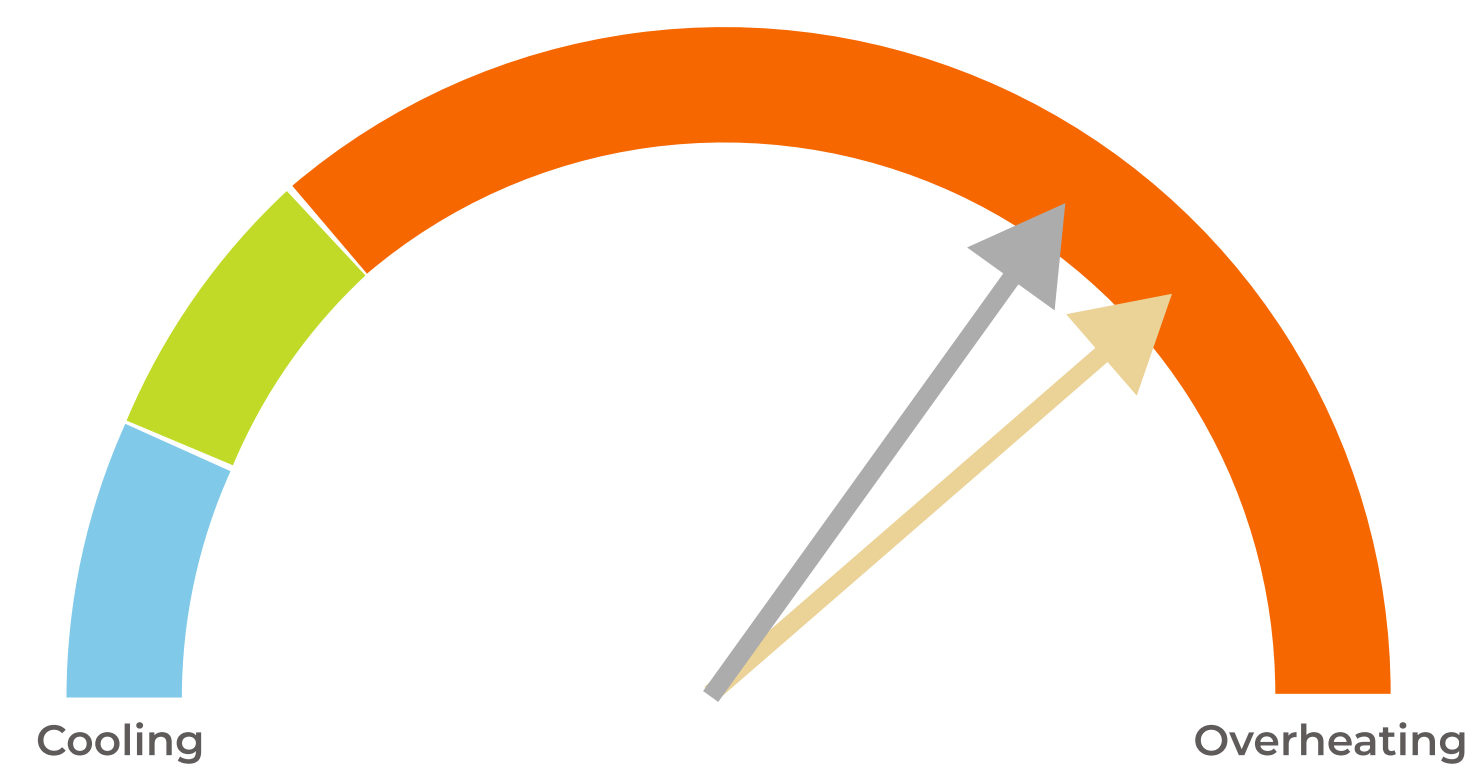## *Dashboard for assessing current economic activity*

In July 2022 Jusan Analytics team **has developed a dashboard for assessing current economic activity**. The dashboard allows you to understand what phase of the short-term cycle the economy is in, as well as predict the likely actions of economic agents **(inflation, exchange rate, business activity, rate)**.

Cooling   Overheating

According to the results of the developed dashboard, **22 out of 29 factors indicate a steady overheating of the econom**y. The analysis was carried out in 4 blocks: inflation, monetary, economic and external terms.

