The war in the region, demand for raw materials, increased risks of transit along the Northern line (through the Russian Federation and Belarus).

- Anonymous

“

Oil and gas prices, which became the main driver of economic growth in 2022.

- Anonymous

“

Anti-Russian sanctions and geopolitics.

- Anonymous



II - BRENT oil price forecasts

What price in US dollars per barrel of BRENT crude oil, in your opinion, can be formed in the forecast periods being considered?

Chart 4. Forecast oil price in USD per barrel

■ Q3 - Median of minimum values ■ Q3 - Median of maximum values
■ Q4 - Median of minimum values ■ Q4 - Median of maximum values

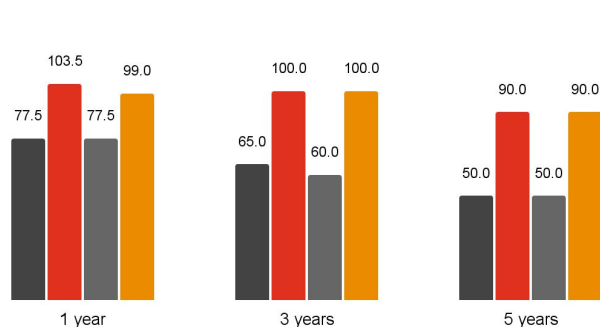
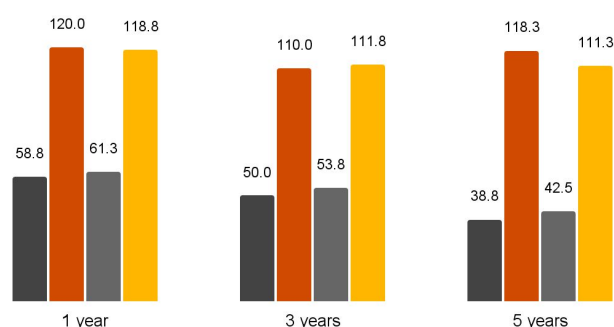


Chart 5. Scope of oil price forecasts in USD per barrel

■ Q3 - Lower 30% of minimum values ■ Q3 - Upper 30% of maximum values
■ Q4 - Lower 30% of minimum values ■ Q4 - Upper 30% of maximum values



Source: PwC Kazakhstan Macroeconomic Survey, Q4 2022

Oil prices in the last quarter showed multidirectional dynamics with less pronounced volatility compared to the first half of the year. Having survived geopolitical turbulence, the oil price continued the downward trend that formed in the previous quarter amid global uncertainty with fuel demand. The compound rate of decline in average monthly Brent crude prices for the fourth quarter was 3.7%, falling from \$90.7/bbl in September to \$81.3/bbl in December 2022. In January-February, prices regained some of their decline on optimism about the recovery of demand in China, and by the end of February, the price of Brent crude closed at \$83.89/bbl.

Despite less volatility in the last quarter, oil prices continue to vary from month to month (+3% in October, -3% in November, -10% in December and +3% in January-February). Among the pressure factors were pessimistic sentiment about the risks of a global recession, provoked by economic statistics and data on the increase in fuel inventories in the USA, which indicated problems in demand, as well as immediate signals from the US Federal Reserve System (FRS) to maintain the momentum of raising the interest rates.

On the other hand, prices were mainly supported by: expectations of an increase in demand in the PRC after the removal of quarantine restrictions (restrained by news about the number of new cases of infection), fears of a decrease in supply in the market due to a reduction in Russian production after the introduction of price ceilings, optimism about the slowdown of the pace of inflation in the USA in October and December, which could soften the FRS's hawkish rhetoric.

Respondents' forecasts for the Q4 2022 survey have seen slight downward changes compared to the previous survey, which correlates with subdued trends observed in the markets. At the same time, the forecasts have a more pronounced downward trend as the forecast horizons increase. In a one-year perspective, the median of the minimum forecast values remained at the level of \$77.5/bbl, the decrease in the upper limit was insignificant, falling from \$103.5 to \$99/bbl. In the perspective of three years, the forecast median of the minimum values decreased by 8%, and the maximum value remained at the level of \$100. In a five-year perspective, the respondents did not change their expectations for the oil price corridor: the median of the minimum border remained at the level of \$50/bbl and the maximum at the level of \$90. According to the interviewed experts, the military conflict in Ukraine will also continue to have the greatest impact on oil prices in the horizon of one year (30%), followed by the removal of COVID restrictions in China (16%) and a possible change in OPEC+ production quotas (14%).

According to EIA*, global oil demand in the fourth quarter decreased by 0.7 million b/d compared to the previous quarter and amounted to 99.72 million b/d (0.38 million b/d more than in the fourth quarter of 2021). The decrease was due to the seasonal decline in fuel consumption in OECD countries and their weak macroeconomic environment. The projected transition of production processes in Europe from more expensive gas to oil, which was supposed to support demand, turned out to be lower than expected levels amid favourable weather conditions**.

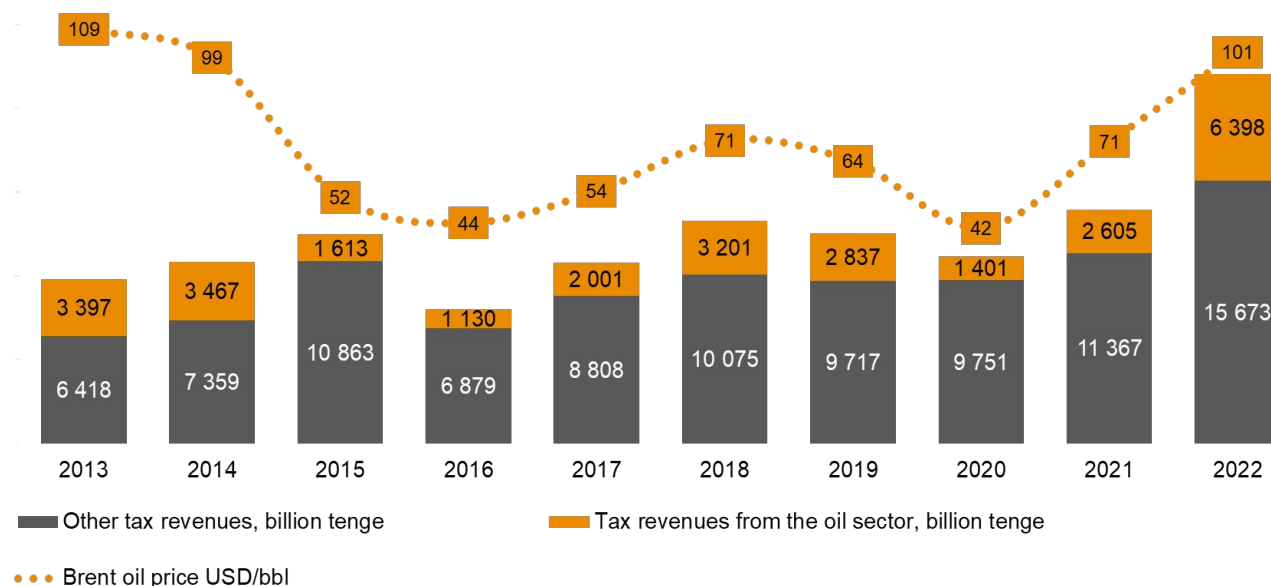
All these factors led to a significant excess of the balance of supply and demand in the oil market, which amounted to 1.6 million b/d. The reduction of the production ceiling by OPEC+ by 2 million b/d did not have a significant effect on supply reduction, since most members were already producing well below their targets. Also, supply pressure was exerted by record production volumes in the US, Canada, Brazil and Guyana, and unfulfilled market expectations for a reduction in production volumes in Russia after the imposition of an embargo and oil price ceilings by the EU.

Despite the fact that by the end of the year, oil prices returned to the levels before the military conflict, during the year they experienced a cycle of high volatility, second only to the level of 2008 volatility. In March last year, the price of Brent crude oil exceeded \$130 per barrel, which is a record figure outside the year of the global financial crisis (the maximum value in 2008 was \$147 per barrel). Thus, the average annual price of Brent crude oil increased by 42% compared to the previous year and amounted to \$100.93 per barrel.

Favourable fuel prices significantly contributed to the growth of budget revenues, which grew by 58% from Tenge 14 billion in 2021 to Tenge 22 billion in 2022, with 47% of the total increase in budget revenues coming from direct oil revenues. At the same time, the volume of tax revenues from the oil sector itself increased by 2.5 times (from Tenge 2.6 billion in 2021 to Tenge 6.4 billion in 2022), increasing its share in the total volume of tax revenues of the republic from 20% in 2021 to 30% in 2022.

Chart 6.

Tax revenues to the Consolidated Budget of RK and the price of Brent crude oil (CO1 Comdty)

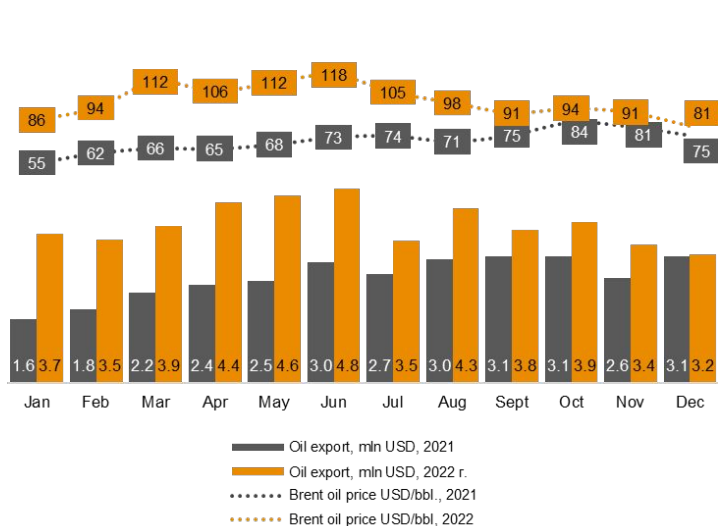


Source: Based on data from the Ministry of Finance of RK and Bloomberg

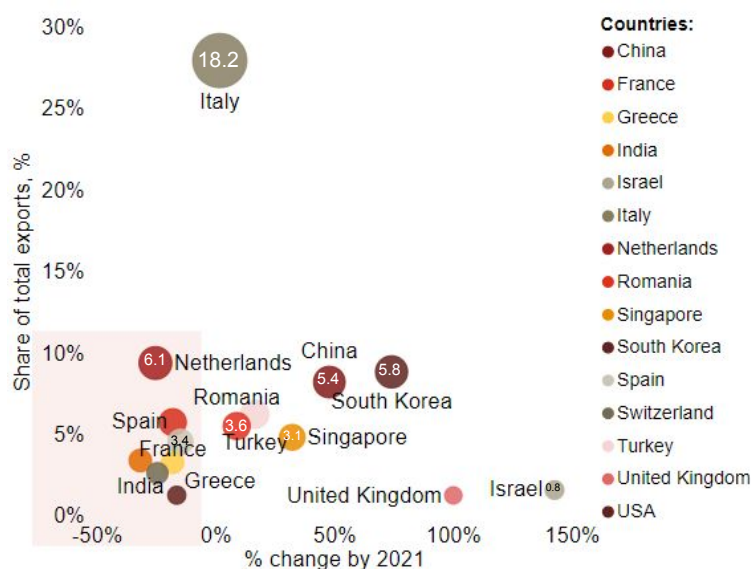
*U.S. Energy Information Administration's February Report (EIA)

**December and January reports of the International Energy Agency on the oil market

The increase in oil prices was the main driver of the growth of Kazakhstan's trade balance surplus, which amounted to \$34.3 billion, which is 82% higher than in the previous year: 66% of the total increase in exports is accounted for by an increase in oil exports with an actual decrease in its physical volumes (65.2 million tons in 2022 and 65.7 million tons in 2021). At the same time, the share of oil shipments is 56% of the total export volume.

