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Price and financial stability of the Bank of Russia: Non-financial mechanisms for the competition development

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Abstract. The paper considers the problem of price and financial stability of the Bank of Russia, as well as the issue of the influence of inflation and currency exchange rate volatility on economic growth rates. It has been proved that the growth in prices for services has a significant impact on the inflation dynamics. It is the dynamics of the consumer price index for services that generally determine inflation in the service sector. It has been substantiated that in the policy of the Bank of Russia it is expedient to use non-monetary instruments to reduce inflation, namely the development of competition and control over the pricing mechanism on the market. Effective measures that contribute to reducing the variation in prices for services and inflation are: raising competition in the economy and the growth of control over the activities of natural monopolies; measures aimed at developing competition in the housing and communal services market, control over the formation of tariffs in the light of the implementation of programs intended to increase the efficiency of natural monopoly subjects; implementation of the requirements for the growth of transparency and openness of the activities of natural monopolies, especially in terms of tariff calculation, as well as the growth of control over their activities; the participation of the Bank of Russia, together with the territorial offices of the Bank of Russia and the Offices of the Federal Antimonopoly Service in the constituent entities of the Russian Federation, in the process of monitoring and approving the tariffs of natural monopolies. Based on the results of the study, the authors of the paper developed proposals for non-monetary instruments as a measure to reduce inflation and improve the policy effectiveness of the Bank of Russia on inflation targeting.

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Ценовая и финансовая стабильность Банка России: нефинансовые механизмы развития конкуренции

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Аннотация. В исследовании рассмотрены проблема ценовой и финансовой стабильности Банка России, а также вопрос влияния на темпы экономического роста волатильности инфляции и валютного курса. Доказано, что на динамику инфляции существенное влияние оказывает рост цен на услуги. Именно динамика индекса потребительских цен на услуги в целом определяет инфляцию в сфере услуг. Обосновано, что в политике Банка России целесообразно использовать немонетарные инструменты снижения инфляции, а именно развитие конкуренции и контроль за механизмом ценообразования на рынке. Эффективными мерами, способствующими снижению вариации цен на услуги и снижению инфляции, являются следующие: повышение роста конкуренции в экономике и рост контроля за деятельностью естественных монополий; меры, направленные на развитие конкуренции на рынке жилищно-коммунальных услуг, контроль за образованием тарифов в свете реализации программ повышения эффективности субъектов естественных монополий; реализация требований к росту прозрачности и открытости деятельности естественных монополий, особенно в части расчета тарифов, а также рост контроля за их деятельностью; участие Банка России совместно с территориальными учреждениями Банка России и Управлениями Федеральной антимонопольной службой в субъектах Российской Федерации в процессе контроля и утверждения тарифов естественных монополий. По результатам проведенного исследования в целях повышения эффективности политики Банка России по таргетированию инфляции авторами работы разработаны предложения по использованию немонетарных инструментов как меры снижения инфляции.

Ключевые слова: ценовая стабильность, финансовая стабильность, Банк России, конкуренция, монетарная политика

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Introduction

The main goal of the policy of the Bank of Russia is to ensure price and financial stability to achieve sustainable economic growth and raise the living standards of the population.

Price stability is achieved in conditions of low inflation, which stimulates the growth of savings in the domestic currency and the growth of investment in fixed assets. Low inflation and stable inflation are a necessary condition for making economic decisions in business and people's lives, as well as a condition for economic growth. High inflation can contribute to an increase in the differentiation of incomes of the population and social inequality, and a decrease in the standard of living of the population.

Thanks to the inflation targeting policy, the Bank of Russia managed to reduce high inflation rates to 2.51 % in 2017 and keep inflation low in subsequent years.

Inflation is influenced by various factors: monetary and non-monetary. The Bank of Russia uses the main tool in its monetary policy — interest rates on loans. Thus, it influences short-term money market rates and brings them closer to the value of the key rate. However, the presence of non-monetary factors has a significant impact on inflationary processes. In conditions of the persistence of the negative impact of external factors, the instability of world markets, and the instability of exchange rates, the policy of the Bank of Russia should be consistent with the goals of economic, social, and other policies implemented by federal and regional authorities.