Designations	Number of indicators	
	Current	Previous
Overheating 🔴	20	22
Growth 🟢	5	4
Cooling 🔵	4	3
Total	**29**	**29**

1 indicator in the inflation block and 2 in the monetary terms block have moved into the cooling zone compared to the previous dashboard. However, the increased overheating in the previously observed indicators brings the attention of the Government and the National Bank of the Republic of Kazakhstan to continue assuming measures to stabilize the situation. **We expect a further base rate hike** at the next meeting of the National Bank of the Republic of Kazakhstan Monetary Policy Committee.

A semantic analysis of the National Bank of the Republic of Kazakhstan press release was also carried out.

JUSAN ANALYTICS

109/02/2022

Inflation block

Factors	Target indicator	Comments on the target indicator	Indicators			Estimated impact	
			Monthly data				
			Current value	Average for 3 months	Average since the beginning of the year	Current	Previous
Current inflation rate (YoY)	4-6%	The target indicator of the National Bank of Kazakhstan for 2022	16.1%	15.2%	13.4%	🔴	🔴
Current inflation rate (MoM)	0.6%	The average value in this month for 2019-2021	1.4%	1.4%	1.7%	🔴	🔴
Inflation expectations	5.0%	A cap on the target corridor of the NBK in a year	15.6%	14.0%	11.9%	🔴	🔴
Real interest rate (difference between TONIA and inflation expectations for the year ahead)	3.6-3.7%	Research data of the NBK	-2.11%	-0.11%	1.79%	🔴	🔴
Housing prices (MoM)	0.40%	The average value of the change in the sale prices of new housing in a given month for 2019-2021	0.5%	1.1%	1.7%	🔴	🔴
	0.93%	The average value of the change in the resale prices of apartments in a given month for 2019-2021	0.8%	0.7%	2.4%	🔵	🔴

Designations

Overheating 🔴
Growth 🟢
Cooling 🔵

Source: BNS, NBK, Jusan Analytics calculations

2

Conclusions on the inflation block:

Inflation statistics in August 2022 indicate **an acceleration in consumer price growth to 16.1% in annualized terms** (15.0% in July). At the same time, there is **a faster growth in monthly inflation** – 1.4% (1.1% in July). This was set forward by the increase in prices for some types of non-food products, including seasonal demand for stationery and school supplies at the beginning of the new school year, the resumption of growth in the cost of utilities, which started after the end of the moratorium on tariff increases, as well as a less noticeable seasonal reduction in the cost of food products. Thus, the price increase occurred for all components of the consumer basket.

Food and non-food products in August became more expensive in annualized terms by 20.8% and 15.5%, respectively (by 1.0% and 1.8% for the month). Service inflation rose sharply after being at the same level for a long time to 10.1% YoY (1.6% MoM).

Despite the step of the National Bank of the Republic of Kazakhstan to tighten monetary conditions, the observed acceleration of inflationary processes along a soft fiscal policy carries significant risks of the transition of the current price growth into an inflationary spiral. This is also impacted by the **household inflation expectations**, which by the results of the National Bank of the Republic of Kazakhstan survey worsened in July compared to last month. The estimate of inflation expectations for the year ahead was 15.6% (14.8% in June). The deterioration in household expectations is a consequence of the tenge weakening, growing uncertainty amid concerns about a developing cyclical crisis in the global economy and the consequences of the geopolitical conflict between Russia and Ukraine. The observed increase in pessimism in inflation expectations without appropriate measures that are aimed at attaining price stability will contribute to further strengthening in the domestic inflationary background.

Taking into account the actual inflation data in August, the real interest rate level becomes more negative. As a result, the current base rate level **does not have a proper limiting effect on consumer demand** and local prices.

Монетарлық жағдайлар блогы

Factors	Target indicator	Comments on the target indicator	Indicators			Estimated impact	
			Monthly data				
			Current value	Average for 3 months	Average since the beginning of the year	Current	Previous
Retail lending	657 419 million tenge	Average value for 2019-2021	1 164 726 million tenge	1 062 095 million tenge	921 045 million tenge	🔴	🔴
Lending to the trade and services sectors	543 660 million tenge	Average value for 2019-2021	582 553 million tenge	557 802 million tenge	567 711 million tenge	🔴	🔴
Loans/deposits	100%	Average value for 2019-2021	103%	104%	103%	🔴	🔴
Demand for currency in currency offices	169 729 million tenge	Average value of foreign currency sales for 2019-2021	82 176 million tenge	111 307 million tenge	137 810 million tenge	🔵	🟢
Tenge deposits movement*	Increase		3.1%	8.1%	4.6%	🔵	🟢
Foreign exchange deposits movement*	Decrease		+3.5%	+8.9%	+1.6%	🔴	🔵
Dollarisation*	Decrease		+0.09 p.p.	+0.18 p.p.	-0.67 p.p.	🟢	🔵
Monetary multiplier	2.2	Average value for 2019-2021	2.85	2.97	3.13	🔴	🔴
Credit multiplier	1.8	Average value for 2019-2021	2.47	2.67	2.72	🔴	🔴
Reserve multiplier	0.3	Average value for 2019-2021	0.20	0.20	0.17	🔴	🔴

