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R95 **Russian Economy in 2022. Trends and outlooks. (Issue 44) /** [V. Mau et al; scientific editing by Kudrin A.L., Doctor of sciences (economics), Radygin A.D., Doctor of sciences (economics), Sinelnikov-Murylev S.G., Doctor of sciences (economics)]; Gaidar Institute. – Moscow: Gaidar Institute Publishers, 2023. – 521 pp.: illust.

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The review “Russian Economy. Trends and Outlooks” has been published by the Gaidar Institute since 1991. This is the 44th issue. This publication provides a detailed analysis of main trends in Russian economy, global trends in social and economic development. The paper contains 5 big sections that highlight different aspects of Russia’s economic development, which allow to monitor all angles of ongoing events over a prolonged period: the monetary and budget spheres; financial markets and institutions; the real sector; social sphere; institutional changes. The paper employs a huge mass of statistical data that forms the basis of original computation and numerous charts confirming the conclusions.

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Russia's monetary policy in 2022[1]

1.1.1. The main trends of the monetary policy

In 2022, the Russian economy experienced a profound negative shock associated with the imposition of sanctions against Russia by a number of developed countries, including the freeze of the Bank of Russia's international reserve assets, Russian banks being cut out of international payment systems, restrictions on imports of Russian goods and services and exports of technologies to Russia, and some other measures. The shock gave rise to pronounced instability in Russia's financial market and forced the Central Bank of the Russian Federation to sharply tighten its monetary policy in order to prevent the outflow of funds from the banking system.

At the same time, on the eve of the crisis, the movement pattern of inflation in Russia was already significantly above the target because of the aggressive expansion of aggregate demand after the COVID-19 pandemic coupled with limited opportunities for increasing supply. According to the results as of end of January 2022, it stood at 8.7%, thus determining the next raise of the key rate by the Bank of Russia on February 11, 2022, by 1 p.p. to 9.5% per annum, which is a record high of the entire period since May 2017.

In late February 2022, as a result of an unprecedented deterioration in external conditions, the risks of a destabilization of prices and financial instability increased significantly, which urged the Bank of Russia, together with the Russian Government

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and other bodies of authority, to launch a package of anti-crisis measures. At the end of February 2022, the Central Bank of the Russian Federation, in the situation of a record capital outflow and the ruble weakening to a historic low,[1] having lost the ability to exert a stabilizing effect on the foreign exchange market by forex interventions as a result of the freeze of its most liquid international currency reserves, imposed tight restrictions on the movement of capital (banning the payment of coupons and dividends to non-residents; temporarily banning non-residents from selling Russian assets; introducing a commission on the purchase of foreign currency on the stock exchange and banning the sale of cash currency; requiring the mandatory sale of 80% of export earnings within a period of no more than 3 days after its receipt; banning the export from Russia of foreign cash in excess of the equivalent of $10,000; establishing a special procedure for withdrawing cash from individual foreign currency deposits with banks; introducing a 30% commission for the individuals buying foreign currency through brokers, etc.). Alongside these measures, the Bank of Russia on February 28, at its extraordinary Board of Directors' meeting, raised the key rate by 10.5 p.p. to a record high of 20% per annum. The imposed restrictions coupled with the tightening of monetary policy made it possible to curb the rapid capital outflow and strengthen the ruble.[2]

From April 2022 onwards, when the risks to price and financial stability were no longer on the rise, the Bank of Russia launched a monetary policy easing cycle, during which the key rate was reduced six times in a row: on April 11, April 29, and May 16, by 3 p.p. to 11% per annum; on June 10 and July 22, by 1.5 p.p. to 8.0% per annum; and on September 16, by 0.5 p.p. to 7.5% per annum. The downward movement of the key rate ended on October 28, when the regulator left it unchanged at 7.5% per annum. This happened in response to the increasing medium-term inflationary risks associated with the expectations of tightening trade and financial restrictions, problems on the supply side (difficulties with the supply of components and equipment, and mounting tension in the labor market caused by the partial mobilization). In addition, the decision of the Central Bank of the Russian Federation was adopted with due regard for the rising inflationary expectations in the context of increasing uncertainty and geopolitical tensions, as well as the pro-inflationary nature of the budget policy (an increase in budget expenditure to Rb29.43 trillion in 2023, while the planned budget expenditure for 2022 amounted to Rb23.7 trillion; and risks of a widening budget deficit in 2023–2024). At the Bank of Russia Board meeting on December 16, the key rate was also kept unchanged.

As the situation in the foreign exchange market was becoming stabilized, and the ruble had significantly strengthened, the Central Bank of the Russian Federation began to gradually relax some of its foreign exchange control measures. Thus, the requirement for the mandatory sale of export earnings was reduced from 80% to 50%, and on June 10 it was altogether canceled. Besides, the commission for the purchase of foreign currency on the exchange for individuals was abolished,

1 Rb120.4 per US dollar as of March 11, 2022.
2 By the end of Q1 2022, the ruble strengthened enough to reach its pre-crisis level.

and the limit on currency transfers abroad by individuals was significantly raised, from $5,000 to $10,000 in April, and then to $50,000 in May 2022. In addition, from the second half of April, banks were allowed to sell foreign currency cash to individuals, and it was delivered to the cash desks on April 9. From May 20 onwards, the Central Bank of the Russian Federation allowed banks to sell any foreign currency cash to individuals without restrictions, with the exception of US dollars and euros. From August 8, 2022, non-residents from friendly countries, as well as non-residents whose ultimate beneficiaries were Russian individuals and legal entities, were admitted to trading on the Moscow Exchange.

By introducing capital control measures and timely implementing a tight interest rate policy, the Bank of Russia managed to stabilize the situation in the domestic forex market and reduce inflationary pressure: after inflation reached a peak value of 17.8% in April, it dropped to 12.6% by October. It should be noted that throughout the year 2022, inflation was accelerating in most countries around the world due to high prices for energy carriers and other commodities, the consequences of long-term stimulus policy in the major developed economies during the COVID-19 pandemic, and problems with logistics. Thus, as of the end of June 2022, inflation in the USA hit its record high of 9.1% since 1981. In the euro area, inflation reached a historic high of 10.6% by October 2022, and in the UK, a 40-year peak of 11.1%.

In face of dominant pro-inflationary risks, the central banks of the majority of developed and developing economies tightened their monetary policies. In developed countries, the tightening of monetary policy began somewhat later than in developing countries, and the key rates were being raised at a slower pace, thus lagging behind the inflation rates (*Table 1*). For example, at its July meeting, the European Central Bank raised the monetary policy rate for the first time since 2011, in a one-time jump by 50 p.p. After the next steps towards monetary policy tightening had been implemented in September, November and December 2022, the key rate of the ECB reached 2.5% per annum.

