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Monetary Policy Transformation of Major Central Banks During the COVID-19 Pandemic

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ABSTRACT

The paper **aims** to assess the scope, effectiveness and key instruments of monetary policy in advanced and emerging markets during the first wave of the COVID-19 pandemic. **The methodological basis** of the study was the reports of the central banks of the sample countries and the data of international organizations and financial market participants on monetary policies. The author assesses the scope of financial support for the economy by the central banks of the largest advanced and emerging markets during the crisis, including the size and share of quantitative easing in its total volume. The study identifies and characterizes the main groups of monetary policy measures during the COVID-19 pandemic, and also shows the monetary policy differences of advanced and emerging economies during the pandemic. The paper highlights larger direct financial support from the central banks of advanced countries. The difference in monetary policy instruments is that advanced economies use traditional monetary policy measures while emerging economies widely apply unconventional monetary policy instruments, primarily quantitative easing. The article presents a preliminary assessment of the effectiveness of monetary policy in China and Russia. The author **concludes** that the consequences of the monetary policy pursued by advanced countries in 2020 may lead to long-term stagnation in these countries and the rapid recovery of emerging markets due to the inflow of speculative capital from advanced countries. The study provides a post-pandemic forecast of the general direction of monetary policy and its driving factors. Enormous direct financial support, primarily through quantitative easing, from the central banks of advanced countries in 2020 had a positive impact on the economy in the short run, but the long-term consequences of such policies require further research.
Keywords: monetary policy; COVID-19 pandemic; ultra-accommodative monetary policy; unconventional monetary policy tools; quantitative easing

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INTRODUCTION

The global coronavirus pandemic that emerged in March 2020 led to the sharpest aggravation of the situation in the global economy and the global financial market since the Second World War (a widespread fall in stock prices, an increase in bond yield spreads, an increase in borrowing costs, a collapse in world oil prices, devaluation of national currencies against the US dollar, etc.).

The World Bank estimates that global GDP fell by 4.3% in 2020 (the worst global recession in 150 years, except for the Great Depression and two world wars[1]), despite an unprecedented government support for the world economy. In the first two months of the pandemic, governments around the world spent $ 10 trillion to mitigate the effects of COVID-19, which is 3 times the amount of government support during the global financial crisis of 2008–2009 [1, p. 2].

GENERAL CHARACTERISTICS OF THE MONETARY POLICY OF ADVANCED AND EMERGING ECONOMIES DURING THE PANDEMIC

The first rapid response of states to the economic consequences of the coronavirus was monetary policy measures, initially through large injections of liquidity into financial markets (in most countries since March 2020). They were followed by other measures that can be described as extraordinary in terms of the volume of assistance, the breadth of the tools used and the efficiency with which they were adopted. Due to this, financial market conditions began to stabilize as early as April 2020, and in general, the reaction of financial markets to COVID-19 turned out to be milder compared to the scale of the economic consequences (lower production, rising unemployment, etc.). Thus, the standard deviation of the index of global financial conditions from the average since 1995 in March 2020 increased to 3.8 (from a negative level, indicating a favorable financial market situation by the beginning of 2020); and during the global financial crisis of 2008–2009 the index value reached 6.7.[2]

The general vector of the monetary policy of states during the pandemic was its rapid aggressive easing in order to ensure the stable functioning of the foreign exchange and financial markets and uninterrupted lending to the economies of countries. The general vector of the monetary policy of states during the pandemic was its rapid aggressive easing in order to ensure the stable functioning of the foreign exchange and financial markets and uninterrupted lending to the economies of countries. The volume of this easing in the world is estimated at $ 11 trillion [12.5% (!) of global GDP in 2019] in the first three months of the wide spread of the virus (mid-February–mid-May 2020) [1, p. 6].

At the same time, there were significant differences between the monetary policies of advanced and emerging economies: both in the scale of financial assistance to the economy from central banks and in the preferred monetary policy instruments (*Table 1*).

Table 1 data show the unprecedentedly high volumes of financial injections into the economy by the central banks of developed countries and the high proportion of their use of such an unconventional monetary policy tool as the purchase of government and corporate securities [Quantitative Easing (QE)].

The scale of support by emerging economies for their financial and foreign exchange markets was much more modest and traditional in terms of monetary policy tools — with a greater emphasis on the use of indirect methods of regulating the volume of money supply: the release of financial resources and an increase in lending to the economy was achieved through a reduction in key and other interest rates and easing regulatory

[1] Global Economic Prospects: A World Bank Group Flagship Report. World Bank Group; January 2021. P. 3. URL: https://openknowledge.worldbank.org/handle/10986/34710/ (accessed on 17.01.2022).