Designations

Overheating	🔴
Growth	🟢
Cooling	🔵

* changes for 3 months and since the beginning of the year are presented

Source: National Bank of the Republic of Kazakhstan, Jusan Analytics calculations

Conclusions on monetary terms block:

Retail lending increased by 8% in June. According to our assessment, all indicators exceed the optimal values. For example, they exceed new retail loan issuance by 77%. The aggressive growth of retail, namely consumer lending, directly indicates the expansion of credit demand in the economy and harms inflation. The growth in lending to the trade and services sectors indicates overheating too, the growth for the month was 5.5%, which is also above the optimal level. **Such unproductive credit growth continues to influence the excess demand in the economy in the presence of several structural supply problems.**

Over the month, a decrease in the tenge loan to deposit ratio by 1.1 p.p. was observed due to an increase in the latter. However, this growth still does not correspond to the increase in tenge funding and indicates **an overheating of the tenge lending market that is not borne out by the expansion of savings**.

There is an increase in the balance of demand for cash in the market. During the month, the demand for the currency increased almost 2 times after its record decline in June. Despite the high growth in demand, the value is still 94% below optimal. In our opinion, the growth is associated with the holiday season, but continuing high demand for the tenge was in July. In our view, low demand values are related to the influx of foreign currency (dollars and rubles) from Russian citizens conducting financial transactions on the territory of Kazakhstan. Thus, despite the assessment of such a signal as a reduction in excess activity, this parameter reflects a lesser extent of the internal terms and demand for the currency of citizens of Kazakhstan in the current conditions.

In July, there was an increase in tenge deposits by 3.14%, which shifted the overall dynamics of the growth of tenge deposits to the growth zone. However, in June foreign currency deposits increased by 13.88%, in July the growth was 3.52%. **The level of dollarization increased by 0.09 p.p.** during the month. Previously, there was a systematic decrease in dollarization due to the outflow of foreign currency deposits from the system, which at the same time were not reflected in the tenge deposit increase.

Despite the positive dynamics over the month, almost all monetary multipliers are deep in the "red" zone, indicating the need to slow down credit activity at the current parameters of funding the banking system and available reserves. Thus, any additional external injections, including those of an emission nature, will lead to an even greater increase in excess credit demand and debt load of the economy.

Economic terms block

Factors	Target indicator	Comments on the target indicator	Indicators					Estimated impact	
			Monthly data			Quaterly data			
			Current value	Average for 3 months	Average since the beginning of the year	Current value	Previous quarter	Current	Previous
Output gap*	0.0%	International practice				0.5%**	0.4%**	🟢	🟢
Non-oil budget deficit/GDP	0.0%					-8.7% (-11.1%)***	-4.3% (-6.3%)***	🔴	🟢
Short-term economic indicator	103.3%	Average value for 2019-2021	100.5	103.9	104.8			🟢	🔴
Business activity index	50.0%	Global practice	48.0	48.6	49.1			🔵	🔵
"Hours" of the business cycle		NBK data	Growth	Growth	Growth			🟢	🟢
Consumer expenditures	9.7%	The average value of changes in household consumption expenditures for 2019-2021				16.0%	12.2%	🔴	🔴
Volume of goods and services trade	10.3%	Average retail trade change for 2019-2021	22.3%	19.7%	15.5%			🔴	🔴
	9.0%	Average value of wholesale trade change for 2019-2021	20.8%	18.2%	24.6%			🔴	🔴
Import of goods	7.6%	Average value of wholesale trade change for 2019-2021	18.9%	14.2%	16.1%			🔴	🔴