At the same time, at year-end 2022, in spite of the active key rate increases by central banks, the real rates measured on the basis of actual inflation remained negative in most regions: -7.9% per annum in the EU; -7% per annum in the UK; -3.2% per annum in Norway; -3.6% per annum in Kazakhstan; and -1.6% per annum in Chile (*Fig. 1*). As inflation was climbing up in 2022, the key rate in Russia moved from positive to negative zone in real terms (-4.4% per annum in December 2022). At the end of December 2022, a positive real key rate was observed in Brazil (7.96% per annum), Mexico (2.68% per annum), and India (0.5% per annum).

According to the Bank of Russia estimates, in order to gradually move inflation towards the target, it will be necessary to maintain the key rate within the average range of 7–9% per annum in 2023, and 6.5–7.5% per annum in 2024. In response to the easing inflationary pressure, the Bank of Russia will be bringing down the key rate, returning it to the long-term neutral range of 5–6% per annum in 2025.

Table 1

Inflation and key rates in some developed and developing countries

	Actual inflation, December 2022 to December 2021, %	Key rate, as of end of December 2022, % per annum
Developing countries		
Indonesia	5.51	5.5
India	5.72	6.25
Brazil	5.79	13.75
South Africa	7.20	7.00
Mexico	7.82	10.50
Peru	8.46	7.5
Russia	**11.90**	**7.50**
Chile	12.8	11.25
Colombia	13.12	12
Poland	16.60	6.75
Kazakhstan	20.30	16.75
Hungary	24.50	13.00
Developed countries		
Norway	5.9	2.75
Canada	6.3	4.5
USA	6.5	4.5
New Zealand	7.2	4.25
Australia	7.8	3.1
Iceland	9.6	6
EU	10.4	2.5
United Kingdom	10.5	3.5
Czech	15.8	7
Norway	5.9	2.75
Canada	6.3	4.5

Source: central banks' websites.

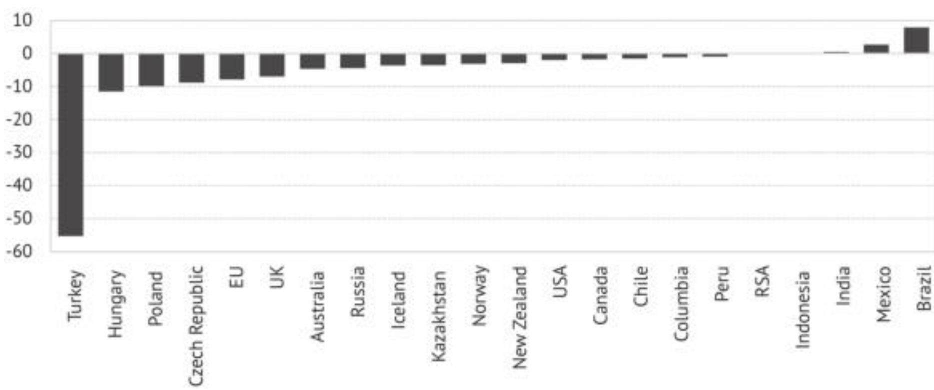

Fig. 1. Real key rate as of end of December 2022, % per annum (based on the actual inflation pattern over the previous 12 months)

Source: central banks' websites; Gaidar Institute calculations.

1.1.2. The money market

Against the backdrop of high turbulence and uncertainty in the money market in late February-March 2022, commercial banks displayed an increased demand for ruble liquidity. In this connection, the Bank of Russia implemented a package of measures designed to support the banking sector. As a result, by year end 2022, the amount of loans attracted by credit institutions from the Bank of Russia increased by 45%, to Rb4.5 trillion (vs Rb3.1 trillion as of January 1, 2022) (*Fig. 2*).

Thus, over the period from February 28 to March 1, REPO auctions were held without a set maximum allotment amount, and funds were provided to all their participants in the amounts requested by them against appropriate security. Banks' debt under REPO auctions averaged Rb4.6 trillion, which is higher than the corresponding average indices recorded during the previous crisis episodes. By way of doing its utmost to cover the possible need of banks for current liquidity, the Bank of Russia significantly extended its Lombard List and relaxed the requirements for collateral in the framework of refinancing operations for non-marketable assets. The debt of banks on loans secured by non-marketable assets in the period from late February to mid-March 2022 averaged Rb3 trillion, which corresponds to the level of 2015. The reason behind the increased demand for this type of loans was the fact that since March 1, the interest rate for 2-to-90-day loans secured by non-marketable assets was reduced to match the upper limit of the interest rate band.

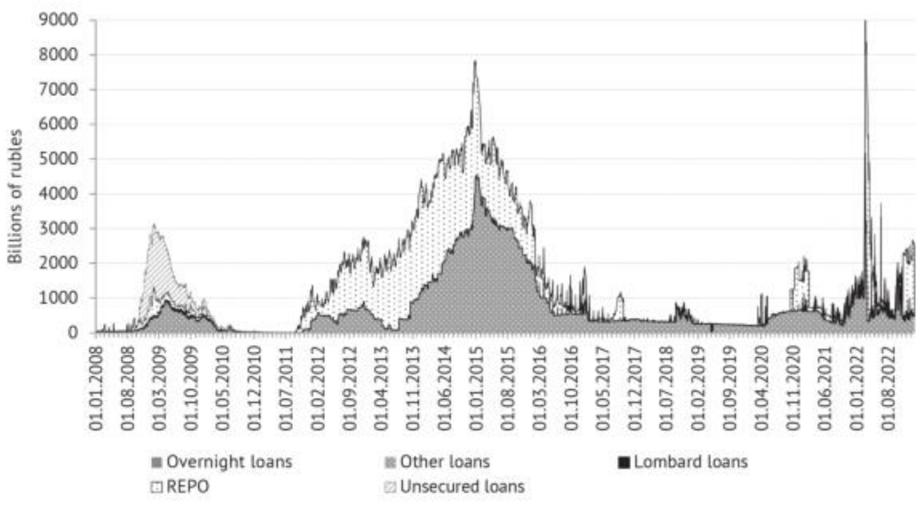

Fig. 2. Debt of commercial banks to the Bank of Russia, rubles, 2008–2022

Source: Bank of Russia.

From March 25, the Bank of Russia introduced Lombard loans for terms from 2 to 90 days at a floating rate, which also corresponded to the upper limit of the interest rate band. As a result, over the period from March through December 2022, the banks' average debt on Lombard loans amounted to Rb73.2 bn, while a year earlier it stood at zero.