[2] Monetary Policy Report. The Bank of England, Monetary Policy Committee; August 2020. P. 22. URL: https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2020/august/monetary-policy-report-august-2020/ (accessed on 17.01.2022).

Table 1

Declared direct financial support to economy from central banks during the first wave (up to the 2020 fall) of the COVID-19 pandemic (as % of national GDP in 2019)

USA	EU	China*	Japan	UK	Germany	India*	Brazil*	Russia*	South Africa*
Volumes of direct financial support to the economy from the central bank, in % of GDP in 2019:									
48.0	25.4	6.1	47.1	33.7	19.6	3.7	5.8	1.1	2.1
Expected economic effect (release of financial resources) from easing regulatory requirements for financial institutions (reduction of reserve requirements, capital requirements, etc.), % of GDP in 2019 (for emerging economies):									
		1.8				1.3	8.7	0.2	n/a
Share of quantitative easing in the total volume of direct financial support, %									
22.4	42.3	0	43.6	97.6	0	3.7	0	0	23.1

Note: * — for emerging economies, the expected economic effect (release of financial resources) from the easing of regulatory requirements for financial institutions (reduction of reserve requirements, capital requirements, etc.) was also noted.

Source: USA — Monetary Policy Report Submitted to the USA Congress on June 12, 2020, Pursuant to Section 2B of the Federal Reserve Act; European Union — The ECB's Monetary Policy Response to the COVID-19 Crisis. The European Parliament's Committee on Economic and Monetary Affairs, Briefing; Updated July 17, 2020; China — China Monetary Policy Report Q1 2020. The People's Bank of China, Monetary Policy Analysis Group; May 10, 2020. 61 p.; China Monetary Policy Report Q2 2020. The People's Bank of China, Monetary Policy Analysis Group; August 6, 2020. 59 p.; Japan — Monetary Policy Releases 2020: from January 21, 2020 to September 17, 2020. Bank of Japan. URL: http://www.boj.or.jp/en/ (accessed on 17.09.2021); Germany — COVID-19: Crisis Resilience Made in Germany. Deutsche Bank Research; June 10, 2020; India — COVID-19 Related Measures: Press Releases: from March 3, 2020 to September 7, 2020. Reserve Bank of India. URL: https://www.rbi.org.in/ (accessed on 17.09.2021); Great Britain — Monetary Policy Report. The Bank of England, Monetary Policy Committee; August 2020. 53 p.; Brazil — Financial Stability Report. Vol. 19, no. 1. Banco Central do Brasil; April 2020. 80 p.; COVID-19 in Brazil: Impacts and Policy Responses. The World Bank; June 2020. 136 p.; Brazil's Policy Responses to COVID-19. Ministerio da Economia; Updated on April 7, 2020. 4 p.; Russia — Measures of the Bank of Russia to Mitigate the Effects of the Coronavirus Pandemic as to 11.09.2020 17:04. The Bank of Russia; 2020. 61 p. (In Russ.). URL: https://www.cbr.ru/info_2020/ (accessed on 11.09.2021); Monetary Policy Guidelines for 2021–2023. The Bank of Russia, 2020, 157 p. (In Russ.). URL: https://www.cbr.ru/about_br/publ/ondkp/on_2021_2023/ (accessed on 22.01.2021); South Africa — Our Response to COVID-19: Statements on the Monetary Policy — 2020. South African Reserve Bank. URL: https://www.resbank.co.za/ (accessed on 22.09.2021); Economic Relief Measures During COVID-19. Republic of South Africa Government; 2020. 12 p. All Countries — Police Responses to COVID-19: Policy Tracker. International Monetary Fund. URL: https://www.imf.org/ (accessed on 17.09.2021); COVID-19 Market Updates: Monetary Policy. International Capital Market Association. URL: https://icmagroup.org/ (accessed on 17.09.2021); Annual Economic Report. Bank for International Settlements; June 2020. 118 p.; COVID-19: Key Measures Taken by Governments and Central Banks. BNP Paribas Group Economic Research; June 15, 2020. 38 p. URL: https://economic-research.bnpparibas.com/Views/DisplayPublication.aspx?type=document&IdPdf=38920/ (accessed on 22.09.2020).