Designations

🔴 Overheating
🟢 Growth
🔵 Cooling

* Calculated using the Hodrick-Prescott filter
** Based on the dynamics of GDP in average annual prices in 2005
*** Calculations according to the methodology of the Ministry of Finance of the Republic of Kazakhstan

Source: BNS, TradingEconomics.com, fao.org, Jusan Analytics calculations
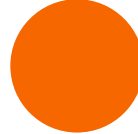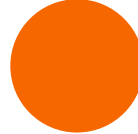
Conclusions on economic terms block:

The output gap in the 2nd quarter increased by 0.1 p.p. and amounted to 0.5% (in Q1 2022 was 0.4%). **This increase is caused by the outpacing growth of the industrial sector**, namely the manufacturing sector. Thus, the country's GDP in the 2nd quarter of this year grew by 3.4% (in annualized terms) and amounted to 39.6 trillion tenge. At the same time, the contribution of the manufacturing sector increased by 5.8%. Such a significant increase in the components of the sector is observed in the markets for the production of motor vehicles, other finished products and basic pharmaceutical products.

Due to the growth of the expenditure part of the budget, the state budget **has moved to a deficit zone** again and amounted to 1.6% of GDP (-3.1% in Q2 2021). The non-oil budget deepened to -8.7% of GDP (-9.5% in Q2 2021). The growth of budget expenditures leads to excessive stimulation of demand in the economy, which in turn **puts additional pressure on prices, preventing market adjustment and contributing to a new round of price increases with a positive response from aggregate expenditures (signs of an inflationary spiral)**.

The short-term economic indicator for 7 months of 2022 increased by 4.0% (in July by 0.5%) due to the **continued increase in basic industries** (in annualized terms: construction +8.6%, communications +6.5%, trade +6.2%, transport +5.6%, industry +2.7% and agriculture +2.1%). The growth of the short-term economic indicator is above the past (+3.7%) and pre-crisis 2019 levels (+4.4%). This **indicates a fairly confident growth of the economy of Kazakhstan**. However, the value of the short-term economy indicator in July was below the target, which may indicate a possible stabilization of economic growth close to the potential level. And this, carries more risks than benefits in the context of a significant increase in inflation.

Consumer demand continues to grow and exceeds the level of previous years, which leads to further strengthening of inflationary processes. Consumer expenditures, which account for more than 90% of all household expenditures, increased by 16.0% YoY in the 1st quarter of 2022 (by 6.4% in Q1 2021) and amounted to 201.8 thousand tenge on average per capita. Of these, food products account for 54%, non–food products for 26%. The cost of market services is 19%. Retail trade in July increased by 22% YoY (in June – by 8% YoY), wholesale trade +21% YoY (+2% YoY in June). It should be noted that such an increase is most likely due to increased demand for goods from Russians, we see similar dynamics for certain import items (clothing, electronics, automobile components).

External terms block

Factors	Target indicator	Comments on the target indicator	Indicators			Estimated impact	
			Monthly data				
			Current value	Average for 3 months	Average since the beginning of the year	Current	Previous
The price of Brent crude oil	$ 90.0 per barrel	According to the amendments to the state budget, which were approved in May 2022, the price of crude oil (the price of $ 60 per barrel was previously set)	$ 97.3 per barrel	$ 106.5 per barrel	$ 103.9 per barrel	🟢	🟢
FAO Consumer Price Index	106.3	Average for 2019-2021	138.0	144.4	148.2	🔴	🔴
Inflation in the main trading partner countries	4.8%	Russia, average price change in 2019-2021	15.1%	16.0%	1.4.4%	🔴	🔴
	7.1%	China, average price change in 2019-2021	3.2%	2.6%	1.8%		
	1.7%	The EU, average price change in 2019-2021	9.8%	9.4%	8.0%		
	15.7%	Turkey, average price change in 2019-2021	79.6%	77.2%	66.6%		
Dollar Index	95.2	Average value for 2019-2021	107.2	106.1	101.7	🔴	🔴

Source: BNS, TradingEconomics.com, fao.org, Jusan Analytics calculations

Designations	
Overheating	🔴
Growth	🟢
Cooling	🔵

8

Conclusions on external terms block:

In August 2022, there was a slight decrease in pressure from high world food and energy prices. The growing **concern about the prospects for global economic growth, together with the monetary tightening by key economies of the world, led to a decrease in aggregate demand**, which affected world prices.