In order to maintain the stability of credit institutions and bring the overnight money market rate closer to the key rate, the Bank of Russia, over the period from late February through early April 2022, held on a daily basis fine-tuning overnight auctions in the amount of Rb3 trillion. The average daily value of closed transactions was Rb1.4 trillion, at a weighted average rate of 19.5% per annum.

In 2022, the banking sector continued to display demand for the Bank of Russia's deposit auctions. This could be explained by the heterogeneous situation with liquidity among banks: some banks attracted funds, while others, on the contrary, placed their funds as deposits. The volume of funds raised by the Bank of Russia through weekly deposit auctions averaged Rb1.8 trillion at a weighted average rate of 8.45% per annum (vs Rb1.3 trillion in 2021 at a weighted average rate of 5.75% per annum). In order to maintain short-term money market rates close to the key interest rate in 2022, the Bank of Russia repeatedly held fine-tuning overnight deposit auctions. The average volume of funds raised through these transactions amounted to Rb1.1 trillion at a weighted average rate of 16.04% per annum (vs Rb1.0 trillion in 2021 at a weighted average rate of 6.0% per annum).

The proximity to the key rate of the short-term money market overnight rates in the interbank lending segment and their position within the interest rate band, ensured by the Bank of Russia's measures designed to provide and absorb liquidity, created proper conditions for the Bank of Russia to be able to effectively influence, by its key rate decisions, the interest rate fluctuations across the economy, thus achieving inflation targets. In the context of tightening monetary policy, the RUONIA rate reached 10.4% per annum on average in 2022 (vs average 5.6% per annum in 2021) (*Fig. 3*).

Over January-March 2022, the situation in the money market was characterized by a shortage of liquidity.[1] While in January 2022 this happened because of an outflow of liquidity from budget operations, the liquidity deficit in late February and March was caused primarily by the outflow of funds into cash in face of general panic and uncertainty (+14%, or by Rb2 trillion in February 2022). In April 2022, as a result of the stabilization of the situation with ruble liquidity, the money market returned to a state of liquidity surplus: over the period from April through September 2022, the structural liquidity surplus amounted on average to Rb2.1 trillion (vs Rb1.4 trillion in April-September 2021) (*Fig. 4*). It emerged thanks to the return of cash to banks and an inflow of funds generated by budget operations.

1 According to the Bank of Russia's definition, the structural liquidity deficit/surplus is the difference between its aggregated claims on the banking sector and its aggregated liabilities to the banking sector. The banking sector structural liquidity deficit is the state of the banking sector which implies the existence of banks' permanent need for raising funds with the Bank of Russia operations. A reverse situation, that of a permanent need of allocating funds through the Bank of Russia operations, represents a structural liquidity surplus.

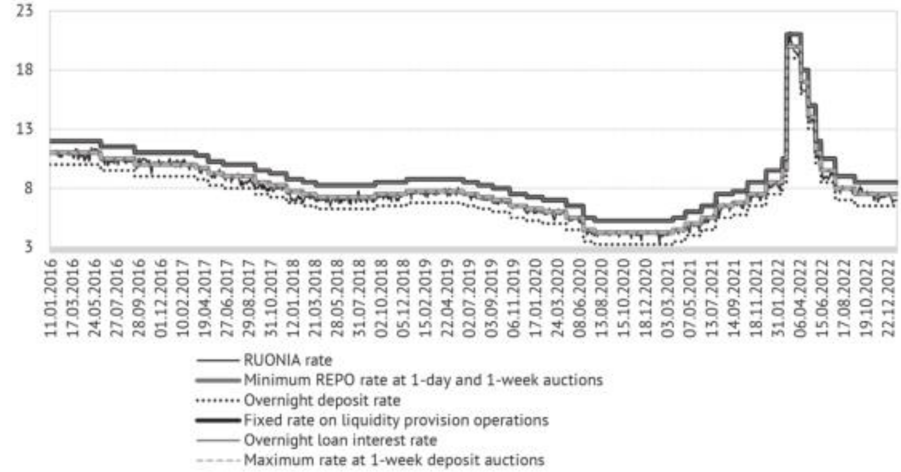

Fig. 3. The Bank of Russia interest rate band and the movement of interbank market interest rates, 2016–2022

Source: Bank of Russia.

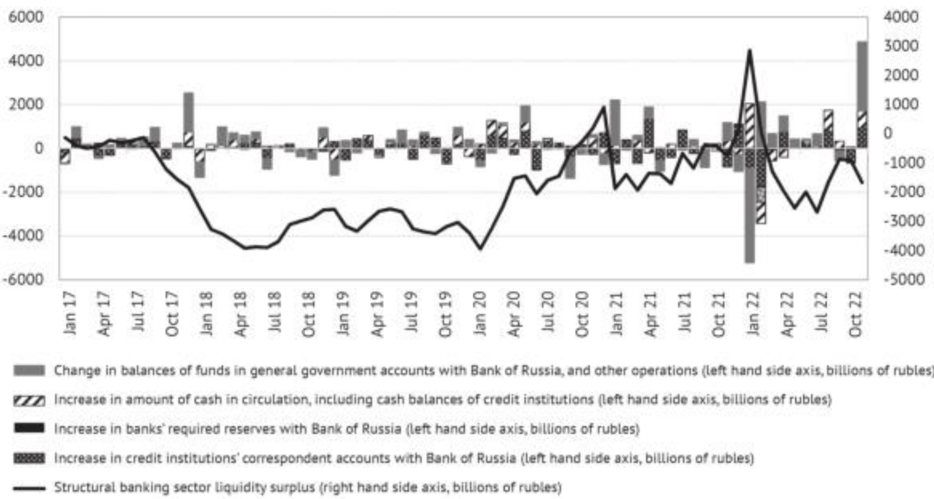

Fig. 4. The banking sector structural liquidity surplus and its components, 2017–2022

Source: Bank of Russia.

In late September 2022, after the start of the announced partial mobilization, there was once again an increase in cash in circulation. Thus, its growth in September relative to August 2022 reached 6.5% (vs 0.7% in September 2021 relative to August 2021). An additional outflow of liquidity from the banking sector in October-December 2022 had to do with the placement of OFZ bonds, to be bought in the main by commercial banks. Thus, over the period from October through December 2022, the Ministry of Finance of the Russian Federation managed to attract Rb3.14 trillion. However, this was offset by an increase in the placements of Federal Treasury funds with banks (Rb2.7 trillion), as well as large-scale budget expenditures at the year-end (Rb3.1 trillion in December 2022). As a result, by January 1, 2023, the structural liquidity surplus grew to RB2.8 trillion.