The policy of the Bank of Russia to curb inflation can be more effective when implementing a systematic approach that uses the coordination of instruments of other types of policies, including policies to promote competition.

Literature review

The development of a policy to curb inflation involves the study of this phenomenon and the study of its nature.

M. Friedman (1992) points precisely to the monetary and quantitative nature of inflation, saying that “it is formed and can be formed only by a faster growth in the amount of money compared to the growth in output.”

It should be noted that this statement says that inflation is the result of not just the growth of money in absolute terms, but also relatively with the dynamics of economic growth. This statement implies the influence of monetary and non-monetary

factors on inflation, their unity and interrelation (Loktionova, 2020; Petrova, 2018; Seryakova, 2018; Smirnov, 2021).

Turning to the basic equation of money circulation $MV = PQ$, attention should be paid to the velocity of money circulation (V). Studies of the dependence of the level of inflation on the velocity of money are reflected in the work of P.D. Grauwe and M. Polan (2001). But the growth in the amount of money in circulation cannot be considered as just a monetary phenomenon (i.e., associated with an increase in the amount of money in circulation), since it is closely related to consumption and savings, investment, and lending processes.

Some researchers consider the growth in the amount of money in the economy as a purely monetary factor, classifying all other factors as non-monetary ones (Pitelin, 2015). A.K. Pitelin (2015) made calculations on long series, investigating the relationship between the money supply and inflation.

In the economic literature, there are also other approaches to determine monetary and non-monetary factors of inflation and their growth in inflationary processes (Alieva, 2018; Allen et. al, 2020; Aluko & Opoku, 2022; Araujo, Barroso, & Gonzalez, 2020; Basten & Koch, 2020; Beck & Gambacorta, 2020; Chekanova, 2020; Gaganis et. al, 2021; Gladkikh & Osokina, 2018; Jianqiang et. al, 2021; Kogler, 2020; Urlacher, 2020).

For example, the works of C. Cottarelli, M. Griffiths, R. Moghadam (1998) examine the price dynamics in some countries in the 1990s–2000s and such non-monetary factors are identified that cause inflation as the budget deficit, price liberalization, and the exchange rate policy regime, the degree of independence of the central bank.

The work of F. Hammermann (2007) identifies the following non-monetary factors: the need to achieve the inflation target and economic growth, financing the budget deficit, ensuring financial stability and sustainability of the balance of payments.

Despite the fact that there is no generally accepted division of inflation factors into monetary and non-monetary in the economic literature, they should not be neglected when developing a policy to control inflation and stimulate economic growth.

Materials and methods

The change in the level of inflation in Russia is due to the influence of internal and external factors.

The growth of inflation is significantly influenced by fluctuations in prices for food and non-food products, as well as prices for services.

Inflation is characterized by volatility, the magnitude of which can be indicated by the dispersion indicator. In general, since 2000 there has been a general downward trend in inflation. One can see an essential increase in inflation in 2008–2009 and in 2015 (Figure 1, Table 1).

It can be seen from the dynamics of the IDI that the volatility of prices for food and non-food goods and services differs, as well as their contribution to the overall fluctuation of inflation.