Chart 7. Oil exports in Kazakhstan and the price of Brent crude oil (CO1 Comdty)

Source: Based on data from stat.gov.kz and [Bloomberg](https://www.bloomberg.com)

Chart 8. Top 15 countries (95% of exports) in terms of exports of Kazakhstan oil, million tons

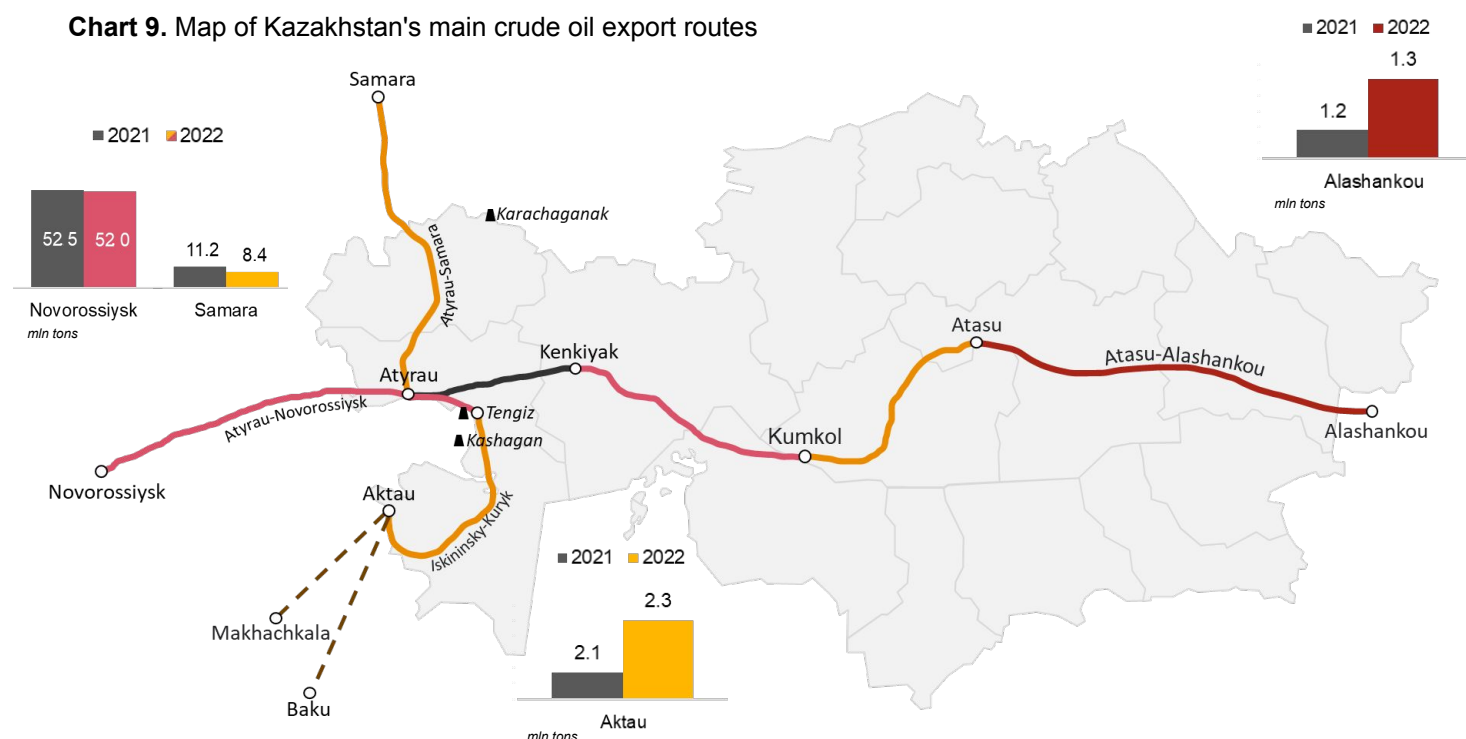
Source: Based on data from stat.gov.kz

According to the Office of National Statistics of RK, the total volume of crude oil production in 2022 amounted to 84.2 million tons*, which is 1.8% lower than in the previous year. The decrease in physical volumes of oil production in 2022 was affected by repair work at the main fields and interruptions in work at the main export channel - the CPC pipeline system:

- shipments via CPC decreased by 1 million tons to 52 million tons
- production at Kashagan decreased by 20% (12.7 million tons in 2022 and 16 million tons in 2021)

Kazakhstan is planning to increase oil production in 2023 to 90.5 million tons, mainly through the implementation of projects to expand production at the Tengiz field and restore the production volumes of existing projects.

Similarly, it is planned to increase the volume of exports to 71 million tons. In 2023, the completion of a project to increase the throughput capacity of the CPC oil pipeline from 53.7 to 72.5 million tons per year is expected. The head of the Ministry of Energy also announced plans to ship an additional 1.5 million tons of oil along the Atyrau-Samaru route to replace the sanctioned Russian oil at the PCK refinery in Schwedt city, Germany with the possibility of increasing up to 6 million tons per year.

Chart 9. Map of Kazakhstan's main crude oil export routes

Source: Based on data from [Samruk-Kazyna JSC](https://www.samruk-kazyna.jsc)

Dialogue with experts

How do you think the global energy crisis affected the economy of Kazakhstan in 2022 and what impact will it have in the next 12 months?

“

Growth of global demand for uranium.

- Sabit Khakimzhanov

“

Perhaps rising energy prices and an embargo on Russia will push revenue growth.

- Olzhas Dzhunusov

“

A positive impact in the form of rising oil prices.

- Almas Chukin
Partner, Visor Kazakhstan

“

It had a positive impact on the balance of payments and other indicators of net exports. Due to the decline in late 2022 - early 2023, the dynamics will be negative, which will affect the slowdown in economic growth.

- “Insurance company “Jusan Garant” JSC

“

The energy crisis was a godsend for us. Thanks to it, the government can now squander money, but it is largely over, and in a year we will have to tighten our belts.

- Kairat Mynbayev
Professor, KBTU

“

The energy crisis had a generally positive impact, since Kazakhstan is a fairly large exporter of oil. The National Fund and, consequently, the budget were able to receive large amounts of money to finance the increase in spending and social payments as well. It also had a positive impact on the exchange rate, which turned out to be relatively strong in 2022, especially amid the growth of the dollar index and the sharp fall in many currencies and even political stability (Sri Lanka) due to the energy crisis.

- Anonymous

“

The energy crisis itself did not affect Kazakhstan, but its consequences on the economy of Western countries resulted in high inflation, which directly affected Kazakhstan.

- Anonymous

“

So far, it has had a more positive effect, as the volume of exports in monetary terms has grown. Moreover, new routes and oil export countries are opening up. However, risks with the CPC pipeline remain.

- Anonymous

“

Higher commodity prices will increase the trade surplus but may delay necessary reforms.

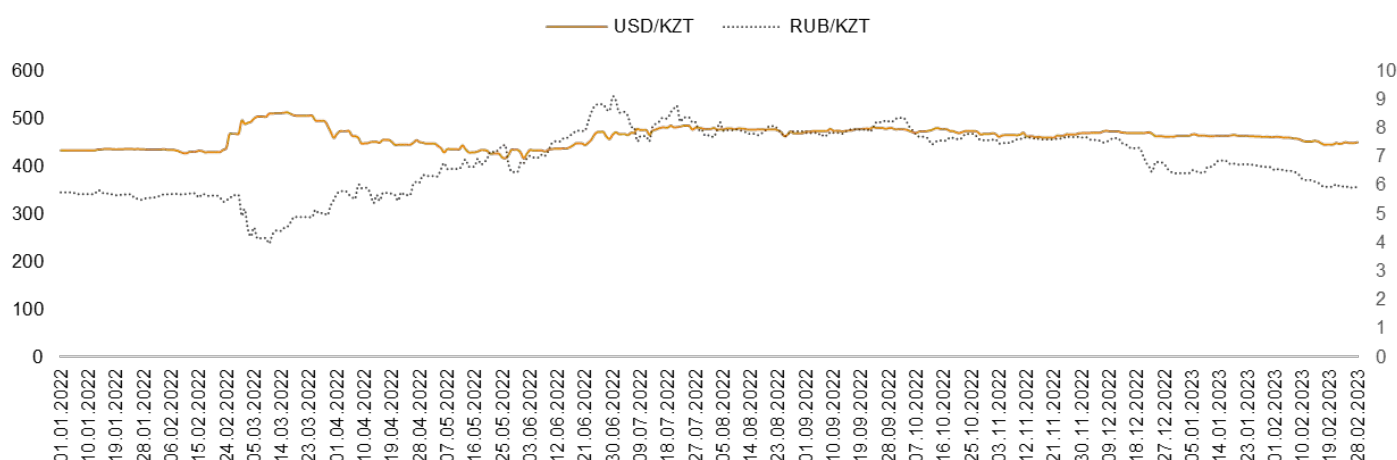
- Anonymous

III - Exchange Rate Forecasts

Foreign exchange markets are seeing a weakening dollar against most currencies in the fourth quarter of 2022 after the DXY dollar index peaked at 114.7 p. in September 2022. The central driver of the strength of the US dollar in 2022 was the increase in the base interest rate of the US FRS. However, already in October 2022, the US dollar began to weaken, which was caused by the weakening of the US economy (increase in inflation and unemployment) and expectations that a further increase in the interest rate could lead to a recession and subsequent weakening of the US monetary policy.

In the fourth quarter, as throughout 2022, increased volatility of most currencies continued. The Kazakhstani Tenge is no exception. For example, the market KZT/USD exchange rate was in the range of 459.04 - 479.32, the KZT/RUB exchange rate was 6.43 - 8.36 and the RUB/USD exchange rate was 55.30 - 72.13. In general, fluctuations in the Tenge exchange rate, with relatively stable oil prices, were more influenced by external economic and geopolitical factors than domestic economic demand factors. Domestic factors affecting the fluctuation of the KZT/USD exchange rate include tax weeks in November 2022 and February 2023, as well as an increase in the sale of foreign currency by the quasi-public sector and the National Fund.

Chart 10. Changes in forex currency pairs for the period 1 January 2022 – 28 February 2023



Source: PwC Kazakhstan Macroeconomic Survey, Q4 2022. Based on data from *NBRK* and *Bank of Russia*.

On average, for the fourth quarter of 2022, market rates have developed at the level of:

- 467.87 Tenge per US dollar, compared to the third quarter of 2022, Tenge appreciated by 1.6%;
- 7.50 Tenge per Russian rouble, compared to the third quarter of 2022, Tenge appreciated by 0.6%;
- 62.69 Russian rouble per US dollar, compared to the third quarter of 2022, the rouble depreciated by 6%.

At the end of 2022, on average, market exchange rates were at the level of:

- 460.48 Tenge per US dollar, Tenge depreciated by 7.1% against the dollar;
- 6.96 Tenge per Russian rouble, Tenge depreciated by 12.8% against the rouble;
- 68.35 Russian roubles per US dollar, the rouble exchange rate against the dollar of the year strengthened by 6.4%.

In January 2023, Kazakhstan withdrew from the Agreement on Mutual Convertibility of Currencies with Russia, signed in 1995, due to the loss of relevance. Thus, the mechanisms for the convertibility of the rouble and tenge are regulated in the Agreement on Cooperation in the Organization of the Integrated Currency Market of the EurAsEC Member States (2006) and the Treaty on the Eurasian Economic Union (2014).

Also, Kazakhstan has an independent float arrangement, under these conditions, the national currency rate is formed depending on internal and external market factors, and the RUB/KZT rate is determined through the cross rates of the Tenge and the rouble against the US dollar. Withdrawal from this agreement cancels direct settlements in roubles, which will now be made through the USD/Euro/Yuan.

Kazakhstan also intends to denounce similar agreements with Mongolia (signed in 1992), Kyrgyzstan (dated 1994) and Belarus (dated 1994)*.

Chart 11. Movements in trading volumes for 2022, USD billion

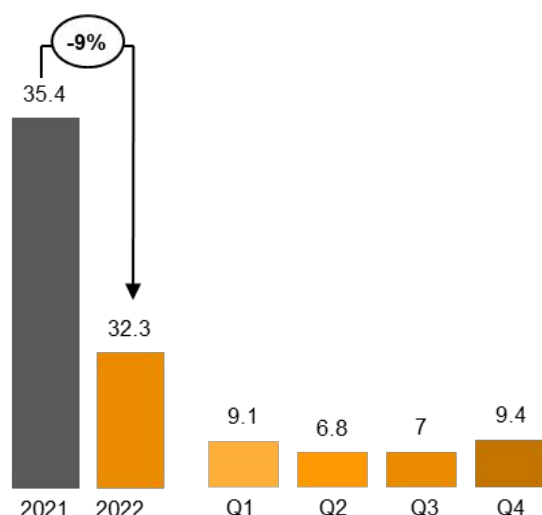
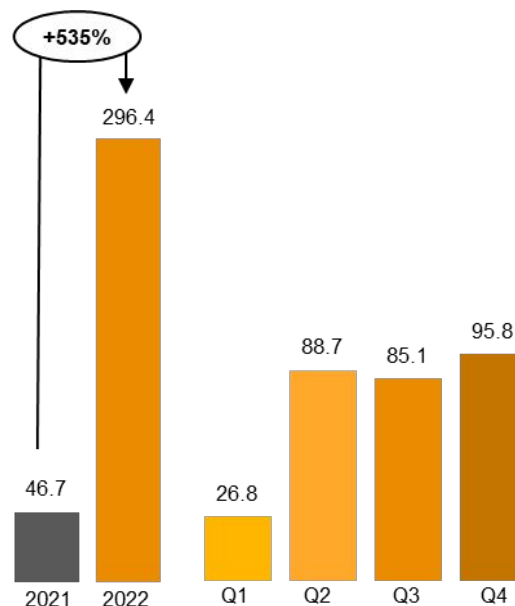


Chart 12. Movements in trading volumes for 2022, RUB billion



Source: Kazakhstan Stock Exchange (KASE)

Considering the movements in the purchase of currencies in Kazakhstan in 2022, it can be noted that the instability of the foreign exchange market had a significant impact on the volume of purchased currencies. According to the Kazakhstan Stock Exchange (KASE), the volume share of US dollars fell from 97.2% in 2021 to 71.8% in 2022. At the same time, the volume share of Russian rouble increased from 1.7% in 2021 to 10.3% in 2022. It is worth noting that the share of the Yuan also increased by 2% to 2.8% in 2022.