In the context of a liquidity surplus in the banking sector, the positive movement of the monetary base was determined in the main by that of deposits of credit institutions with the Bank of Russia. In 2022, the broad monetary base increased by only 20.1%, to Rb24,429 bn (in 2021, it increased by 10.1% to Rb20,339 bn). Meanwhile, the most substantial positive growth in the monetary base occurred in December 2022 (+14.2%, or by Rb3,037 trillion). According to the year-end results of 2022, the fastest growing components of the broad monetary base were deposits of credit institutions with the Bank of Russia (+76.5%, to Rb4,951 bn) and cash in circulation (+16.2%, to Rb16,348 bn). The correspondent accounts of credit institutions gained 12.6%, increasing to Rb2,984 bn. At the same time, required reserves decreased by 5.6 times, to Rb146 bn. It should be noted that such a sharp drop in required reserves is associated with a decrease, from March 3, 2022, in the required reserve ratio for ruble liabilities from 4.75% to 2%. As noted earlier, in the context of suspended issuance and placement of the Bank of Russia's coupon bonds in Q4 2021, by January 1, 2022 their value fell to zero and remained at this level throughout 2022, while at the beginning of 2021 it amounted to Rb0.6 trillion (*Table 3*). In general, in the context of a growing demand for liquidity across the banking sector, the volume of excess reserves for 2022 increased by 1.5 times, to Rb7,935 bn (*Table 2*).

As noted earlier, in the context of sanctions imposed against the Bank of Russia by the EU and the United States, a part of the RF Central Bank's international

Table 2

The broad money dynamic in 2020–2022, Rb bn

	01.01.2021	**01.01.2022**	**01.01.2023**
Monetary base (broad)	18,472.4	20,338.9	24,428.6
currency in circulation, including cash balances of credit institutions	13,419.6	14,068.1	16,347.7
correspondent accounts of credit institutions with Bank of Russia	2,548.5	2,650.6	2,983.6
required reserves	713.6	815.3	145.9
deposits of credit institutions with Bank of Russia	1,220.7	2,805	4,951.4
Bank of Russia bonds held by credit institutions	570	0.0	0.0
For reference: excess reserves	4,339.2	5,455.6	7,935

Source: Bank of Russia.

Table 3

The Bank of Russia's balance sheets in 2020–2022

	31.12.2020		30.12.2021		31.10.2022*	
	Rb bns	% of assets / liabilities	Rb bn	% of assets / liabilities	Rb bn	% of assets / liabilities
Funds placed with non-residents and foreign issuers securities	31,447.5	60.4	31,447.5	60.4		
Loans and deposits	4,442.5	8.5	4,442.5	8.5	4,244.8	8.7
Precious metals	10,446.0	20.0	10,446.0	20.0		
Securities	1,020.0	2.0	1,020.0	2.0	1,074.6	2.2
Other assets	2,779.9	5.3	2,779.9	5.3	8,769.0	18.1
Total assets	**52,105.9**	**100.0**	**52,105.9**	**100.0**	**48,556.0**	**100.0**
Currency in circulation	13,181.3	25.3	13,181.3	25.3	15,489.8	31.9
Funds in accounts with Bank of Russia	17,798.8	34.2	17,798.8	34.2	14,523.3	29.9
including RF Government	*12,645.9*	*24.3*	*12,645.9*	*24.3*		
resident credit institutions	*4,643.4*	*8.9*	*4,643.4*	*8.9*		
Credit float						
Securities issued	555.0	1.1	555.0	1.1		
Liabilities to IMF	1,640.9	3.1	1,640.9	3.1	2,171.3	4.5
Other liabilities	9,475.2	18.2	9,475.2	18.2	164.5	0.3
Capital	9,454.7	18.1	9,454.7	18.1	16,207.0	33.4
Profit for reporting year	–		–		–	
Total liabilities	**52,105.9**	**100.0**	**52,105.9**	**100.0**	**48,556.0**	**100.0**

* Some cells are empty because of a temporary reduction in the volume of statistical information released by the Bank of Russia.

Source: Bank of Russia.

reserve assets was frozen. As a result, about 50% of the reserves were affected by sanctions ($300 bn out of $630 bn available as of February 1, 2022).[1] In 2022, the total amount of international reserves[2] decreased by 7.7% to $582 bn (*Fig. 5*). This happened mainly as a result of negative currency and market revaluation.

According to data released by the Bank of Russia, as of the year beginning 2022, international reserves were denominated in euros (33.9%), gold (21.5%), yuan (17.1%), US dollars (10.9%), GBP (6.2%), and yen (5.2%).[3] At present, the international reserve assets of the Central Bank of the Russian Federation that

1 URL: https://www.rbc.ru/economics/13/03/2022/622dd6ee9a7947081b63341c
2 Data on the structure of international reserves is unavailable because of a temporary reduction in the volume of statistical information released by the Bank of Russia.
3 URL: https://cbr.ru/Collection/Collection/File/40915/ar_2021.pdf

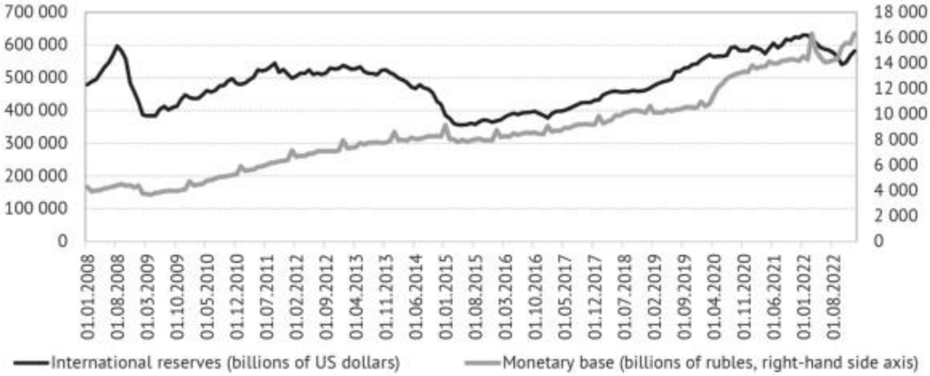

Fig. 5. The movement of the monetary base (narrow definition) and gold and foreign exchange (international) reserves in the Russian Federation, 2008–2022

Source: Bank of Russia.

have not been frozen consist in the main of yuan and gold. The new structure is somewhat less liquid, because the international reserves denominated in yuan can be used to a limited extent only – for example, in settlements between the Russian Federation and China, as well as for paying off external debt under future contracts concluded in yuan. It is also possible to purchase the currencies of friendly countries for yuan and then make payments in yuan, but this, however, is associated with transaction costs. The current structure of the non-frozen part of international reserves imposes serious constraints on forex market operations because the demand for the yuan is lower than that for the US dollar and the euro.