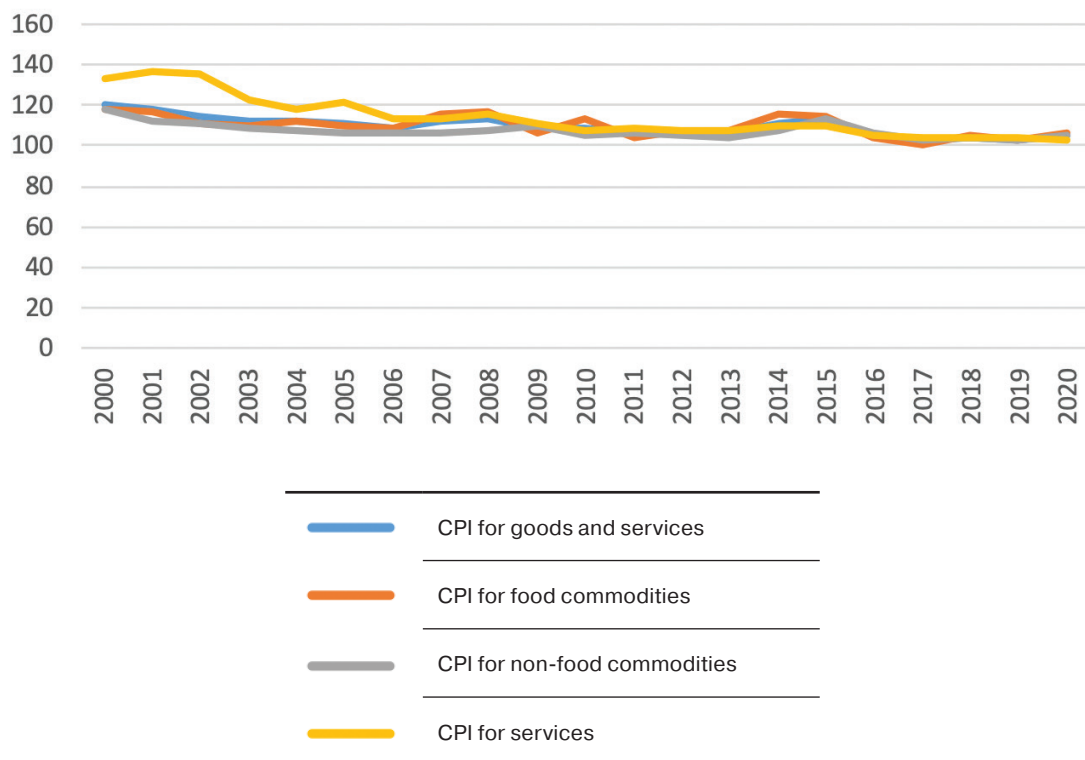


Figure 1. CPI for goods and services in the Russian Federation in 2000–2020, In % of the previous year

Source: Russia in numbers. A brief statistical collection. 2020. Federal State Statistics Service. Retrieved April 1, 2023, from https://rosstat.gov.ru/storage/mediabank/GOyirKPV/Rus_2020.pdf

Table 1

Indicators of inflation variation for the period of 2000–2020

Indexes/Indicators	Variance	Mean value	Standard deviation	Variance coefficient
CPI for goods and services	23.07	109.70	4.80	4.38
CPI for food commodities	25.85	109.78	5.08	4.63
CPI for non-food commodities	14.72	107.58	3.84	3.57
CPI for services	111.32	114.04	10.55	9.25

Source: compiled by the author.

The growth in prices for services has the greatest impact on the overall level of inflation, as can be seen in Figure 2.

For data analysis, there are many different special processing methods that are often used together with software packages for machine processing statistics, such as regression and correlation analysis. This method guarantees a comprehensive and in-depth analysis of information. Correlation and regression analysis is widely used for the purposes of analysis and planning of both the economic activity of the enterprise

and macroeconomics indicators. Correlation and regression analysis is a classic method of stochastic modeling, it helps to study the relationship of economic activity indicators when the relationship between them is not strictly functional and is distorted by the influence of third-party factors.