The increase in the volume of roubles in 2022 is due to the inflow of capital from neighboring countries to Kazakhstan. Thus, the first wave began at the end of February, which led to an increase in the volume of Russian rouble trading in the following months. If in January and February 5.5 billion Russian roubles were sold on KASE, then in March the volume of trading amounted to 21.3 billion, in April - 31.8 billion, with a subsequent decrease in May to 29.3 billion Russian roubles. The second wave of capital inflows was triggered by mobilization in Russia and began at the end of September, which also increased the volume of Russian roubles in the fourth quarter. September and October 2022 were record-breaking in terms of trading volumes - 49.2 and 42.1 billion Russian roubles, respectively. In general, the volume of Russian rouble trading in 2022 increased by more than 5 times compared to 2021 and amounted to 296.4 billion Russian roubles.

The annual volume of US dollar trading in 2022 decreased by 9% compared to 2021 and amounted to 32.3 billion US dollars. At the same time, the peak of trading occurred in March and December 2022 - 3.5 billion and 3.4 billion US dollars, respectively, with an average monthly trading volume of 2.6 billion US dollars.

*The relevant resolutions on the denunciation of the Agreements are posted on the Open LSI portal (Открытые НПА).

III Exchange Rate Forecasts: USD/KZT

In the fourth quarter of 2022, the market rate averaged at the level of 467.87 Tenge per US dollar, compared to the previous quarter, Tenge appreciated by 1.6%. However, throughout the quarter the exchange rate remained volatile in the range of 459.04 - 479.32 Tenge per US dollar.

The weakening of the dollar began in the second half of October 2022: the dollar fell from 476.71 to 468.35 Tenge per US dollar, thereby strengthening Tenge by 2%. Despite another increase in the US key rate by 75 b.p. to 3.75 - 4% per annum, rising unemployment and expectations of a likely slowdown in the rate increase led to a weakening of the US dollar. The rise in oil prices also contributed to the strengthening of Tenge.

At the end of November 2022, the average Tenge exchange rate remained at 468.4 Tenge per US dollar. However, in mid-November there was a temporary strengthening of Tenge by 2%, the US dollar fell to 459.04 Tenge following the decision of the US FRS's Open Market Committee to slow down the monetary policy tightening. Tenge also strengthened in the second half of November due to a large conversion of proceeds in preparation for tax payments.

In the first half of December, the US dollar strengthened to 473.51 due to an increase in business activity and a decrease in the unemployment rate in the USA. However, already in the second half of December, the dollar weakened following a slowdown in the US FRS's rate hike (by 25 bp to 4.25 - 4.5%). In late December, the Senate of the U.S. Congress approved the FY 2023 federal budget proposal, in which 3% of the total budget of 1.7 trillion was planned to be sent to help Ukraine and Washington's NATO allies, which also led to a weakening of the US dollar. In addition, the supply of the US dollar increased in the domestic foreign exchange market due to the sale of foreign currency by the quasi-public sector and the National Fund, which amounted to 789.7 million US dollars, having increased by 219.7 million US dollars compared to November*. Thus, at the end of December 2022, Tenge appreciated by 1.3%, the weighted average US dollar exchange rate decreased from 468.9 to 462.66 Tenge.

In January and February 2023, there was a further strengthening of the Tenge against the US dollar: by the end of January 2023, Tenge appreciated by 0.6% (from 462.65 to 459.92), and by the end of February 2023 - by 2.5% (from 460.51 to 449.14). The weakening of the US dollar was mainly due to the weakening of economic activity in the USA and expectations of a further slowdown in the pace of base rate hikes.

**NBRK's information memorandum on the foreign exchange market for December 2022*

Table 1. Statistical indicators for the USD/KZT currency pair

	October 2022	November 2022	December 2022	January 2023	February 2023
Minimum value	465.36	459.04	460.62	459.92	444.09
Maximum value	479.32	469.42	473.54	464.34	460.87
Mean value	472.50	463.76	468.10	462.18	452.32
% change at the end of the month	+2%	-0.02%	+1.3%	+0.6	+2.5

Source: NBRK official market exchange rates

What values of the US dollar rate against the Kazakhstani Tenge, in your opinion, are the most probable for the given forecast periods?

Chart 13. Projected USD/KZT rate

■ Q3 - Median of minimum values ■ Q3 - Median of maximum values
■ Q4 - Median of minimum values ■ Q4 - Median of maximum values

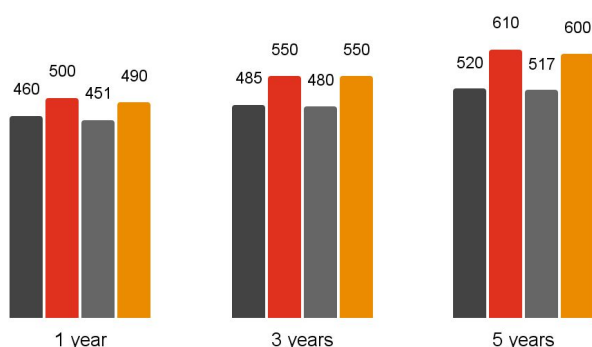
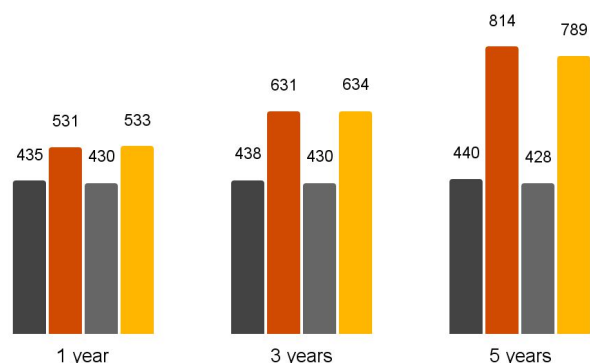


Chart 14. USD/KZT projection limits

■ Q3 - Lower 30% of minimum values ■ Q3 - Upper 30% of maximum values
■ Q4 - Lower 30% of minimum values ■ Q4 - Upper 30% of maximum values

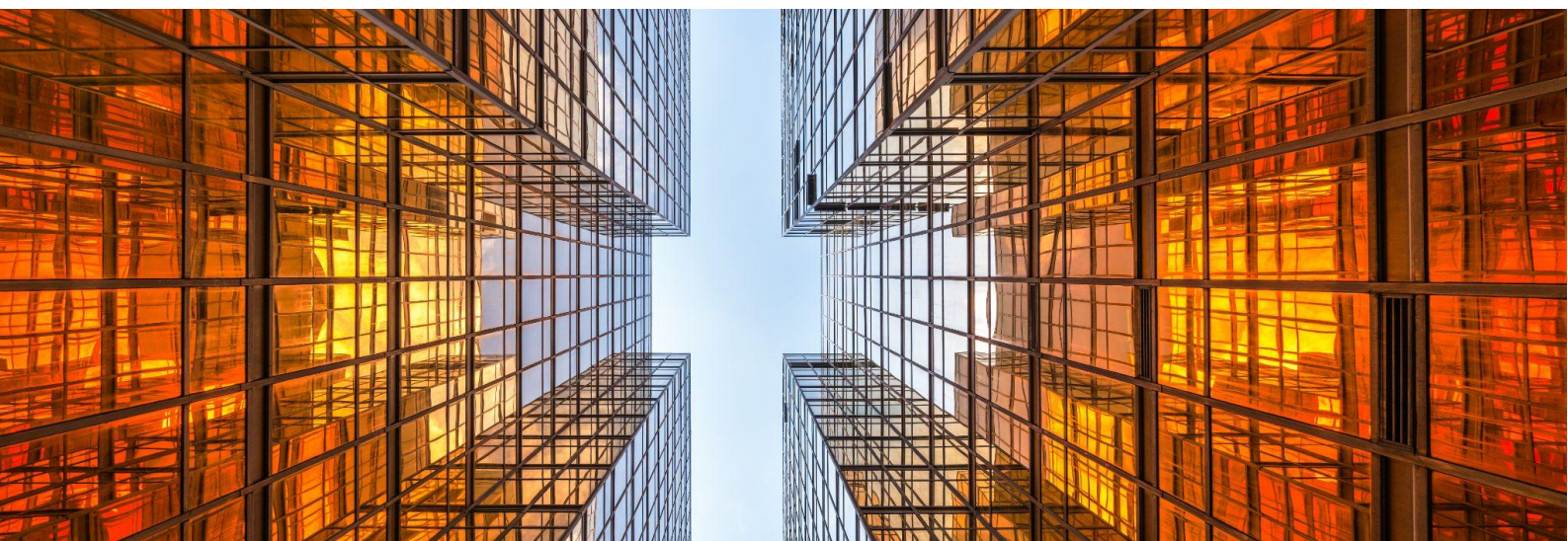


Source: PwC Kazakhstan Macroeconomic Survey, Q4 2022

Respondents' forecasts for the fourth quarter of 2022 regarding the USD/KZT currency pair have become slightly more optimistic compared to the results of the previous survey: the medians of the maximum and minimum values have decreased in both the short- and long-term forecasts. The medians of the maximum values decreased in the horizon of one year by 2% - to 490 Tenge per US dollar, while in the horizon of three years they remained at the level of 550 Tenge. However, in the five-year horizon, there is again a decrease in the median of the maximum values by 1.6% compared to the third quarter. Respondents expect that the exchange rate will be at the level of 600 Tenge per US dollar. The medians of the minimum values in the horizon of one year and three years decreased by 2% and 1%, to 451 and 480, respectively. In the horizon of five years, there is a slight decrease by 0.6% to 517 Tenge per US dollar.

Compared to the previous quarter, the values of the upper limit of the USD/KZT currency pair in the one-year horizon increased by 2 Tenge and were fixed at 533 Tenge per US dollar, in the three-year horizon they increased by 4 Tenge to 634 Tenge, and in the five-year horizon they decreased by 25 Tenge up to 789 Tenge per US dollar. It should be noted that in the fourth quarter, the lower limit of the projected values decreased in all projected periods.

According to projections for the fourth quarter, the tenge exchange rate against the dollar by median values is expected to be in the range of 451 - 490 Tenge in the one-year horizon, 480 - 550 Tenge in the three-year horizon and 517 - 600 Tenge in the five-year horizon.



III Exchange Rate Forecasts: USD/RUB

In the fourth quarter of 2022, the market rate averaged 62.69 Russian roubles per dollar, the Russian rouble depreciated by 6% compared to the third quarter. However, throughout the quarter, the exchange rate remained volatile in the range of 55.30 - 72.13 Russian roubles per US dollar.

At the end of October 2022, despite the weakening of the US dollar, the Russian rouble depreciated against the US dollar by 11.3%: the US dollar rose from 55.30 to 61.53 Russian roubles. In general, the exchange rate fluctuated in the range of 55.30 - 63.76 Russian roubles per US dollar. The weakening of the Russian rouble was caused by the following factors: the decline in commodity prices following the tightening of the monetary policy by the US FRS, the decline in Russia's trade balance and geopolitical pressure.

At the end of November 2022, the US dollar exchange rate remained at the level of 61.4 Russian roubles. However, in the second half of November, the rouble strengthened by 2% to 60.4 Russian roubles per dollar following an increase in the supply of foreign currency on the foreign exchange market due to the preparation of exporters for tax payments.

At the end of December 2022, the Russian rouble depreciated by 15.5% (from 61 to 70 roubles per US dollar). The significant weakening of the Russian rouble was due to a decrease in oil and gas sector's revenue, which was also associated with the entry into force of the oil price ceiling and the embargo on Russian oil supplies to the European Union by sea. The price ceiling was approved by the EU countries, the G7 and Australia at \$60/bbl. It is also worth noting that Russia's balance of payments remained positive.

In January and February 2023, the USD/RUB exchange rate remained volatile. In January, the Russian rouble strengthened by 1.1% (from 70.34 to 69.59), but already in February, the Russian rouble weakened by 7% (from 70.51 to 75.43). The weakening of the rouble was caused by a decline in oil prices, an increase in the budget deficit, as well as new sanctions from the US and the EU against Russian financial institutions.

Table 2. Statistical indicators for the USD/RUB currency pair

	October 2022	November 2022	December 2022	January 2023	February 2023
Minimum value	55.30	60.22	60.88	67.57	70.04
Maximum value	63.76	62.10	72.13	70.30	75.43
Mean value	61.12	60.85	65.31	68.88	72.78
% change at the end of the month	-11.3%	+0.9%	-15.5%	+1.0%	- 7.0%

Source: Bank of Russia's official exchange rates



What values of the US dollar exchange rate against the Russian rouble, in your opinion, are the most probable for the given forecast periods?