Note: Method of calculation. The volume of direct financial support for the economy from the country's central bank was calculated by the author by summing up the volumes of financial resources declared by the central bank for each of the monetary policy instruments used to fight the consequences of the coronavirus, which implies the allocation of financial resources to financial market participants, companies and households (by quantitative easing, supporting the liquidity of financial organizations, implementing foreign exchange interventions, implementing targeted programs of financial assistance to business entities, including by acquiring their securities, etc.). The volume of provided state guarantees and other indirect support measures that free up financial resources of financial institutions are not included in the calculation of direct financial support.

Calculation period. From the beginning of the country's central bank assistance in fighting the consequences of COVID-19 (for most countries — from March 2020, in China — from January 2020) to mid-September 2020.

Calculation accuracy. These tables may contain errors in the calculation of exact figures for the volume of financial assistance to economies from central banks due to the lack of data on certain areas of monetary policy pursued by countries.

requirements for financial institutions (reducing capital requirements, liquidity, financial leverage, reserve requirements, etc.).

At the same time, during the pandemic, there were also universal measures to support the economy, which were used by the central banks of the vast majority of both developed and developing countries. Such measures were the reduction of key and other interest rates; liquidity support for financial institutions (both targeted and unrelated); easing regulatory measures against market participants, contributing to the release of their financial resources for lending to the economy. Many countries have also provided direct financial support to crisis-hit industries/businesses.

The observed differences between developed and developing countries are largely due to the phase of the economic cycle in which these countries were at the beginning of the pandemic, and their monetary policy. Developed countries after the 2008–2009 global financial crisis experienced growth problems in their economies and continued to implement accommodative monetary policies, approaching 2020 with slower GDP growth, low or declining inflation, and very low interest rates. Under these conditions, the potential for further easing of monetary policy using its traditional tools turned out to be unavailable to these countries.

Developing countries, in the context of a slowdown in global economic growth, also carried out monetary policy easing, but in these countries the level of interest rates and inflation remained at a fairly high level, and the potential of traditional methods of monetary policy easing remained not completely wasted.

CHARACTERISTICS OF THE MAIN INSTRUMENTS OF MONETARY POLICY OF THE COUNTRIES DURING THE PANDEMIC PERIOD

Let us consider the main groups of countries' monetary policy measures during the COVID-19 pandemic.

1. A significant reduction in interest rates by the central banks of countries:

1.1. The key interest rate by developed countries [in the US and UK, the central bank key rate in March 2020 was reduced to almost zero; in the European Union (EU), key short-term interest rates remained unchanged only because they were close to zero or turned negative at the start of the crisis; in Japan, the rate is –0.1%] and many developing countries, for example, India, Brazil (the Selic key rate is reduced to a historically low level of 2%), South Africa (the key rate is reduced from 6.25 to 3.5%), Russia (the level of the key rate has been reduced from 6% to a historical minimum of 4.25%), Argentina, Mexico, Turkey, etc.

1.2. Other rates: the cost of short-term and long-term funding of financial institutions by the central bank, including through refinancing operations; interest on mandatory/excess reserves of financial institutions at the central bank, etc.

Reducing interest rates has become the most common monetary policy instrument in both developed and developing countries in 2020. Due to the higher level of key rates in developing countries compared to developed countries at the beginning of the pandemic, this monetary policy instrument was the first to be used more actively, and the percentage of cuts was higher in countries with higher key rates.

As noted earlier, the problem for developed countries was that, having entered the crisis with already very low interest rates, they were extremely limited in the ability of traditional monetary policy to revive the economy. Having reduced rates to values close to zero, and not daring to lower them to negative values (negative rates undermine the profitability of financial institutions and weaken the country's financial system), the central banks of the US, EU, Japan, and the UK had no choice but to start another round of quantitative easing (especially given the unprecedented nature of the economic downturn caused by the spread of the coronavirus in the world), see more [2].

2. The launch/increase by almost all developed countries of such an unconventional monetary policy tool as quantitative easing, in the face of the low effectiveness of

traditional monetary policy instruments due to the achievement by many countries of the "effective lower limit" of interest rates (see Paragraph 1).

The volume of current and crisis asset purchase programs (government, mortgage, corporate securities) in the United States is $ 3.1 trillion, in the EU — about 2 trillion euros, in Japan — more than 120 trillion yen ($ 1.1 trillion), in the UK — about 900 billion pounds.[3] Major quantitative easing programs are also being implemented by the central banks of Canada and Australia.