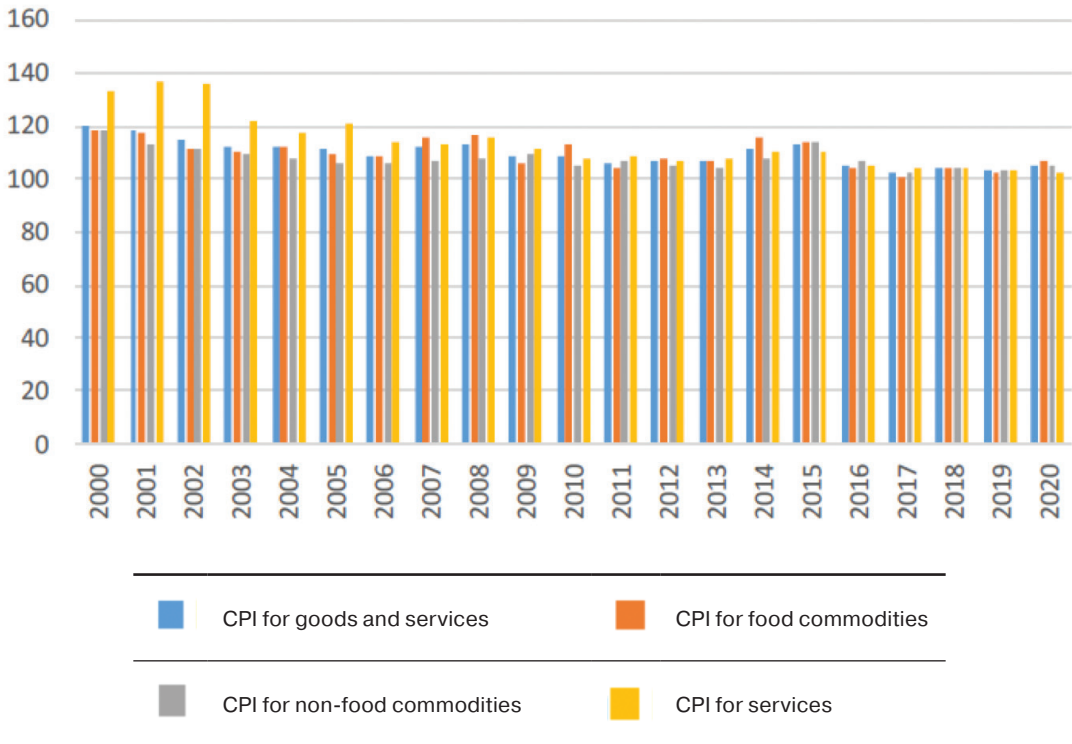


Figure 2. Contribution to the dynamics of the CPI for goods and services of various components

Source: Russia in numbers. A brief statistical collection. 2020. Federal State Statistics Service. Retrieved April 1, 2023, from https://rosstat.gov.ru/storage/mediabank/GOyirKPV/Rus_2020.pdf

When conducting correlation and regression analysis, various correlation and regression models of economic activity are built. In these models, factor and performance indicators are distinguished.

The purpose of the work is to identify the relationship and degree of relationship between the indicators of economic growth, inflation and exchange rate using correlation analysis. It is necessary to measure the closeness of the relationship between the varying variables and evaluate the factors that have the greatest impact on the effective feature. Regression analysis is designed to select the form of the relationship and the type of model to determine the calculated values of the dependent variable.

The methods of correlation and regression analysis are used in a complex. To study the dependence of economic growth and inflation, a pair correlation was used, when the ratios of an effective feature and one factor feature are studied. This is a one-factor correlation and regression analysis. When conducting correlation and regression analysis, it is customary to use the following procedure: constructing a correlation diagram, constructing a linear regression model, calculating model parameters, checking the model for adequacy (Table 2, 3).

Table 2

Initial data for correlation and regression analysis

Indexes/Indicators	2000	2001	2002	2003	2004	2007
CPI for goods and services	120.18	118.58	115.06	111.99	111.73	111.87
Physical volume index of GDP	110	105.1	104.7	107.3	107.2	108.5
Dollar exchange rate on January 1 st	27	28.16	30.13	31.78	29.45	26.33
	2008	2009	2010	2011	2012	2015
CPI for goods and services	113.28	108.8	108.78	106.1	106.57	112.91
Physical volume index of GDP	105.2	92.2	104.5	104.3	104	98
Dollar exchange rate on January 1 st	24.54	29.39	30.18	30.35	32.19	56.23
	2016	2017	2018	2019	2020	
CPI for goods and services	105.39	102.51	104.26	103.04	104.91	
Physical volume index of GDP	100.2	101.8	102.8	102	97	
Dollar exchange rate on January 1 st	72.92	60.65	57.6	69.47	61.9	

Source: Russia in numbers. A brief statistical collection. 2020. Federal State Statistics Service. Retrieved April 1, 2023, from https://rosstat.gov.ru/storage/mediabank/GOyirKPV/Rus_2020.pdf

Table 3

The value of the correlation coefficient

Y — economic growth rate X — inflation rate	0.4443
Y — economic growth rate X — currency exchange rate	-0.4857
Y — inflation rate X — currency exchange rate	-0.6228

Source: compiled by the author.