Chart 15. Projected USD/RUB rate

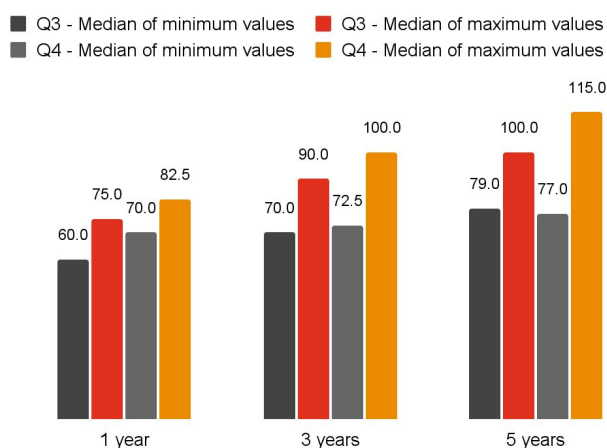
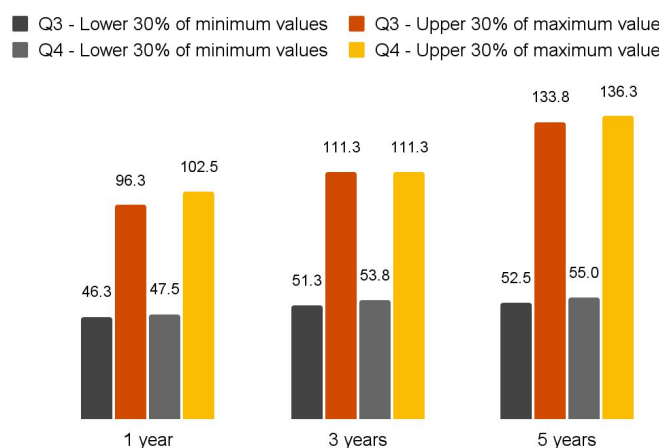


Chart 16. USD/RUB projection limits

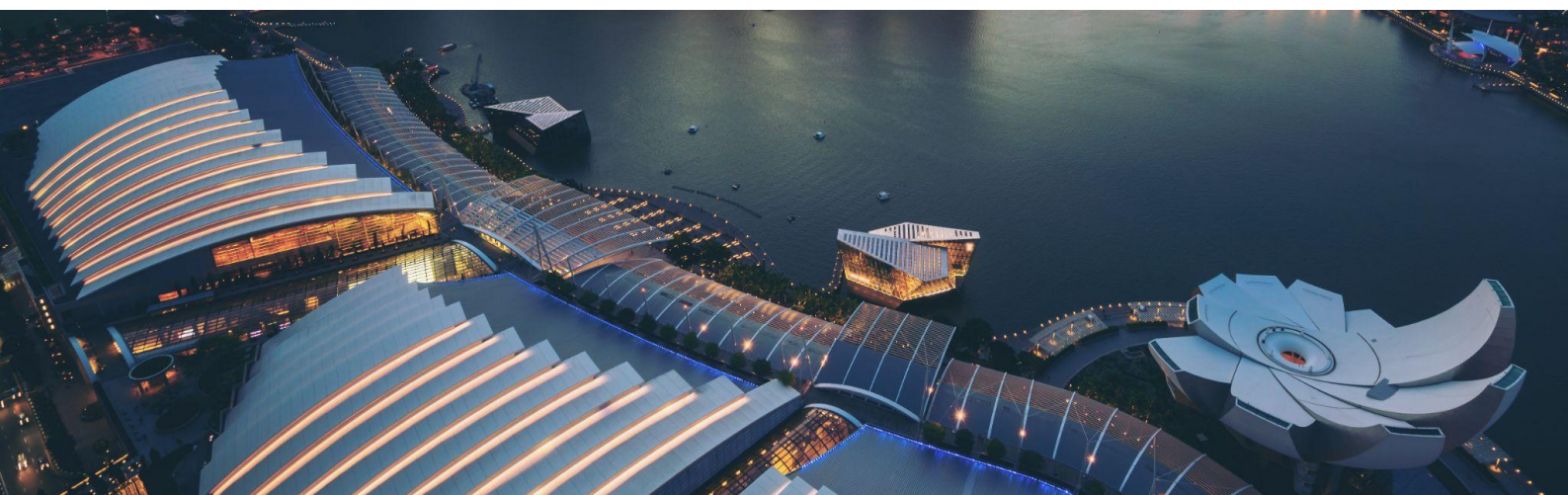


Source: PwC Kazakhstan Macroeconomic Survey, Q4 2022

When comparing the survey results for the third and fourth quarters of 2022, one can notice that the respondents' forecasts for the USD/RUB currency pair have changed in most forecast values. In general, respondents expect the Russian rouble to weaken further against the US dollar in all forecast periods. For example, compared with the third quarter, the median of maximum values in the one-year horizon increased by 10% to 82.5 Russian roubles, in the three-year horizon by 11% to 100.0 Russian roubles, in the five-year horizon there was an increase by 15% to 150 Russian roubles per US dollar. Compared to the third quarter, the medians of the minimum values showed diverse dynamics: in the one-year horizon, there is an increase in the exchange rate by 16.7% to 70.0 Russian roubles per US dollar, in the three-year horizon the values also increased by 3.6% to 72.5 Russian roubles per US dollar, and in the five-year horizon, there is a decrease in value by 2.6% to 77 Russian roubles per dollar.

Compared to the previous quarter, the value of the upper limit of the USD/RUB currency pair increased by 6% to 102.5 Russian roubles per US dollar in the one-year horizon, did not change and remained at the level of 111.3 Russian roubles per dollar in the three-year horizon, and increased by 2% to 136.3 Russian roubles per US dollar in the five-year horizon. The lower limit of the predicted values remained practically at the same level in all forecast periods.

Thus, according to the forecasts for the fourth quarter, the median exchange rate of USD/RUB is expected to be in the range of 75.0 - 82.5 Russian roubles in the one-year horizon, 90.0 - 100.0 Russian roubles in the three-year horizon and 75.0 - 115.0 Russian roubles in the five-year horizon.



III Exchange Rate Forecasts: RUB/KZT

In the fourth quarter of 2022, the market rate averaged at the level of 7.50 Tenge per Russian rouble, compared to the third quarter of 2022, the Tenge appreciated by 0.6%. However, throughout the quarter, the exchange rate remained volatile in the range of 6.43 - 8.36 Tenge per Russian rouble. The weakening of the Russian rouble in October 2022 also affected the RUB/KZT exchange rate, following the results of October, the Tenge strengthened by 9.3%, from 8.36 to 7.58 Tenge per Russian rouble. In November 2022, there were no significant fluctuations in the exchange rate, the weighted average exchange rate of the Russian rouble remained at the level of 7.6 Tenge. In December 2022, the Russian rouble weakened by 16.5% from 7.7 to 6.43 Tenge, which was the lowest level in the second half of 2022. In January 2023, the average exchange rate of the Russian rouble remained at the level of 6.7 Tenge. In February 2023, there was a weakening of the Russian rouble following the introduction of the 9th and 10th packages of sanctions against Russia by the European Union, which also affected the exchange rate of the Russian rouble against the Tenge. In February, the Russian rouble depreciated by 8.7% from 6.53 to 5.96 Tenge.

Table 3. Statistical indicators for the RUB/KZT currency pair

	October 2022	November 2022	December 2022	January 2023	February 2023
Minimum value	7.44	7.47	6.43	6.62	5.95
Maximum value	8.36	7.72	7.70	6.87	6.57
Mean value	7.73	7.62	7.20	6.72	6.22
% change at the end of the month	+9.3%	-0.9%	+16.5%	+0.5%	+8.7%

Source: Bank of Russia's official exchange rates

What values of the Tenge exchange rate against the Russian rouble, in your opinion, are the most probable for the given forecast periods?

Chart 17. Projected RUB/KZT rate

■ Q3 - Median of minimum values ■ Q3 - Median of maximum values
■ Q4 - Median of minimum values ■ Q4 - Median of maximum values

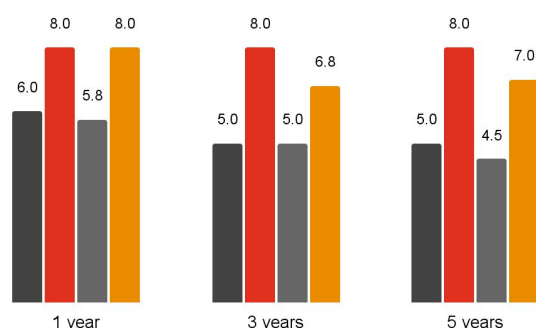
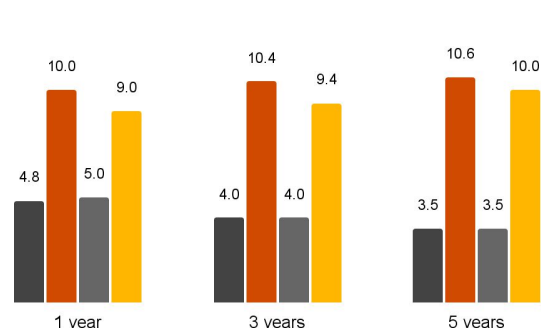


Chart 18. RUB/KZT projection limits

■ Q3 - Lower 30% of minimum values ■ Q3 - Upper 30% of maximum values
■ Q4 - Lower 30% of minimum values ■ Q4 - Upper 30% of maximum values



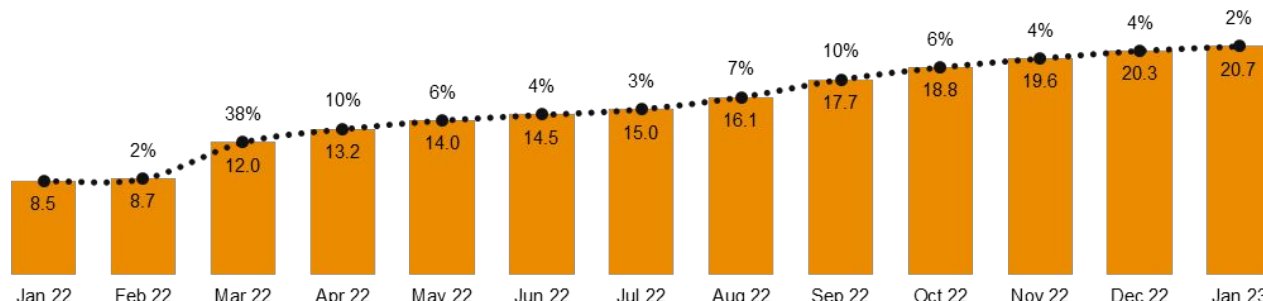
Source: PwC Kazakhstan Macroeconomic Survey, Q4 2022

When comparing the minimum median values for the third and fourth quarters, respondents' forecasts remain almost at the same level. At the same time, the maximum median values in the one-year horizon also remained at the level of 8 Tenge per Russian rouble, and in the horizon of three and five years they decreased by 15% to 6.8 and 7 Tenge per Russian rouble, respectively. The maximum values of the exchange rate increased in all forecast periods: one year - 9.0, three years - 9.4, five years - 10.0. At the same time, the minimum value of the exchange rate in the one-year horizon was 5.0 Tenge, and in the horizon of three and five years - 4.0 and 3.5 Tenge per Russian rouble, respectively.

IV - Consumer price index

What indicators of inflation (in particular, the consumer price index - CPI) in Kazakhstan, in your opinion, are the most likely for the given forecast periods?

Chart 19. Movements in annual inflation by months, %



Source: Based on data from stat.gov.kz

The geopolitical tension last year led to a sharp rise in energy prices, supply disruptions continued to cause distortions in consumer prices. The global cost-of-living crisis caused by these factors has resulted in a situation where many countries experiencing double-digit and even triple-digit annual price increases.

The annual inflation rate in Kazakhstan grew from month to month. In January 2022, the inflation rate was 8.5%, while in January 2023 it rose to 20.7%, reaching its highest level in more than 25 years. The first quarter of 2022 saw the fastest increase in inflation rates caused by the military conflict in Ukraine and the January events in Kazakhstan. The highest monthly inflation in 2022, which amounted to 3.7%, occurred in March. This indicator is 78% or 2.9 percentage points higher than the monthly inflation of the previous month. However, the fourth quarter of 2022 showed a slowdown in monthly inflation growth, which continued in January 2023 (1.1% month-over-month). The observed trend is in line with the updated IMF* report, according to which about 84% of countries expect inflation to decline in 2023.

The results of the survey for the fourth quarter of 2022, compared to the previous one, showed no change in the maximum and minimum inflation limits in the short term, however, in the mid-term and long-term perspective, respondents increased the corridor of inflation limits. Thus, in the one-year horizon, the lower and upper thresholds of the median values of expected inflation decreased by 0.5 pp. In the three-year horizon, the lower limit of the median values increased by 0.5 pp, while maintaining the upper threshold. In the five-year horizon, the lower limit decreased by 1.0 pp, while the upper limit increased by 2 pp.