The freeze of part of the international reserves resulted in their reduced availability when measured by generally accepted indicators. According to some of the traditional criteria, the non-frozen foreign exchange reserves are no longer sufficient for neutralizing the consequences of comprehensive macroeconomic shocks, while simultaneously financing imports over the next 3 months and making the external debt payments over the next 12 months.[1] Nevertheless, it should be taken into account that the traditional criteria for the sufficiency of international reserves do not fully correspond to the current geopolitical conditions, when due to retaliatory Russian sanctions, the external debt payments are made in limited volumes in rubles.

The freeze of international reserves also made it impossible to implement the fiscal rule mechanism in its previous form. Previously, the Central Bank of the Russian Federation, on behalf of the Ministry of Finance of the Russian Federation, carried out purchases (or sales) of foreign currency in the domestic forex market depending on the ratio of actual and base oil prices, which significantly reduced

1 *Bozhechkova A., Sinelnikova-Muryleva E., Trunin P.* Capital control stabilized the situation on the currency market // Monitoring of Russia's Economic Outlook. Trends and Challenges of Socio-Economic Development. 2022. No. 5 (158).

the correlation between oil price movements and the nominal ruble exchange rate. When the Central Bank of the Russian Federation had become unable to carry on transactions in the foreign exchange market (at least transactions with major reserve currencies), the correlation became closer, thus increasing the Russian economy's exposure to external shocks. As a result, in 2022, excess oil and gas revenue (about Rb5.1 trillion) was drawn to cover budget expenditures.

The growth of budget expenditures to support the economy made a significant input in the movement of the money supply. Thus, in 2022, the average monthly growth of M2 (compared with the corresponding period of last year) reached 19.3%, while in 2021 it was 10.7%. Given that the average growth rate of the monetary base in 2022 amounted to 4.4% (vs 7.9% in 2021), the money multiplier (the ratio between M2 and the monetary base) turned out to be 3.5 (vs 3.1 in 2021). In addition to the effect of the fiscal factor, the accelerated growth of M2 compared to that of the monetary base can be explained by the devaluation of deposits. Thus, by the beginning of October 2022, the share of foreign currency deposits in total deposits had hit a historic low (less than 11% of household deposits). Over time, the accelerated growth of M2 may lead to an increased inflationary pressure, thus necessitating monetary policy tightening by the regulator.

1.1.3. Inflationary processes

On the eve of the crisis that broke out in late February 2022, inflation in Russia had been significantly above the target, amounting to 8.7% at the end of January 2022 relative to January 2021 as a result of the active expansion of aggregate demand, labor shortages, the pro-inflationary situation in the world markets, and high inflationary expectations. At the end of April 2022, in response to the mounting inflationary risks caused by a sharp depreciation of the ruble, growing uncertainty and a surge in consumer demand for certain groups of goods, inflation

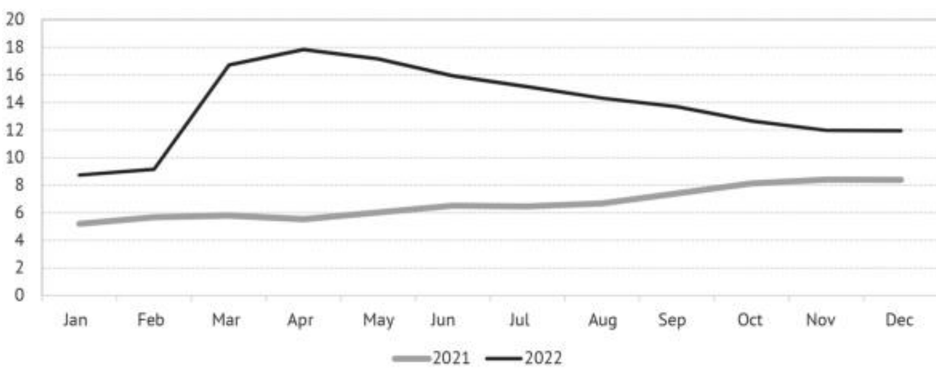

Fig. 6. The CPI growth rate in 2021–2022 (% for the previous 12 months)

Source: Rosstat.

jumped to 17.83%, which exceeds the inflation rates observed during the previous crises and corresponds to the level of February 2002 (*Fig. 6*).

Then annual inflation gradually declined to 11.98% in November as the ruble had been strengthening and rush demand had been giving way to more restrained consumer activity. It should be noted that June-August 2022 was a period of deflation (-1.2% over three months), caused in the main by the movement of food prices, and in particular, prices for fruits and vegetables as a result of a good harvest. Another important factor responsible for the inflation slowdown was the adjustment of prices for goods and services after their rapid growth in March in face of a sharp weakening of the ruble. However, it is highly probable that so far, the influence of that factor has already been exhausted. In the autumn, as a result of the waning effects of the ruble strengthening, the pro-inflationary fiscal policy, the rising inflationary expectations of households and businesses in response to mounting geopolitical tensions and uncertainty, and the unscheduled upward indexation of utility tariffs by 9% in December 2022 (announced in September), inflationary risks increased once again. In December 2022, amid a deteriorating external economic situation and a significant depreciation of the ruble against the US dollar (by 15% by year end 2022, to Rb70.34), coupled with the indexation of housing and utility tariffs, the annual inflation slowdown rate declined significantly. At the end of December 2022, inflation stood at 11.94% relative to December 2021 (vs 8.39% in December 2021 relative to December 2020) (*Table 4*).

In April 2022, having reached a multi-year high of 20.4% relative to April 2021, core inflation also gradually declined, being above headline inflation (spread from 2 to 4 p.p. in May-December 2022). This means that the main reason for the slowdown in general inflation was the movement pattern of regulated and volatile CPI components (lower prices for fruits and vegetables, cheaper gasoline, cheaper household appliances and electronics).

In December 2022, food inflation amounted to 10.29% relative to December 2021 (vs +10.62% in December 2021 relative to December 2020). The leaders in price growth were milk and dairy products (+15.24% relative to December 2021), butter (+14.7% relative to December 2021), pasta (+14.64% relative to December 2021), and granulated sugar (+13.5% relative to December 2021). At the same time, prices for fruits and vegetables plunged by 1.97% on December 2021 as a result of a good harvest and limited export opportunities (Table 4).