The values of the correlation coefficient show the inverse relationship between the economic growth rate and the currency exchange rate, as well as between the inflation rate and the currency exchange rate. At the same time, the degree of closeness of the relationship can be characterized as average. There is a direct relationship between the rate of economic growth and the rate of inflation. The degree of closeness of the relationship is also average.

Figures 3–5 present the result of a correlation-regression analysis of the assessment of the impact of inflation volatility, the exchange rate on economic growth rates.

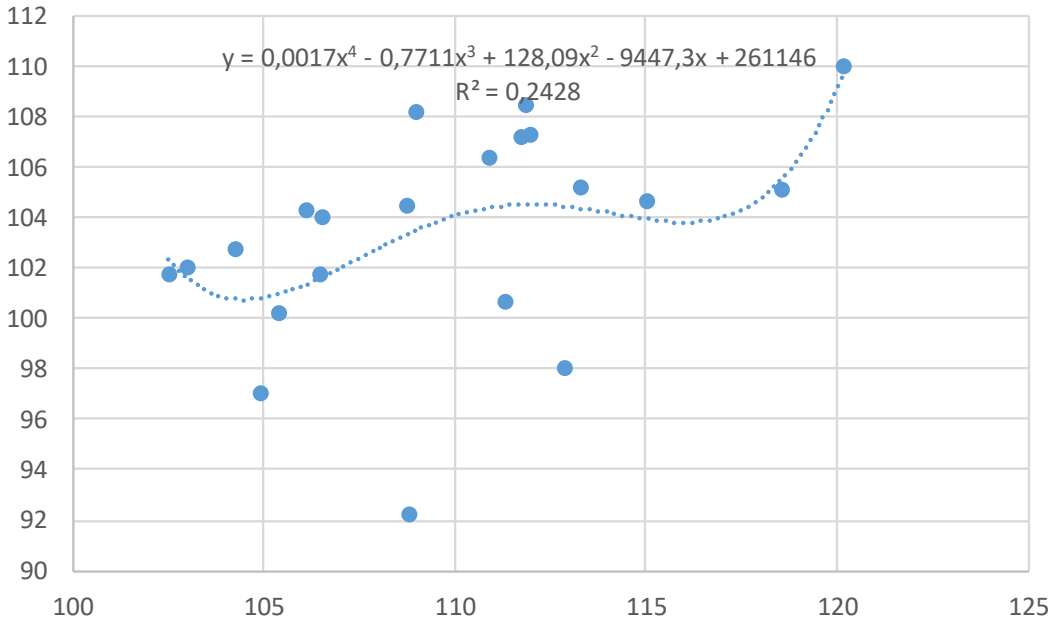


Figure 3. Regression equation of relationship between economic growth rates and inflation rates
 Source: compiled by the author.