Chart 20. Forecast level of CPI, %

■ Q3 - Median of minimum values ■ Q3 - Median of maximum values
■ Q4 - Median of minimum values ■ Q4 - Median of maximum values

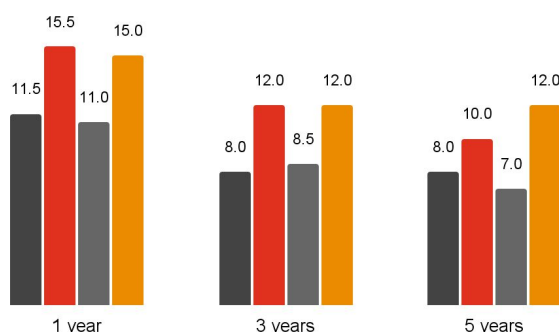
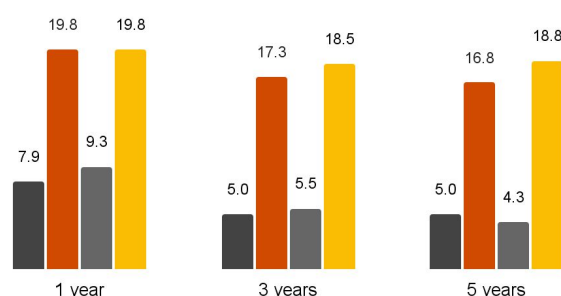


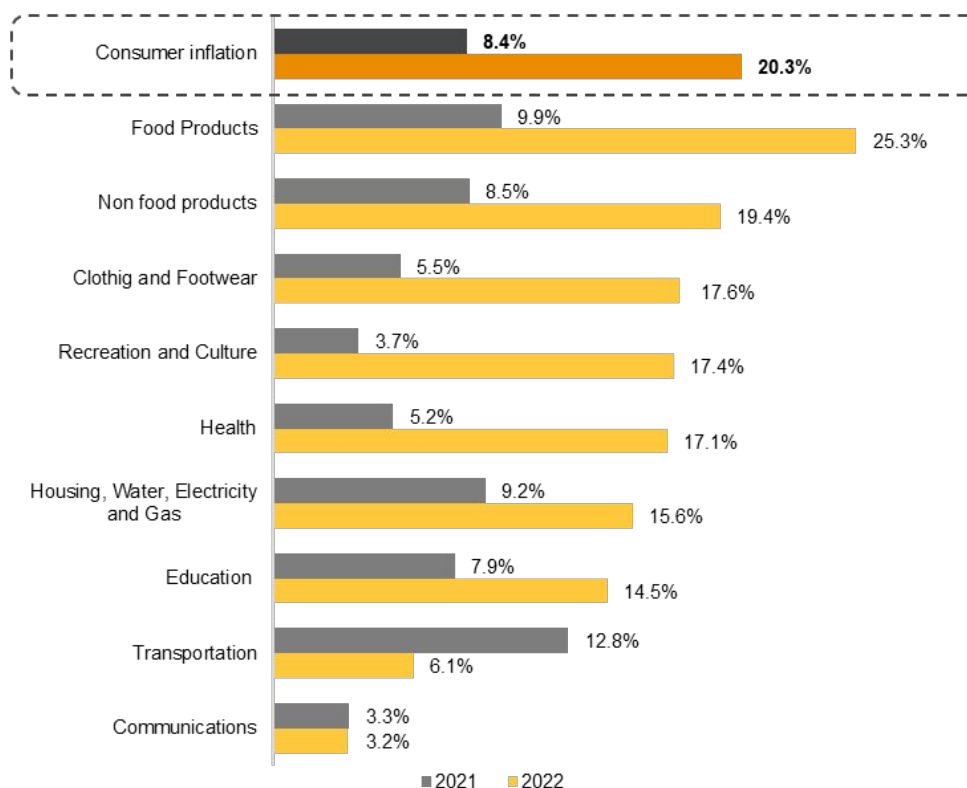
Chart 21. CPI forecast limits, %

■ Q3 - Lower 30% of minimum values ■ Q3 - Upper 30% of maximum values
■ Q4 - Lower 30% of minimum values ■ Q4 - Upper 30% of maximum values



Source: PwC Kazakhstan Macroeconomic Survey, Q4 2022

* IMF World Economic Outlook

Chart 22. Movements in annual consumer inflation by sectors of the economy, %

Source: Based on data from stat.gov.kz

The data analysis shows that from December 2021 to December 2022, there was a significant increase in annual inflation in all sectors of the economy. The largest growth took place in the food sector, where the inflation rate increased from 9.9% to 25.3% and approached the maximum level of 2007 (26.6%).

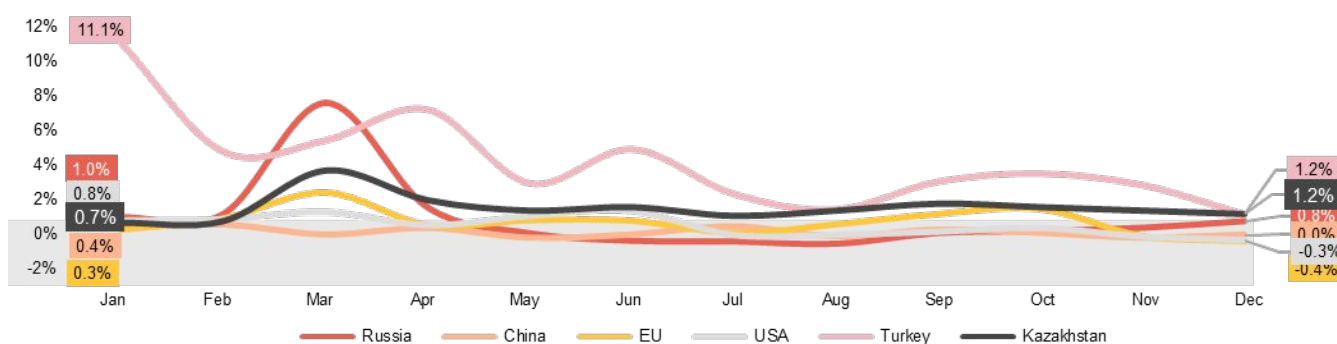
Within this sector, there was an increase in prices, year on year, for such segments as sugar (63.7%), vegetables and fruits (21.0%), bakery products and cereals (33.6%), dairy products (31.3%) and many others.

In the education sector, there was an increase in the annual inflation rate, which increased from 7.9% to 14.5%. In the communications sector, there was no significant change in the inflation rate, which remained stable at 3%. Interestingly, the transport sector showed a decrease in inflation from 12.8% to 6.1%.

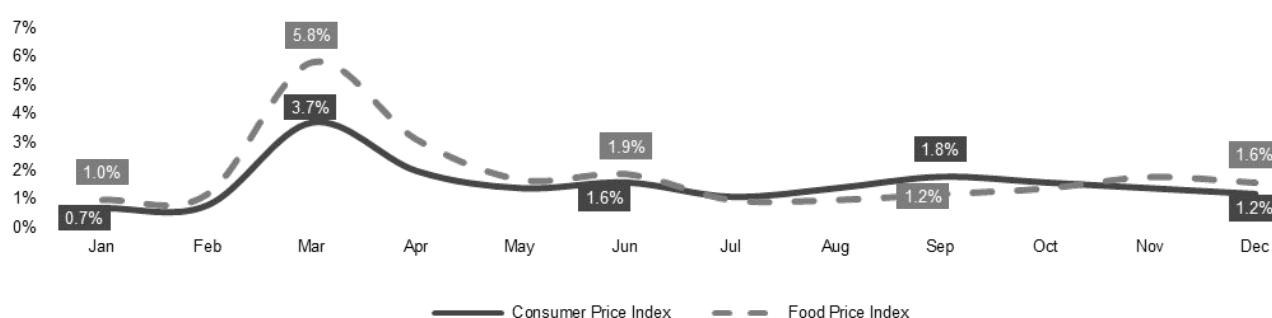
Prices of non-food products (based on data from the Office of National Statistics) reached an inflation rate of 19.4% due to the disruption of supply chains and the weakening of the tenge exchange rate, which affected the prices of imported goods. In particular, the pace accelerated for personal goods (38.5%), clothing and footwear (17.6%), detergents and cleaning products (48.7%).

At the same time, external inflationary pressure on food products continued to weaken. This is confirmed by the decline in the index for food products for 9 months in a row (as of December 2022), according to the Food and Agriculture Organization (FAO).

* FAO Food Price Index

Chart 23. Monthly inflation of the Consumer Price Index, %

Source: Based on data from stat.gov.kz and [Trading Economics](https://tradingeconomics.com)

Chart 24. Monthly inflation of the Consumer Price Index and the Food Price Index in Kazakhstan, %

Source: Based on data from stat.gov.kz

“At the same time, we are concerned about the persistently high level of food imports from abroad, which leads to high inflation. Experts rightly admit that inflation in Kazakhstan is of foreign origin,” said President Kassym-Jomart Tokayev*.

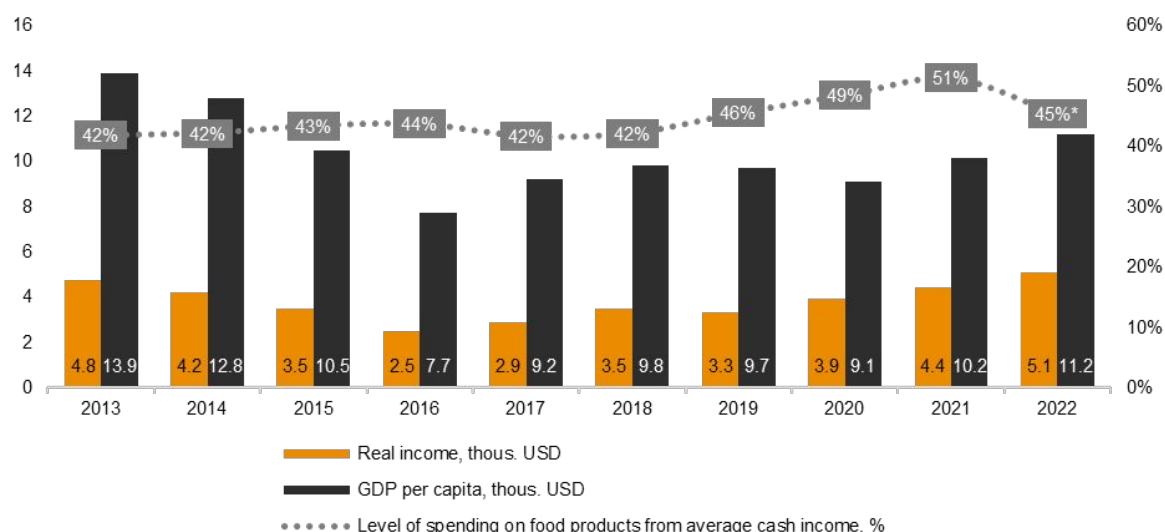
Import inflation is an increase in the price level of imported goods and services. This inflation can be caused by various factors, such as changes in forex currency pairs, changes in world prices for energy resources and raw materials, and increased duties on imported goods.

According to NBRK, since 2015, when the Tenge floated freely, there has been a phenomenon of opposite dynamics of exchange rates and import prices in the short term. With a decrease in the value of the national currency, the prices of imported goods increase significantly. At the same time, when Tenge strengthens, there are no reverse dynamics. The results also show that the acceleration of inflation rates due to the depreciation of the Tenge falls mainly on non-food products due to the larger share of imports in their consumption compared to food products.

According to the Office of National Statistics, most of the imports (in million US dollars) come from such countries as: Russia with a turnover of 17.3 (35% of the share), China with a turnover of 11.0 (22%), the European Union with a turnover of 8.0 (16%), USA with a turnover of 1.9 (4%) and Turkey with a turnover of 1.6 (3%). Chart 23 shows monthly inflation movements for these 5 countries, whose share in imports in total is 80%. An interesting fact is that if we look at the correlation of our monthly inflation in 2022 with the monthly inflation of these countries, then Russia will have the largest value of 81%, followed by EU inflation with a value of 74%. However, if we consider the interdependence period from May to December 2022, then the correlation with Russian monthly inflation is negative at -5%, while the correlation with EU monthly inflation rises to 80%.

According to an internal analysis by PwC Kazakhstan, the average price of food products from the European Union (countries: Austria, Germany, Greece, Spain, Italy, Lithuania and France) increased by 39% from January to December 2022, while the average price of food imports from Russia increased by 73%.