The increase in prices for non-food products in December reached 12.7% relative to December 2021 (vs 8.58% in December 2021 relative to December 2020). The fastest growth rate was demonstrated by prices for washing and cleaning products (29.82% in December 2022 relative to December 2021 vs 7.43% in December 2021 relative to December 2020); passenger cars (29.8% in December 2022 relative to December 2021 vs 11.5% in December 2021 relative to December 2020); electrical equipment and other household appliances (15.26% in December 2022 relative to December 2021 vs 4.3% in December 2021 relative to December 2020); textiles (10.82% in December 2022 relative to December 2021 vs 2.73% in December 2021 relative to December 2020); as well as pharmaceuticals (10.78% in December 2022 relative to December 2021 vs 4.63% in December 2021 relative to

Table 4

The annual growth rate of prices for certain types of consumer goods and services in 2020–2022, %, December relative to December of previous year

	2020	2021	2022	2020–2022
CPI	**4.9**	**8.4**	**11.94**	**27.3**
Foodstuffs	**6.7**	**10.62**	**10.29**	**30.2**
Meat and poultry	2.7	17.53	4.04	25.6
Cereals and legumes	20.1	16.11	9.03	52.0
Eggs	15.1	16.04	-6.51	24.9
Pasta	12.1	14.95	14.64	47.7
Fruits and vegetables	17.4	13.98	-1.97	31.2
Sugar	64.5	30.6	13.5	143.8
Fish and seafood	5.2	10.66	14.03	32.7
Bread and Bakery	7.3	10.27	12.96	33.7
Milk and dairy products	3.6	9.84	15.24	31.1
Sunflower oil	25.9	8.65	5.2	43.9
Alcoholic beverages	2.8	2.56	8.14	14.0
Non-food goods	**4.8**	**8.58**	**12.70**	**28.2**
Construction materials	5.3	23.75	3.58	35.0
Tobacco products	8.2	16.37	10.24	38.8
TV and radio equipment	-0.6	12.74	-4.25	7.3
Gasoline	2.5	8.84	0.91	12.6
Washing and cleaning products	6	7.43	29.82	47.8
Pharmaceuticals	9.8	4.63	10.78	27.3
Knitwear	2	4.16	9.74	16.6
Clothes and underwear	1.6	3.36	7.93	13.3
Services	**2.7**	**4.98**	**13.19**	**22.0**
Passenger transport services	1.1	9.58	10.68	22.6
Outbound tourism	-0.46	2.64	70.68	74.4
Insurance	3.25	6.73	28.24	41.3
Personal and household services	3.3	6.91	10.98	22.6
Sanatoria and health resort services	3.8	5.94	10.83	21.9
Medical services	4.3	5.82	11.72	23.3
Education services	1.9	5.54	6.08	14.1
Housing and utilities	3.6	4.14	11.57	20.4

Source: Rosstat.

December 2020). It should be noted that over the period June-August 2022, for the first time in recent history, the category of non-food products was characterized by deflation. The main reason for the decline in prices was the reduction in the cost of household appliances and electronics, which, apparently, had to do with the strengthening ruble alongside a slight shrinkage in consumer demand.

In December 2022, paid services to the population rose by 13.19% on December 2021 (vs 4.98% in December 2021 relative to December 2020). Rapid growth was also displayed by prices for outbound tourism services (by 70.68%), insurance services (by 28.24%), sanatoria and health resort services (by 10.83%), medical services (by 11.72%), and housing and utility services (by 11.57%).

In general, the decomposition of inflation (which stood at 11.9% in December 2022) by its components demonstrates that the greatest input was made by the increased prices for non-food products (4.5%), while the inputs of food products and the services amounted to 3.9% and 3.5% respectively (*Fig.* 7).

An important factor of inflation slowdown in July-October was the strengthening of the ruble that had occurred in Q2 (the nominal effective exchange rate of the ruble in Q2 jumped by 33.8% relative to Q1 2022 and, as demonstrated by the period-end results of the first 9 months of 2022, the ruble was then 18.5% stronger than in the corresponding period of 2021) and its gradual pass-through effect. However, over the course of that year, the input of this factor gradually dwindled, and in Q4 2022, as a result of the ruble weakening against the US dollar, it once again began to exert an upward pressure on the CPI movement pattern.

The sluggish consumer activity had a restraining effect on inflation. In 2022, a decline in retail trade turnover continued for three quarters in a row (-9.8% YOY in Q2; -9.4% YOY in Q3; -9.5% YOY in Q4 2022), and according to the year-end results, it stood at 6.7%. Real personal money income was shrinking at an accelerating pace over the first three quarters of 2022 (-1.6% YOY in Q1, -2.2% YOY in Q2, and -2.5% YOY in Q3 2022).

According to a survey by InFOM, individual inflationary expectations were at a consistently high level throughout the year 2022. Having hit in March 2022 their 11-year record high of 18.3%, in April-May they plunged to 11.5%, and then in July reached a local record low of 10.8% for the first time since March 2021. Thereafter, individual inflationary expectations were steadily on the rise for three straight months, by the end of October amounting to 12.8%. In November-December 2022, individual inflationary expectations slid to 12.1%, while generally remaining at an elevated level. Likewise, over the year 2022, the price growth expectations of enterprises for the most part remained at an elevated level. It should be noted

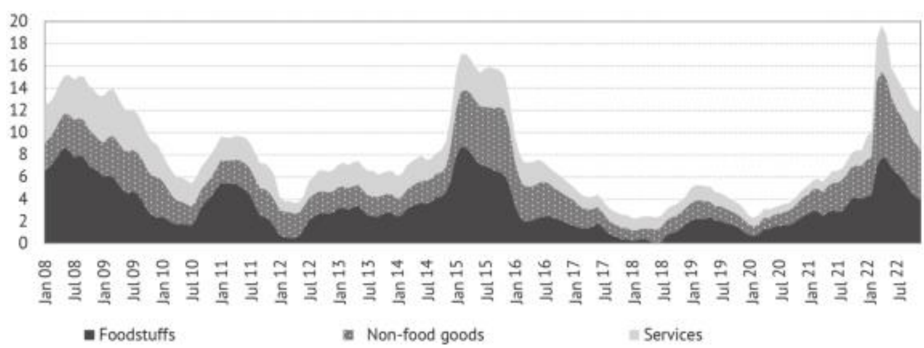

Fig. 7. The structure of inflation in 2008–2022, %, month to the corresponding month of the previous year

Source: Rosstat; Gaidar Institute calculations.

that climbing inflationary expectations will contribute to a persistently elevated inflation rate also in 2023.