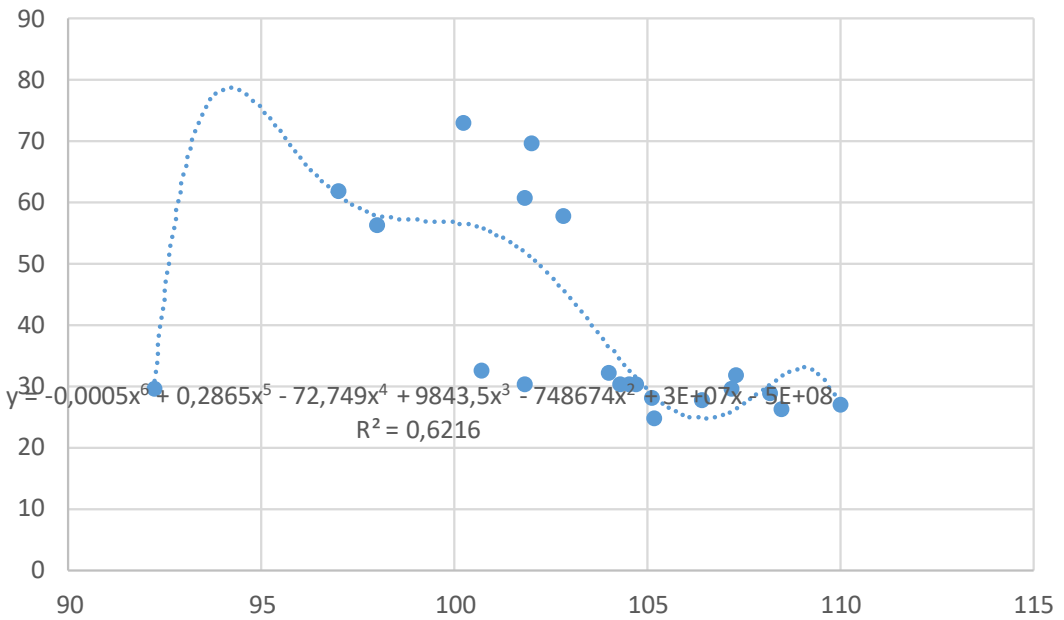


Figure 4. Regression equation of economic growth rates and ruble exchange rate
 Source: compiled by the author.

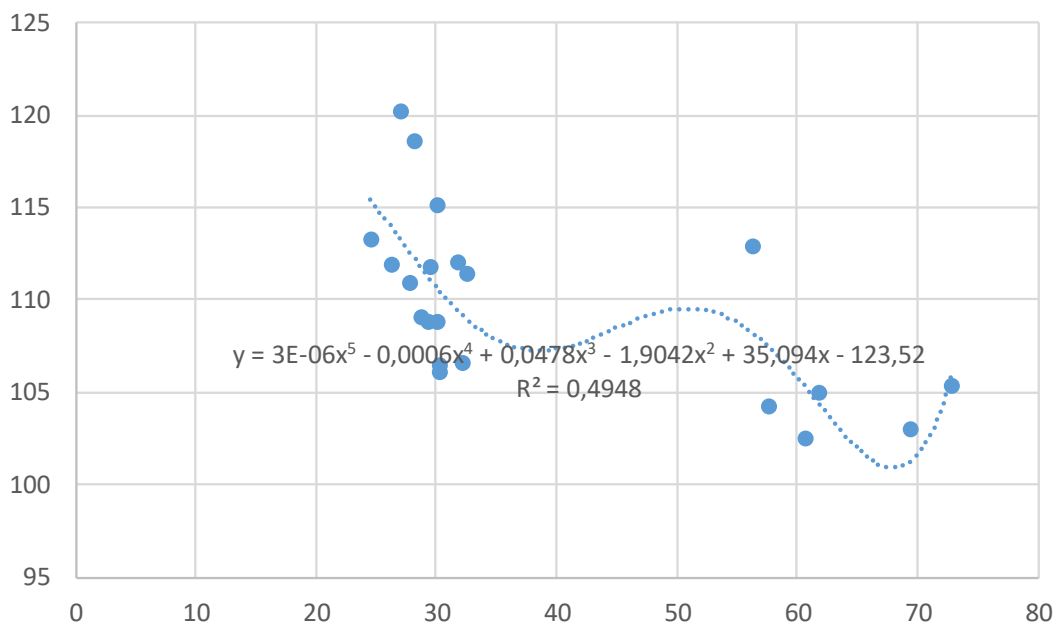


Figure 5. Regression equation for the relationship between inflation rates and the ruble exchange rate
 Source: compiled by the author.

Based on the results of the analysis, it seems possible to draw conclusions about the influence of inflation and exchange rate volatility on economic growth rates.