Source: Based on data from stat.gov.kz and nationalbank.kz

Chart 25. Indicator of the real wealth of the population

Source: Based on data from stat.gov.kz

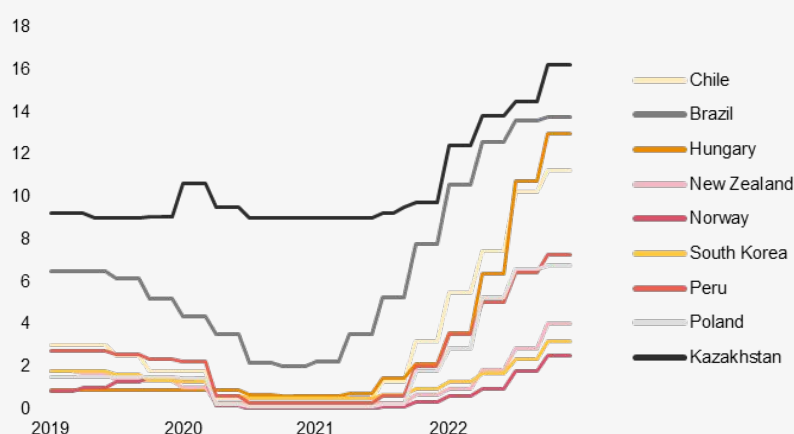
* Data for the third quarter of 2022

The level of the average monthly median salary in Tenge in the fourth quarter of 2022 amid the rising inflation increased by 8% compared to the previous quarter and by 23% compared to the fourth quarter of 2021. In US dollar terms, the median salary increased by 12% compared to the previous quarter and by 14% compared to the fourth quarter of 2021.

The real annual income of the population in 2022 increased by 14% to 5.1 thousand US dollars compared to the previous year. According to the Office of National Statistics, the level of spending on food products from average cash income decreased from 51% to 45% in the third quarter of 2022 compared to the end of 2021. However, the annual inflation rate at the end of the year in 2021 was 8.4%, while the annual inflation rate at the end of 2022 was 20.3%..

Table 4. Real GDP growth and inflation rate, %

Countries	GDP,%		Inflation,%	
	2021	2022	2021	2022
Chile	11.70	2.70	4.50	12.80
Brazil	4.60	2.90	8.30	5.77
Hungary	7.10	4.90	5.10	24.50
New Zealand	3.70	2.70	3.94	6.28
Norway	3.90	3.60	3.50	5.90
South Korea	4.10	2.60	2.50	5.49
Peru	13.30	2.68	4.30	8.46
Poland	6.80	4.90	5.12	16.60
Kazakhstan	4.30	3.20	8.40	20.30

Chart 26. Change in base rate expectations (January 2019 - December 2022)

Inflation is a global problem today. All countries of the world take different measures to target it, following certain practices. The Economist* noticed an interesting trend and described the term “Hikelandia.” The term describes a group of countries, including Brazil, Chile, Hungary, New Zealand, Norway, Peru, Poland, and South Korea, that have taken aggressive measures to combat rising inflation, including raising interest rates. This happened after interest rates fell to record lows at the start of the Covid-19 pandemic, where they reached 0% in some countries. However, the increase in interest rates in this category of countries did not slow down the pace of inflation. In addition, the GDP of the above countries declined, indicating a slowdown in economic growth. In Chart 26, one can notice that Kazakhstan has a similar trend in terms of changing the base rate and also a continuing rise in inflation, like the countries of Hikelandia.

*The Economist

Dialogue with experts

Real income, as well as the purchasing power of the population as a whole, declined in 2022. What actions, in your opinion, can be taken to prevent further decline and/or increase in the real income of the population?

“

The drop in the income of the population as a whole does not need to be compensated. Compensation is needed only for pensions and other social transfers. And most importantly, there needs to be a reform of how this compensation is defined and administered. This issue should not be decided discretionarily, as it is now. The mechanism of compensation, or indexation, should be automatic, transparent and predictable. Only then does it fulfil the function of social protection, otherwise it becomes politicized and becomes destabilizing for the economy. The mechanism needs to be conservative enough in terms of income level not to accelerate inflation, inertial enough not to undermine fiscal adjustment, and countercyclical enough to offset the decline in income during the recession.

- Sabit Khakimzhanov

“

In the short term, the fight against inflation, albeit in the same applied form, as it has been understood by our bureaucracy for many years, includes participation of the prime minister, akims and the mention of city shops where prices for vegetable oil are unreasonably high.

In the medium- and long term - the institutional development of countries and investment in infrastructure - real income will someday reflect intangible factors as an index of happiness, but even without this, there are thousands of asymmetries that could be smoothed out through a private initiative.

Again, in addition to the growth in the wealth of enterprising citizens, the rise in prices will also be smoothed out and the quality of services will increase for a wider population.

- Olzhas Dzhunusov

“

Growth of the economy and labor productivity.

- Almas Chukin
Partner, Visor Kazakhstan

“

inflation targeting. Reduction of social programs.

- “Insurance company “Jusan Garant” JSC

“

An urgent and effective program to increase food production is needed. If it is adopted, due to the seasonality of agriculture, the results will not be visible until the fall of 2023. An increase in income in the agricultural sector and a decrease in food costs for those employed in other sectors is the maximum that can be done in a year and a half.

- Kairat Mynbaev
Professor, KBTU

Dialogue with experts

How do you think the global energy crisis affected the economy of Kazakhstan in 2022 and what impact will it have in the next 12 months?

“

Creation of good jobs for the most vulnerable segments of the population, reorientation from the export of raw materials to the export of other goods and services. At the same time, average real income will most likely fall, but the income of the rental sector will decrease, and inequality will decrease.

- Anonymous

“

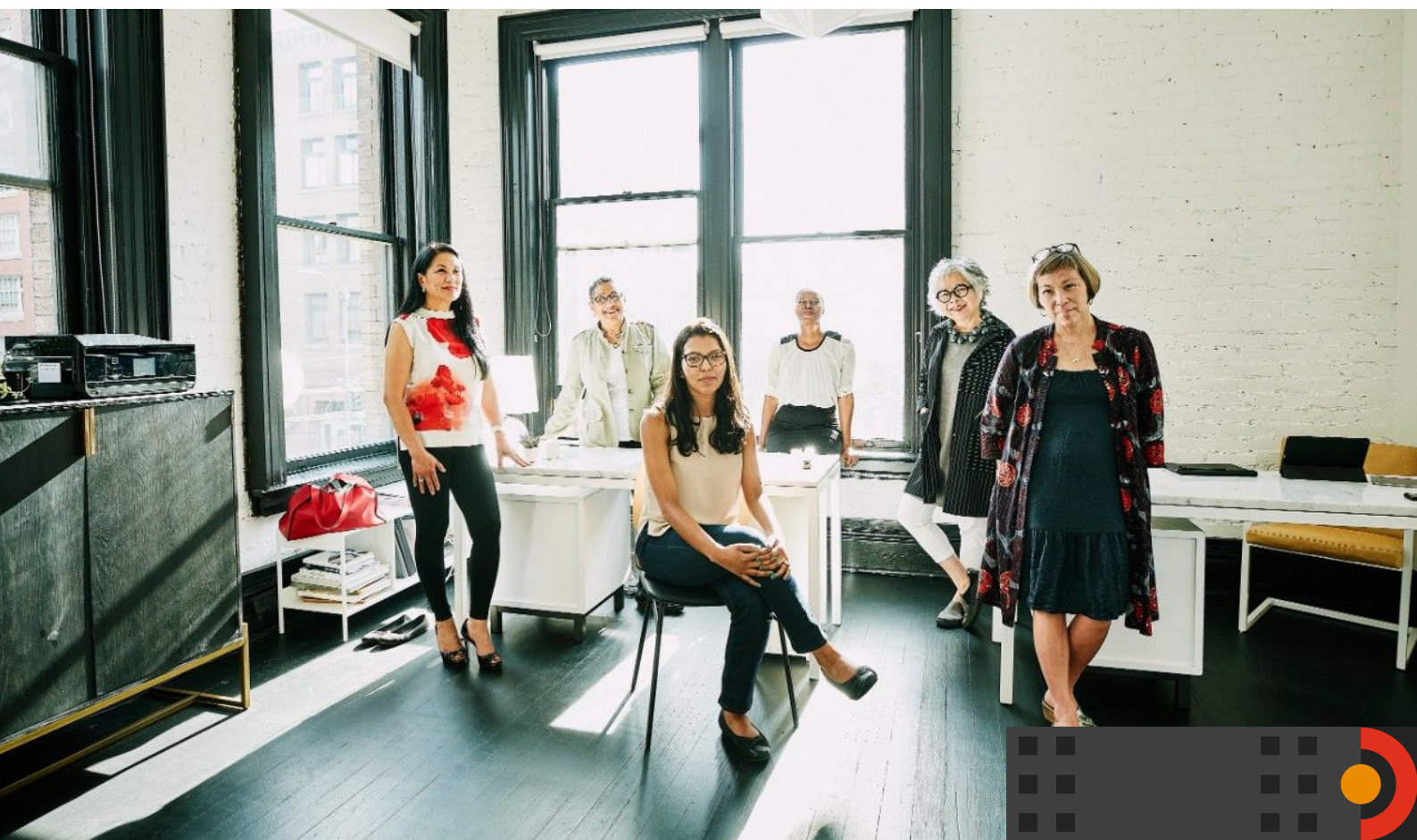
More aggressive food import substitution. It is mainly a food inflation.

- Anonymous

“

Stimulating the development of the SME sector and providing jobs. The fight against inflation.

- Anonymous



IV - Base rate of the NBRK

For most countries, the priority will remain a steady reduction in inflation to the corridors set by national banks.

In the fourth quarter of 2022, the NBRK raised the rate twice amid record inflation acceleration rates in regular meetings: in October - from 14.5% to 16%, and in December to a record high since 2016 - 16.75%. The maximum value of the base rate since May 2016 was maintained at the meeting of the NBRK in February 2023. One of the factors was the continued growth of annual inflation in January to 20.7%, the main driver being high food prices. Nevertheless, the monthly inflation rate continued to slow down for four months in a row and in January it was 1.1% but exceeds the historical average. According to the NBRK report, inflation expectations have declined after reaching a peak in December of the previous year but remain high without a formed downward trend.

Despite the slowdown in global inflation driven by lower energy prices and improved supply chain conditions, the world remains at risk of accelerating inflation due to a tight labor market, stronger consumer demand and a recovery in China's economic activity.

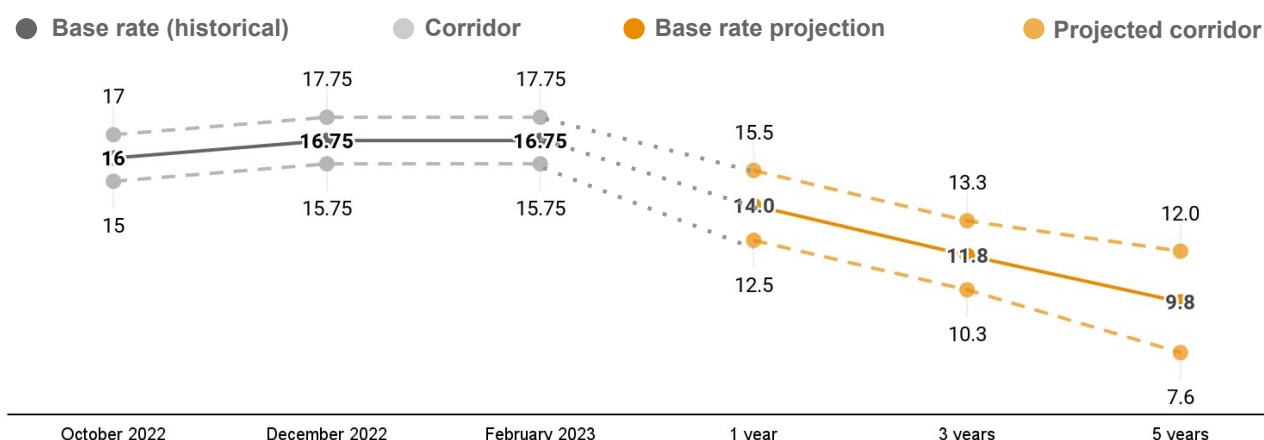
In addition to external factors, the economy of Kazakhstan also felt internal pro-inflationary pressure, one of which is the increase in state budget expenditures in 2022 to 18.5 trillion Tenge, which increased by 22% compared to last year and almost doubled compared to 2018. The growth in public spending was reflected in increased wages and investments in housing construction. However, this growth, together with the influx of CIS citizens into Kazakhstan, led to an increase in housing prices and put additional pro-inflationary pressure on the economy.

At a meeting of the NBRK's monetary policy results committee in December 2022, it was stated that the agency was nearing the end of the base rate hike cycle. The cumulative effect of tightening the monetary policy and the continued current value of the base rate for a long time will allow maintaining conditions conducive to a gradual reduction in inflation in the medium term.

The survey results for the fourth quarter show that the experts expect a slight decrease in the base rate compared to the current value set on 27 February 2023 at 16.75%. Thus, in the perspective of one year, the respondents predict the value of the base rate at 14.0%, which is higher by 0.5 pp than the expectations of the experts in the previous report for the third quarter. Tighter-than-expected financial conditions could trigger debt and external stresses, as well as risks to financial stability.

What indicators of the base rate of the NBRK, in your opinion, are the most probable for the given forecast periods?

Chart 27. Changes in expectations for the base rate of the NBRK



Source: PwC Kazakhstan Macroeconomic Survey, Q4 2022 and NBRK

*Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

**Economist Intelligence Unit



Additional section

**Analysis of changes in food
prices in RK**

Overview of the analysis of changes in food prices

The analysis of changes in food prices is a study, the purpose of which is to reflect the real price situation in the food market in Kazakhstan.