The FAO Food Price Index dropped 2.7 points over the month and amounted to 138.0 points. The decline in world food prices is associated with the onset of the new harvest season in the Northern Hemisphere, and the resumption of exports from the ports of Ukraine. However, compared to the same period last year, the current price level is still high (7.9% higher) and contributes to further inflationary background strengthening. In addition, the observed adverse weather conditions carry risks on the supply side of food markets, which can also cause a new hike in prices.

The oil price for July decreased by 7.4% and fluctuated on average at 97.4 dollars per barrel level. A more significant decline in oil prices limited the supply issues.

Inflation in all partner countries of Kazakhstan exceeds the optimal values for these countries. In July, inflation in Russia was 15.9%, in the EU – 9.8%, and Turkey – 79.6%. In China, consumer inflation showed an increase of 3.2%. At the same time, the current inflation rate in China has been the highest in the last 2 years, which indicates an increase in inflationary processes, including in the world's second economy.

The Dollar Index averaged above 107.2 points in August 2022 (in July – 107.0). Since the beginning of the year, the average Dollar Index value is 101.7, which is higher than the average for the last 3 years (95.2) and **shows a continued increase in pressure from the dollar**.

Analysis of press releases

We have carried out a semantic analysis of the National Bank of the Republic of Kazakhstan "On maintaining the base rate at 14.5%" press release dated 07/25/2022 and noticed that the word "inflation" was used 24 times, "growth" - 11, "price" – 9, "annual", "high", "June", "rate" and "economy" – 7 times, and the word "USA" - 6 times. We can see a change in the frequency of keywords. For example, if the frequency of the word "growth" in the last press release was 2.33%, then this time -1.63%. The word "inflation" has become more common: the frequency of it was 1.88% in the last release, in the current one it is 2.08%. The frequency of the word "price" decreased by 0.35 p.p.

Thus, it can be assumed that the **key factors in approving the base rate are the growth rates of prices/inflation and the US Federal Reserve rate.**

Phrase/word	Number	Frequency, %
"inflation"	24	2.08
"growth"	11	1.63
"price"	9	1.34
"high"	7	1.04
"annual"	7	1.04
"June"	7	1.04
"rate"	7	1.04
"economy"	7	1.04
"USA"	6	0.89

Using https://advego.com/text/seo/

Methodology

we have used The Taylor Rule as a theoretical basis

The Taylor Rule is a monetary policy rule that determines how much it is necessary to change the interest rate in case of changes in GDP, inflation, and other economic terms. The rule was invented to scientifically and systematically determine which monetary policy should meet the task of maximum employment and price stability, as well as to make the monetary policy of the central bank more predictable.

The Taylor Rule Formula is the following:

$$i_t = \pi_t + r_t^* + a_\pi(\pi_t - \pi_t^*) + a_y(y_t - \bar{y}_t).$$

i_t — interest rate;

π_t — level of actual inflation;

π_t^* — desired level of inflation, the target of the monetary regulator;

r_t^* — estimated level of equilibrium interest rates;

$y_t - \bar{y}_t$ — he output gap, the difference between actual and potential GDP, determines the phase of the cycle relative to the long-term growth trajectory

Our interpretation of the economic terms for the dashboard:

The dashboard we have built conditionally divides The Taylor Rule into three blocks, either way corresponding to the factors that are used in the basic equation.

Moreover, we have increased the number of explanatory factors, and also added some f leading ones. The data on the relevant factors are evaluated, as a result of which the degree of their deviation from the optimal level is determined. **The deviation of the indicators in the negative direction indicates an overheating of the economy** or other problems requiring a tightening of fiscal and monetary terms. **The decrease indicates the need for additional incentives.**

- **Inflation block** is the main indicator of the disequilibrium of economic policies, overheating of economic activity, and the presence of excess demand;

- **Monetary terms block** are leading factors of inflation, interpretation, and replacement of the equilibrium rate factor in the basic Taylor equation;

- **Economic terms block** gives a broader picture and interpretation of whether there is a positive or negative output gap.

Important clarification of The Taylor Rule: several external conditions must be taken into account for small open economies.

- **External terms block** shows the most relevant external factors that can have a major impact on the phase of the current cycle.

A set of results for each indicator reflects the current state of the economy and the expected reaction of regulators within the cycles: **"overheating"**, **"growth"**, and **"cooling"**. At the same time, the lack of an appropriate response will cause further deterioration of indicators, exacerbating overheating or slowing down the economy.

Disclaimer:

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