Thus, among the most significant inflation risks in 2023 we may point out the weakening of the ruble, high inflationary expectations, a gradual consumer activity recovery, fiscal policy, changes in the labor market associated with a shortage of workforce in certain specialties as a result of the partial mobilization, and external anti-Russia sanctions.

According to the forecast,[1] quarterly seasonally adjusted annualized inflation will be 5.6%, 6.6%, 7.0%, and 7.2%, in Q1, Q2, Q3, and Q4 2023, respectively. This quarterly inflation forecast corresponds to a slowdown in annual inflation to 3.7% at the end of Q1 (data as of the end of March); at the end of June, annual inflation will be at 4.1%; and by the year end, it will accelerate to 6,6%[2], to average in 2023 at 5.0%.[3]

In view of the current monetary policy, inflation is going to return to the target of 4% only in 2024.

1.1.4. The balance of payments and the ruble exchange rate

According to the preliminary balance of payments estimates for 2022 released by the Bank of Russia, the current account balance amounts to record-high $227.4 bn, which is 86% more than the corresponding figure for 2021 ($122.3 bn). Because of the less detailed balance of payments published by the Central Bank of the Russian Federation compared to the previous periods, the structure of the current account can be described in terms of two main balances: the balance of trade in goods and services and the balance of primary and secondary income.

The balance of trade in goods and services amounts to $282 bn, which is 66% higher (by $112 bn in absolute terms) than in 2021 ($170.1 bn). A decisive role in this increase was played by a significant rise in the value volume of exports of goods and services - from $550.0 bn in 2021 to $628 bn in 2022 (by 14%), and a significant shrinkage in the volume of imports of goods and services - from $379.9 bn in 2021 to $346 bn in 2022 (by 9%).

Nevertheless, in Q4 2022, the positive upward trend in the balance of trade in goods and services relative to 2021 that had been observed throughout Q1–Q3 2022 was reversed. The balance of trade in goods and services for Q4 2022 amounted to just $45.9 bn, which is 26% lower (by $16.3 bn in absolute terms) than in Q4 2021 ($62.2 bn). Such dynamics is caused by a decrease in world and regional prices for the main Russian export goods (primarily for oil, gas and petroleum products, due in part to the warm weather in the EU countries, and in part to the price ceiling), which happened alongside a shrinkage in the physical volume of exports because of the embargo on Russian oil supplies to the EU (it came into force only on December 5, 2022) (*Table 5*).

1 For more details, see *Perevyshin, Yu.N*. Short-Term Inflation Forecasting in the Russian Economy // Economic Policy. 2022. V. 17. No. 5. P. 1–18.
2 Close to the upper range of inflation in the Bank of Russia's forecast (5–7%).
3 *Perevyshin Yu.N., Trunin P.V*. Monetary policy and inflation in early 2023 // Monitoring of Russia's Economic Outlook (URL: https://www.iep.ru/ru/monitoring/denezhno-kreditnaya-politika-i-inflyatsiya-v-nachale-2023-goda.html)

Table 5

The movement of prices for Russia's main exports, in 2022 relative to 2021

Goods group	Share of in total exports, p.p.	Price in-crease, %
Crude oil	24,0	+21
Oil products	14,0	+40
Pipeline natural gas	16,0	+156
Metals and products from them	8,8	+11
Food products and agricultural raw materials	7,0	+14
Chemical industry products, rubber	6,8	+43
Coal	5,6	+94
LNG	4,0	+166
Wood and pulp and paper products	2,4	+15

Source: estimations based on data released by the Federal Tax Service; own calculations

The declining imports of goods and services resulted from the shrinkage in the physical volume of deliveries due to the economic sanctions and the increased logistics costs. Thus, in 2022, the value volume of imports decreased by 9% on 2021, amounting to $345.8 bn. The fall in imports of goods and services was accompanied by a strengthening of the national currency: according to data released by the Bank of Russia, over 2022, the ruble climbed against the US dollar (+15% in real terms) (in spite of having weakened in Q1 by 9.2%).[1]

The balance of primary and secondary income for 2022 amounts to -$55 bn, which is 15% more in absolute terms than the corresponding value for 2021 (-$47.8 bn). At the same time, the year 2022 saw a decline both in income receivable (capital gains received from abroad) and income payable (withdrawal of income and repatriation of profits), which happened, among other things, due to restrictions on cross-border movement of capital. However, receivables decreased quite significantly, namely by $49 bn (to $48 bn); and revenues payable, by $42 bn (to $103 bn).

In 2023, because of the standing restrictions on the movement of capital, difficulties with the repatriation of profits from Russia by foreign investors, and the restrictions imposed by the EU and the USA on the counterparties in these jurisdictions, primary and secondary income payable will continue to decline. As far as the trade balance is concerned, as well as the current account balance, in 2023 they can be expected to contract due to lower prices for basic Russian exports, restrictions on the supply of Russian goods, and a recovery in imports.

Given that the year-end balance of payments for 2022 is released by the Bank of Russia in an aggregated form, the financial account contains aggregated data on net external assets and liabilities across all sectors of the economy and includes changes in reserve assets. The aggregate high-level data make it difficult to analyze the actual status of each individual component of the financial account.

1 Concerning the impact of the exchange rate movement pattern on trade, see *Knobel A.Yu*. Estimation of the demand function for imports in Russia // Applied Econometrics. 2011. No. 4 (24). P. 3–26; *Knobel A., Firanchuk A*. Russia in world exports in 2017 // Russian Economic Development. 2018. No. 9. P. 17–21.

In 2022, the financial account of the balance of payments was prepared in the context of growing geopolitical tensions, the tough sanctions imposed on Russia, the partial freeze of Russia's international reserves, as well as the restrictions on the movement of capital introduced by the Bank of Russia. As noted earlier, as the situation on the foreign exchange market stabilized and the ruble strengthened significantly, the RF Central Bank switched over to a gradual easing of some of its forex control measures.

In 2022, the amount of liabilities of all sectors of the Russian economy to non-residents decreased by $116.1 bn. Throughout the year 2022, the share of non-residents in the OFZ market averaged 17.9%. However, as of December 1, 2022, the share of non-residents in the OFZ market fell to 13.2%, and by January 1, 2023 it stood at 11.1% (at the level of August-September 2012). On the one hand, this happened due to an increase in the volume of the OFZ market by 15.1% to Rb17.9 over November-December 2022 as a result of the active placement of new OFZs by the Ministry of Finance of the Russian Federation. On the other, this can be explained by a shrinkage in the portfolios of non-residents by 27.8% to Rb1.98 trillion as a result of the transfer of accounting for titles to securities of Russian issuers to the Russian accounting infrastructure, including that for OFZ.