Due to rising inflation in 2022, there is an increase in prices for almost all categories of the analyzed goods of the minimum food basket.

According to the Bureau of National Statistics as of January 2022, on average, about 73% of the main food products are produced in Kazakhstan, however, there remains a significant dependence on imports for some product categories, such as processed vegetables (except potatoes) - 18% of own production against 82% of imports, tea and coffee - 30% and 70%, respectively, sugar - 26% and 64%, respectively. In 2022, Kazakhstan imported 3.5 billion US dollars worth of food products. In particular, imports from Russia in 2022, as well as in 2021, amounted to about 90% of total food imports.

In March last year, due to the outbreak of a military conflict between Russia and Ukraine, the import of some basic food products to Kazakhstan was limited, which affected the rise in prices for products of both imported and Kazakhstani origin.

The increase in prices (in December versus January 2022) was especially noticeable in such categories as local vegetables (+94%), imported farinaceous (+82%) and dairy products (+60%). It is interesting to note that prices for locally produced poultry in December decreased by 11% compared to January 2022, while prices for potatoes did not change, despite considerable volatility during the year.

The average change in prices from December to January 2022 for all analyzed product categories was 44% (33% for Kazakhstani products and 51% for imported products).

Analysis methodology

In the analysis of changes in food prices in RK, data was used, including categories, subcategories and names of food products in large online stores in Almaty.

Product categories and subcategories were selected primarily from a minimum food basket list, subject to sufficient data availability for the period of January-December 2022.

To calculate the correct average price, all products have been converted to a common unit of measure, as shown in the table below.

Product	UM	Product	UM
bread	100 g	meat and poultry	1 kg
flour	1 kg	canned foodstuffs	1 kg
starchy foods	1 kg	salt and sugar	1 kg
cereals and legumes	1 kg	water	1 ltr
vegetables and fruits	1 kg	tea, coffee	1 kg
milk, cream, kefir, ayran, tan	1 ltr	eggs	10 pcs
cheese, cottage cheese, sour cream, mayonnaise	1 kg	vegetable oil	1 ltr

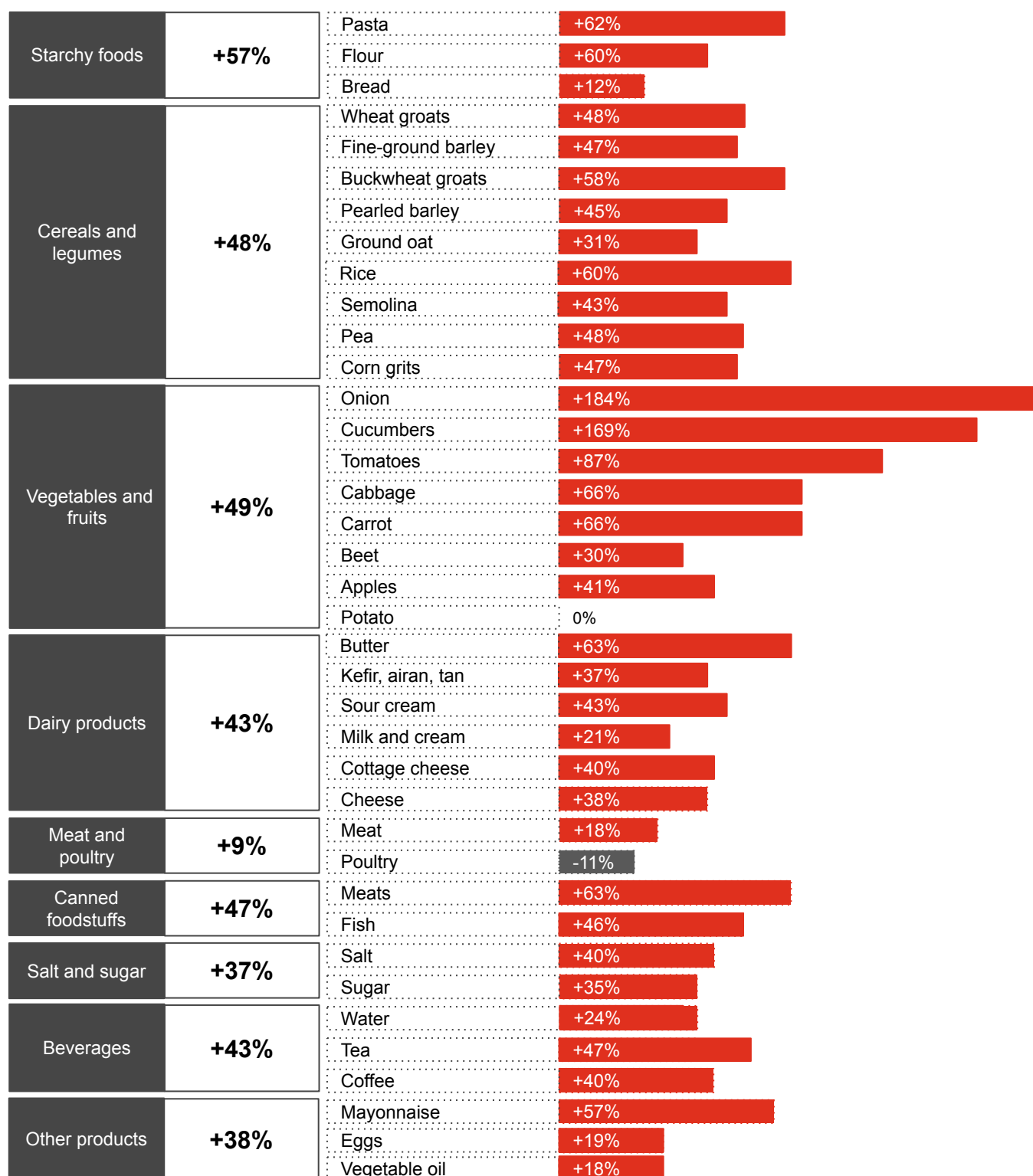
Our analysis is focused on lower price range food items. Thus, the analysis included products whose price did not exceed the minimum price and 25% of the difference between the minimum and maximum prices.

The calculation of the average price for each subcategory of products was carried out as follows:

- Identifying and removing product items whose price is abnormally far from other prices in the dataset
- Identifying and removing products that exceed the low price range
- Calculation of the average price for product subcategories in each analyzed period

Changes in food prices in 2022

Change in prices in December to January 2022 for the main categories and subcategories of food (%)





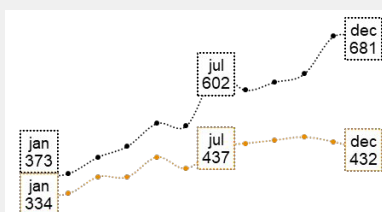
Source: PwC Kazakhstan Macroeconomic Survey, Q4 2022

Changes in prices for the main categories of products



Movements in average prices from January to December 2022 (current year) and the overall change in the average price in December to January 2022 by category for Kazakhstani and imported products (%).

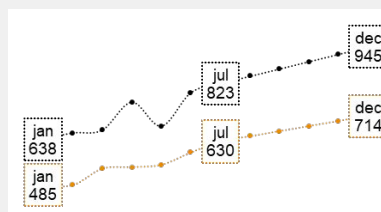
Starchy foods

 +29%
 +82%





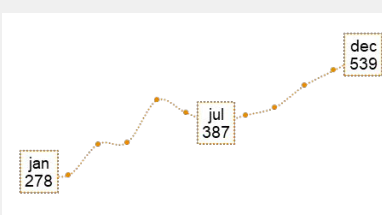
Cereals and legumes

 +47%
 +48%





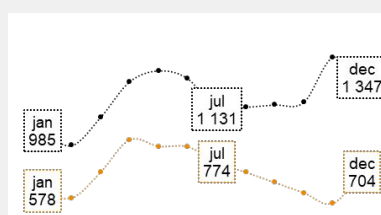
Vegetables

 +94%
 n/a*



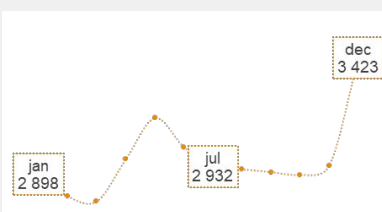
Fruits

 +22%
 +37%



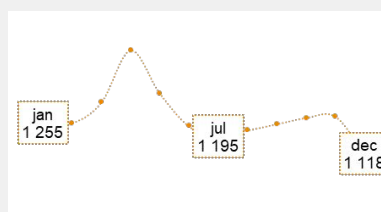
Meat

 +18%
 n/a





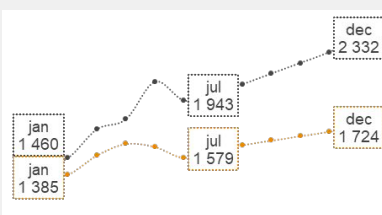
Poultry

 -11%
 n/a





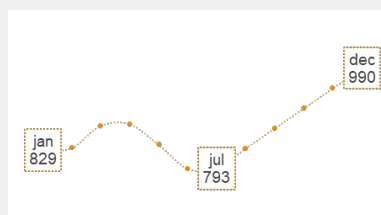
Dairy products

 +25%
 +60%





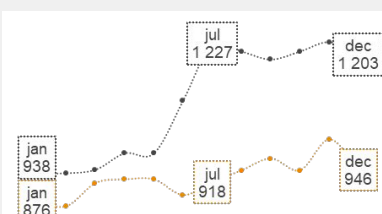
Eggs

 +19%
 n/a





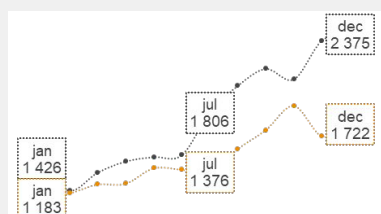
Vegetable oil

 +28%
 +8%





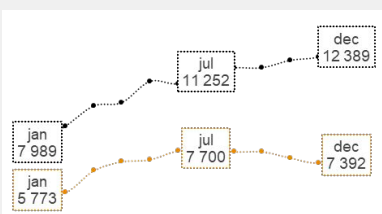
Mayonnaise

 +46%
 +67%





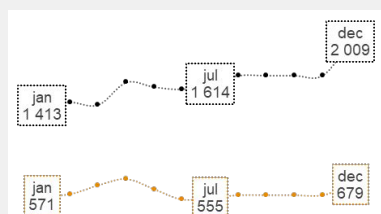
Tea and instant coffee

 +40%
 +36%



Sugar

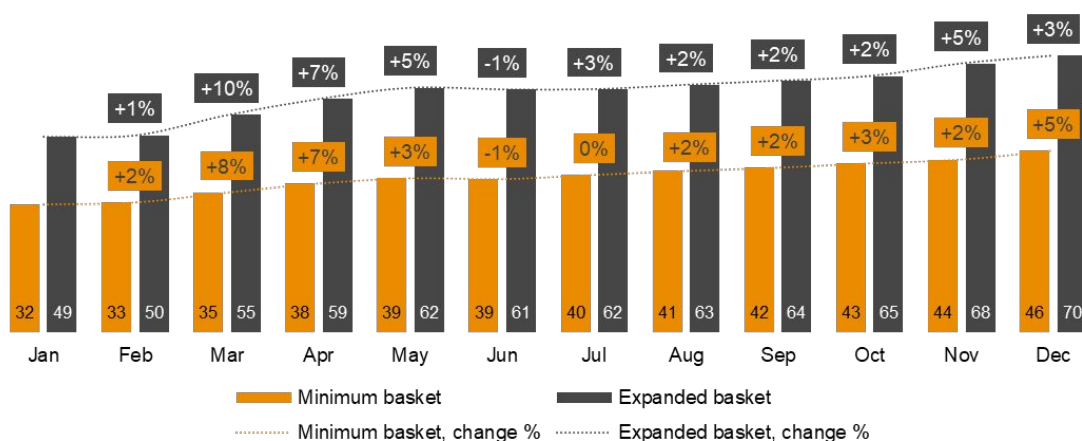
 +19%
 +42%



Change in the amount for the purchase of a one-time good basket

How did the amount to buy a one-time food basket change?