Conclusions

Based on the results of the analysis, it is possible to draw conclusions about the influence of the volatility of inflation and the exchange rate on the pace of economic growth. Thus, in order to achieve financial stability and sustainable economic growth, measures are needed to curb the growth rate of inflation. The government needs to achieve a situation where the growth of the country's economy will overtake the growth of inflation, and one of these ways is to increase the growth of competition in the economy and increase control over the activities of natural monopolies, whose share in the country's economy is quite significant. Programs to support small and medium-sized businesses have been implemented at various levels of government for a long time, but against the background of recent events, such as the pandemic and the negative impact of sanctions pressure from outside, it is necessary to strengthen these measures. If we talk about natural monopolies, then we need to address their main tasks, this is the maximum cost reduction due to its scale and the provision of services at the most affordable prices for the population. Unfortunately, at the moment we cannot say that natural monopolies are maximally optimized and aimed at reducing their costs in order to lower prices for services.

The dynamics of inflation is significantly affected by the rise in prices for services, primarily housing and communal services. In this regard, it is proposed to use

in the policy of the Bank of Russia not only monetary instruments to keep inflation in check, but also non-monetary instruments, namely the development of competition and control over the pricing mechanism in the housing and communal services market.

To improve the effectiveness of the Bank of Russia's inflation targeting policy, proposals have been prepared on the use of non-monetary instruments as a measure to reduce inflation.

Taking account of the fact that the factors affecting the level and dynamics of prices for goods are different, at present the greatest contribution to their growth is the increase in prices for services. In general, the increase in prices for services in its pure form does not refer to either monetary or non-monetary factors influencing inflation.

Changes in the prices of goods are unambiguously associated with the influence of currency fluctuations. Due to the fact that the export of raw materials and energy resources has a high share in the structure of exports of the Russian Federation, as well as due to the instability of world markets for energy resources, the ruble exchange rate is currently characterized by significant volatility.

According to the results of the analysis, it was found that the greatest influence on the dynamics of the consumer price index for goods and services was made by the dynamics of prices for services, namely, among all goods, the dynamics of prices for housing and communal services. It is the dynamics of the consumer price index for services that generally determine inflation in the services sector. The dynamics of prices for tourism services has a significant impact on the volatility of inflation in the services sector.

In this regard, we believe that effective measures to reduce the variation in prices for services and reduce inflation will be increased competition in the economy and increased control over the activities of natural monopolies. These include, in particular, measures aimed at developing competition in the market of housing and communal services, control over the formation of tariffs in the light of the implementation of programs to improve the efficiency of subjects of natural monopolies. In order to improve the quality of housing and communal services, it is necessary to develop fair competition in this market.

Currently, the state of housing and communal services in all regions of Russia, without exception, is characterized by low quality of services provided, including due to a significant weakening of control over the validity of tariffs set by state monopolies in the housing and communal services sector. With the transition of the industry to private monopolies, which still remain technological or natural due to the specifics of the sphere under consideration, such control by both the state and the end consumers of housing and communal services is even more difficult.

All this testifies to the need to improve the existing mechanisms of regulation of the housing and communal sector, to change the nomenclature of market economy entities with the inclusion of state-owned companies in their composition. At the same time, it should be borne in mind that housing and communal services as a whole (as an industry) cannot be privatized and transferred to private business in full due to its technological and economic specifics and social

significance for the population. The development of competitive legal relations in the housing and communal services market will undoubtedly contribute to strengthening the impact on the quality of services provided to consumers, reducing administrative and legal barriers for new organizations in the housing and communal services, limiting tariff growth. However, realizing the specifics of the housing and communal services industry, its most important strategic importance, it is impossible not to take into account that reducing the role of the state in regulating such relations can lead to a decrease in the responsibility of organizations for the timeliness and quality of services provided, “collusion” between management organizations and officials and tariff growth within the monopolization of the housing and communal services market.

An additional measure will be the implementation of the requirements for the growth of transparency and openness of the activities of natural monopolies, especially in terms of tariff calculation, as well as tougher control over their activities.

It seems expedient and necessary that the Bank of Russia, together with the territorial branches of the Bank of Russia and the Departments of the Federal Antimonopoly Service in the territorial entities of the Russian Federation, participate in the process of monitoring and approving the tariffs of natural monopolies.

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Bio notes / Сведения об авторах

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