The data on Russian external debt as of year-end 2022 point to a debt reduction across all sectors of the economy. Thus, the amount of external debt of other sectors of the economy plunged by 21%, to $239.4 bn relative to year-beginning 2022. The volume of government bodies' external debt for 2022 decreased by 26.6%, to $46.5 bn. As of year-end 2022, banks and the Central Bank of the Russian Federation reduced their external liabilities by 16.2%, to $95.9 bn.

In 2022, the increase in foreign assets across all sectors of the Russian economy amounted to $107.1 bn (vs $159.8 bn in 2021). Because of the suspension of operations on the purchase/sale of foreign currency within the framework of the fiscal rule, the demand for foreign assets was displayed in the main by the private sector.

In 2022, the international reserves of the Russian Federation decreased by 7.7% and, as of January 1, 2023, amounted to $582 bn. This happened for the most part as a result of negative currency and market revaluations. Nevertheless, as noted earlier, in 2022, as a result of the anti-Russian sanctions introduced by the EU and the USA, about 50% of the reserves was frozen ($300 bn out of $630 bn available as of February 1, 2022). The freeze of international reserves and the impossibility to implement the fiscal rule mechanism in its previous form translated into a closer correlation between the oil price and the exchange rate, which increased the exposure of the Russian economy to external shocks. It should be noted that, from 2023, the Ministry of Finance of the Russian Federation approved a new fiscal rule and a new structure of the National Welfare Fund (NWF).[1] In accordance with the new fiscal rule, whenever the actual monthly oil and gas revenues exceed their base level calculated monthly by the Ministry of

1 URL: https://minfin.gov.ru/ru/press-center/?id_4=38331-o_provedenii_operatsii_na_vnutrennem_valyutnom_rynke_v_svyazi_s_formirovaniem_dopolnitelnykhvypadayushchikh_neftegazovykh_dokhodov_federalnogo_byudzheta

Finance of the Russian Federation, the Bank of Russia will buy China's yuan for the NWF. In the opposite case, it will sell yuan from the NWF for rubles. Euro, yen and pound sterling were excluded from the NWF structure, and the shares of yuan and gold were increased. The maximum share of yuan is 60%, that of gold, 40%.[1] The new fiscal rule will help smooth out the impact of terms-of-trade shocks on the forex market and the Russian economy as a whole.

In 2022, amid a trade surplus and restrictions on the movement of capital, the ruble climbed against the US dollar by 5.3%, to Rb70.3. In late February and March 2022, as a result of a record-high capital outflow, the ruble depreciated significantly (in March, the ruble's average exchange rate against the US dollar fell by 34% on February, to Rb103.7), and on March 11, 2022 it hit a record low of Rb120.4. After the introduction of restrictions on the movement of capital and the stabilization of the forex market situation over the period from April through December 2022, the ruble's average nominal exchange rate against the US dollar was at Rb60.5, which is 17.2% higher than in April-December 2021, when the average ruble-to-US dollar exchange rate amounted to Rb73.2. In Q4 2022, in face of a significant reduction in the trade surplus as a result of lower oil prices and the introduction, by the EU, of an embargo on crude oil supplies and the price ceiling on Russian oil from December 2022, the ruble lost 22.5% against the US dollar, plunging to Rb70.3 (relative to the end of Q3 2022). Over December 2022, the US dollar climbed against the ruble by 15.2%, from Rb61.1 to Rb70.3.

It should be noted that, overall in 2022, the nominal effective exchange rate of the ruble gained 21.4%, while the effective exchange rates of the national currencies of many other inflation-targeting developing economies, on the contrary, declined (-22.3% in Turkey; -13.5% in Colombia; -1.4% in South Africa; and -0.9% in Poland). This happened in the main due to the tightening monetary policies in major developed countries and the waning investor interest in the currencies of certain developing countries. Nevertheless, in 2022, as a result of the aggressive monetary policies aimed at raising the key rates, the national currencies of Chile (+3.6%), Mexico (+10.8%), and Brazil (+18.3%) strengthened significantly (*Fig. 8*).

At the end of 2022, according to our estimates, the fundamentally justified exchange rate of the ruble against the US dollar stood at about Rb75.[2] In the situation of limited capital mobility, the movement pattern of the ruble exchange rate in 2023 will be shaped primarily by the state of the current account. Geopolitical risks, the restrictions on Russian exports imposed by Western countries, and the recovery of imports are the factors that could possibly weaken the ruble. At the same time, the recovery of the value of Russian exports may be facilitated by the growth of the Chinese economy, as well as the search for alternative routes for export deliveries. The effect of the new fiscal rule from 2023 onwards will also help smooth out fluctuations in the ruble exchange rate.

1 URL: https://minfin.gov.ru/ru/press-center?id_4=38327
2 For more details, see *Bozhechkova A.V., Sinelnikov-Murylev S.G., Trunin P.V.* Factors of the Russian ruble exchange rate dynamics in the 2000s and 2010s // Voprosy Ekonomiki. 2020. No. 8. P. 1–18.

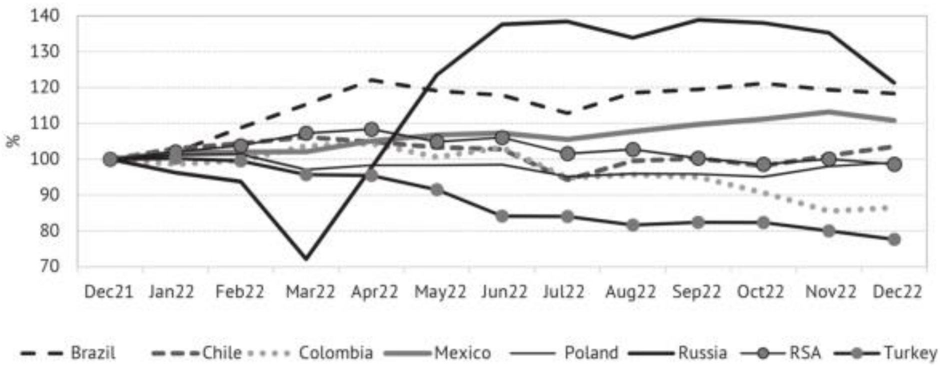

Fig. 8. The movement of nominal effective exchange rates of national currencies in the developing countries targeting inflation
(December 2021 = 100%)