Amount (thousand KZT) and change in the amount in December to January 2022 (%)



42%

increase in the amount for the purchase of the **minimum basket**

41%

increase in the amount for the purchase of an **expanded basket**

Minimum basket



	Jan-22	Dec-22
Peas	561 ₸/kg	831 ₸/kg (+48%)
Buckwheat	764 ₸/kg	1203 ₸/kg (+58%)
Cabbage	132 ₸/kg	219 ₸/kg (+66%)
Potatoes	259 ₸/kg	260 ₸/kg (0%)
Onion	102 ₸/kg	290 ₸/kg (+184%)
Mayonnaise	1304 ₸/kg	2049 ₸/kg (+57%)
Pasta	648 ₸/kg	1050 ₸/kg (+66%)
Semolina	597 ₸/kg	852 ₸/kg (+43%)
Butter and margarine	1367 ₸/kg	2235 ₸/kg (+63%)
Milk and cream	406 ₸/ltr	492 ₸/ltr (+21%)
Carrot	145 ₸/kg	240 ₸/kg (+66%)
Flour	325 ₸/kg	520 ₸/kg (+60%)
Meat	2898 ₸/kg	3423 ₸/kg (+18%)
Poultry	1255 ₸/kg	1118 ₸/kg (-11%)
Oat groats	587 ₸/kg	771 ₸/kg (+31%)
Cucumbers	550 ₸/kg	1479 ₸/kg (+169%)
Pearl barley	448 ₸/kg	649 ₸/kg (+45%)
Tomatoes	523 ₸/kg	979 ₸/kg (+87%)
Vegetable oil	907 ₸/kg	1075 ₸/kg (+18%)
Rice	639 ₸/kg	1021 ₸/kg (+60%)
Sugar	992 ₸/kg	1344 ₸/kg (+35%)
Salt	865 ₸/kg	1209 ₸/kg (+40%)
Sour cream	1498 ₸/kg	2144 ₸/kg (+43%)
Cheese	2844 ₸/kg	3918 ₸/kg (+38%)
Cottage cheese	1924 ₸/kg	2701 ₸/kg (+40%)
Bread	89 ₸/kg	100 ₸/kg (+12%)
Tea	7928 ₸/kg	11631 ₸/kg (+47%)
Apples	654 ₸/kg	921 ₸/kg (+41%)
Eggs	829 ₸/10 pcs	990 ₸/10 pcs (+66%)
Total:	32 275 ₸	46 019 ₸

Expanded basket



Minimum basket + the following types of products:

	Jan-22	Dec-22
+ Oranges	901 ₸/kg	1133 ₸/kg (+48%)
+ Bananas	702 ₸/kg	465 ₸/kg (-34%)
+ Water	259 ₸/ltr	320 ₸/kg (+24%)
+ Pears	1100 ₸/kg	1857 ₸/kg (+69%)
+ Kefir, ayran, tan	495 ₸/ltr	681 ₸/kg (+37%)
+ Canned meat	3030 ₸/kg	4940 ₸/kg (+63%)
+ Canned fish	3643 ₸/kg	5309 ₸/kg (+46%)
+ Instant coffee	5834 ₸/kg	8149 ₸/kg (+40%)
+ Corn grits	510 ₸/kg	749 ₸/kg (+47%)
+ Lemons	1725 ₸/kg	1610 ₸/kg (-7%)
+ Tangerines	753 ₸/kg	1680 ₸/kg (+123%)
+ Millet	552 ₸/kg	817 ₸/kg (+48%)
+ Barley groats	392 ₸/kg	577 ₸/kg (+47%)
Total:	49 443 ₸	70 060 ₸



Annex to the macroeconomic review

**Summary table
of indicators**

Summary table of indicators

Section	Indicator	Period	Q2-21	Q3-21	Q4-21	Q1-22	Q2-22	Q3-22	Q4-22
Oil price	in medians of minimum values	1 year	57.0	60.0	68.0	77.5	83.5	77.5	77.5
		3 years	54.5	53.5	60.0	62.5	75.0	65.0	60.0
		5 years	56.0	50.0	50.0	52.5	60.0	50.0	50.0
	in medians of maximum values	1 year	71.0	77.5	90.0	105.0	120.0	103.5	99.0
		3 years	72.5	80.0	85.0	92.5	100.0	100.0	100.0
		5 years	75.0	80.0	85.0	80.0	100.0	90.0	90.0
	lower 30% of minimum values	1 year	45.0	45.0	51.7	66.3	72.5	58.8	61.3
		3 years	39.0	42.0	46.7	52.5	58.8	50.0	53.8
		5 years	35.0	40.0	40.0	41.3	42.5	38.8	42.5
	upper 30% of maximum values	1 year	77.8	85.0	101.7	117.5	140.0	120.0	118.8
		3 years	79.0	89.0	118.3	118.0	127.5	110.0	111.8
		5 years	88.0	99.0	123.3	126.3	125.8	118.3	111.3
USD/KZT exchange rate	in medians of minimum values	1 year	420.0	422.5	420.0	425.0	445.0	460.0	450.5
		3 years	430.0	432.5	430.0	445.0	488.0	485.0	480.0
		5 years	440.0	440.0	440.0	460.0	523.0	520.0	517.0
	in medians of maximum values	1 год	445.0	450.0	446.0	450.0	505.0	500.0	490.0
		3 years	463.0	490.0	480.0	500.0	550.0	550.0	550.0
		5 years	493.0	500.0	500.0	550.0	600.0	610.0	600.0
	lower 30% of minimum values	1 year	407.8	408.0	412.0	402.5	420.0	435.0	430.0
		3 years	413.4	404.0	407.0	407.5	395.0	438.0	430.0
		5 years	413.6	404.0	400.0	397.5	408.0	440.0	427.5
	upper 30% of maximum values	1 year	470.6	490.0	517.0	507.5	535.0	533.0	533.0
		3 years	522.2	565.0	640.0	557.5	575.0	633.5	633.5
		5 years	572.8	640.0	743.0	687.5	688.0	789.0	789.0
RUB/KZT exchange rate	in medians of minimum values	1 year	5.5	5.6	5.6	5.3	6.0	6.0	5.8
		3 years	5.5	5.6	5.7	5.4	5.3	5.0	5.0
		5 years	5.5	5.6	5.7	5.4	5.0	5.0	4.5
	in medians of maximum values	1 year	6.0	6.0	6.4	6.0	9.3	8.0	8.0
		3 years	6.2	6.2	6.5	6.2	8.3	8.0	6.8
		5 years	6.2	6.1	6.4	6.5	7.8	8.0	7.0
	lower 30% of minimum values	1 year	5.1	5.2	5.3	5.0	4.0	4.8	5.0
		3 years	4.9	5.3	5.2	4.9	3.7	4.0	4.0
		5 years	4.8	5.2	5.0	4.5	3.8	3.5	3.5
	upper 30% of maximum values	1 year	6.1	6.2	7.0	6.3	10.5	9.0	9.0
		3 years	6.8	6.7	7.9	6.7	11.2	9.4	9.4
		5 years	7.4	6.9	8.7	6.8	12.1	10.0	10.0

Summary table of indicators

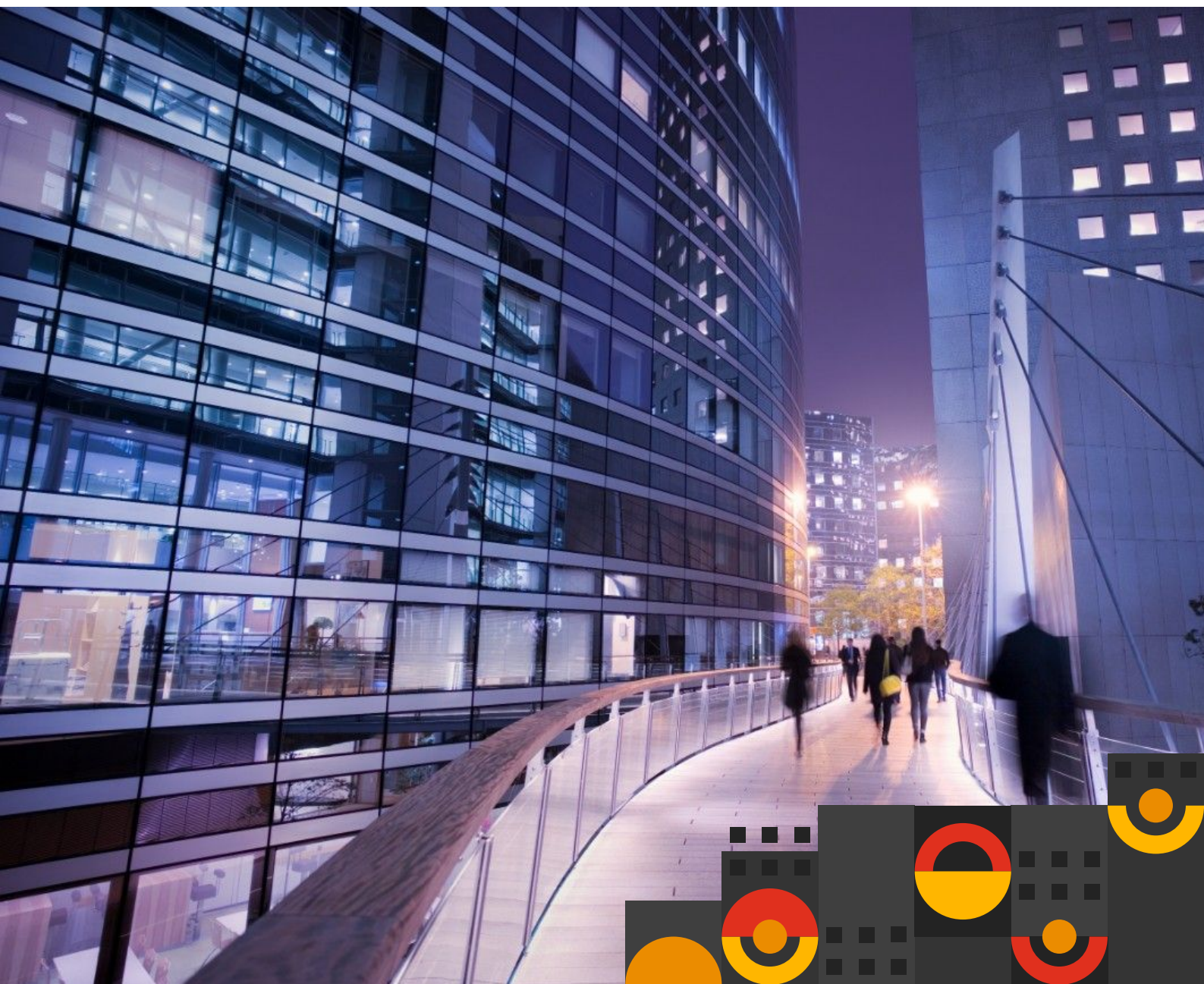
Section	Indicator	Period	Q2-21	Q3-21	Q4-21	Q1-22	Q2-22	Q3-22	Q4-22
USD/RUB exchange rate	in medians of minimum values	1 year	71.0	70.0	70.0	71.5	50.0	60.0	70.0
		3 years	71.0	71.0	70.0	73.5	62.5	70.0	72.5
		5 years	73.0	75.0	75.0	75.0	72.5	79.0	77.0
	in medians of maximum values	1 year	79.0	77.0	75.0	82.0	75.0	75.0	82.5
		3 years	80.0	80.0	80.0	85.0	90.0	90.0	100.0
		5 years	83.5	84.0	83.0	89.5	104.0	100.0	115.0
	lower 30% of minimum values	1 year	66.2	67.0	65.0	66.0	42.0	46.3	47.5
		3 years	66.2	64.8	64.0	65.8	51.3	51.3	53.8
		5 years	65.7	64.4	63.0	65.5	55.0	52.5	55.0
	upper 30% of maximum values	1 year	81.0	81.0	82.0	92.5	96.8	102.5	102.5
		3 years	87.4	86.8	85.0	97.5	116.3	111.3	111.3
		5 years	93.0	94.4	93.0	111.3	143.8	136.3	136.3
CPI expectations	in medians of minimum values	1 year	6.0	7.0	7.5	7.5	12.5	11.5	11.0
		3 years	5.0	5.0	6.0	6.0	8.0	8.0	8.5
		5 years	4.4	4.5	5.0	6.0	8.0	8.0	7.0
	in medians of maximum values	1 year	7.5	8.4	8.9	9.5	17.0	15.5	15.0
		3 years	6.5	7.3	8.0	8.8	11.0	12.0	12.0
		5 years	6.0	6.8	7.0	8.5	8.0	10.0	12.0
	lower 30% of minimum values	1 year	4.1	5.7	5.3	6.5	9.2	7.9	9.3
		3 years	3.2	4.6	4.2	5.3	5.3	5.0	5.5
		5 years	2.8	3.9	3.7	5.3	5.3	5.0	4.3
	upper 30% of maximum values	1 year	12.2	11.1	11.2	10.8	20.0	19.8	19.8
		3 years	12.3	10.8	11.3	11.0	21.5	18.5	18.5
		5 years	13.4	10.6	15.7	12.1	23.0	18.8	18.8
Base Rate Expectations	Base rate	1 year	8.6	8.6	8.6	10.8	13.9	13.5	14.0
		3 years	7.8	7.8	7.8	9.2	10.8	11.3	11.8
		5 years	7.2	7.2	7.2	8.1	8.9	9.3	9.8
	Corridor	1 year	1.1	1.1	1.1	0.9	1.5	1.6	1.5
		3 years	1.0	1.0	1.0	1.0	1.2	1.4	1.5
		5 years	1.0	1.0	1.0	1.1	1.3	1.4	2.2

Acknowledgements

We would like to thank each participant in our study for the time they took to complete the online survey and provide detailed commentaries. We hope that the result of our joint efforts will contribute to a deeper understanding of the current processes and events in the economy of Kazakhstan.

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