Interestingly, at the beginning of the pandemic, some developing countries also reached the lower limit of the key interest rate and launched/continued asset purchase programs (Israel, Poland, Chile, South Korea). An exceptional case was Indonesia, whose central bank temporarily switched to cash financing of the state budget. However, in general, this instrument of monetary policy was not actively used in emerging markets, and if quantitative easing programs were carried out, they were limited to the purchase of government securities[4] (central banks of developed countries also bought corporate paper). If in general in emerging markets the scale of QE was 0.2–2.8% of GDP, then in developed countries, the balance sheets of central banks in the first months of the pandemic strengthened significantly: for example, in the 4 largest developed markets (USA, EU, Japan and the UK) — by 8–15% in March-June 2020.[5]

In the whole, global purchases of financial assets as part of quantitative easing in 2020 only from the US, EU, UK and Japan exceeded $ 5 trillion.[6]

The scale of support to the functioning of financial markets through quantitative easing by the most developed countries is so unprecedented that it has led to conflict in the European Union.[7] The volume and distribution of funds for quantitative easing among the EU member states caused a protest in Germany and the suspension of the participation of the German central bank in the European program for the purchase of financial assets.[8]

In the US, quantitative easing has outperformed previous rounds of quantitative easing, including 80% more than the largest quantitative easing during the 2008–2009 global financial crisis.[9]

In developing countries, this unconventional monetary policy tool was used poorly (including in the context of the effectiveness of using lower interest rates to stimulate lending to the economy): in a number of countries, the volume of QE was low (China, India, South Africa), in some countries there was no QE at all (Brazil, Russia).

At the same time, in Brazil, for example, in May 2020, constitutional amendments were approved allowing the use of quantitative easing as an instrument of monetary policy: the central bank was given a temporary opportunity (until the end of 2020) to buy government bonds in the primary market, as well as corporate bonds with an international rating of at least BB — in the secondary market. However, due to inflationary and debt risks, the

[3] As of March 2021.

[4] The exceptions are the central banks of Hungary and Colombia, which also bought mortgage bonds and bank bonds, and the central bank of Chile, which bought exclusively bank bonds.

[5] The main directions of the unified state monetary policy for 2021 and for the period of 2022 and 2023. Central Bank of the Russian Federation; 2020. P. 114.

[6] Global Economic Prospects: A World Bank Group Flagship Report. World Bank Group; January 2021. P. 175.

[7] The scale of quantitative easing in the EU in 2015–2018 is 2.6 trillion euros ($ 3 trillion), i.e. 0.65 billion euros per year, in 2020 in one year — 1.47 trillion euros.

[8] Based on the existence of a ban on the provision of cash funding under Article 123 of the Treaty on the Functioning of the European Union, Germany suspended its participation in the Public Sector Purchase Programme (PSPP) in May 2020, indicating that the European Central Bank (ECB) had exceeded its powers and disproportionality of the support provided (the ECB buys government securities of the eurozone member countries in proportion to the share of national central banks in the capital of the ECB). This protest, however, did not extend to the purchase of financial assets carried out by the ECB under the Pandemic Emergency Purchase Programme (PEPP) launched in the EU in the second half of March 2020.

[9] In the US QE 1 (2008–2010) — $ 1.725 trillion, QE 2 (2010–2011) — $ 850–900 billion, Operation Twist (2011–2012) — $ 667 billion, QE 3 (2012–2014) — $ 1.14 trillion current round of quantitative easing (as of March 2021) — $ 3.1 trillion In just one month, the Fed bought more than $ 1 trillion (!) of government bonds [Annual Economic Report. Bank for International Settlements; June 2020. P. 38].

central bank announced that it will resort to this monetary policy tool only after the potential of traditional monetary policy methods to support the country's economy has been exhausted.

Appropriateness and barriers to the implementation of QE by developing countries

Quantitative easing, the use of which by the central banks of developed countries is largely a forced measure, is proposed by a number of scientists as justified for use in the context of the coronavirus pandemic in developing countries, subject to a number of conditions: a floating exchange rate, moderate inflationary expectations and government debt denominated in national currency. With capital outflow from developing countries, quantitative easing could relieve pressure on the debt securities market, especially in countries with a high share of foreign investors in the stock market (reducing the cost of borrowing for the entire economy), and provide effective cash funding of budget deficits, preventing stagnation in economics (see [3] for details).

Moreover, the experience of using quantitative easing by thirteen emerging markets during the coronavirus pandemic (many countries did it for the first time: India, Korea, Philippines, Poland, Turkey, South Africa) shows:

1. The success of these programs to restore investor confidence in the financial market (decrease in the yield of long-term bonds, stabilization of the exchange rate).

2. The absence of growth in inflationary expectations (including due to the limited volume of money emission) [4].

At the same time, it should be understood that developing countries are more limited in their monetary policy instruments, including the implementation of new emissions, compared to developed countries due to a number of factors, primarily the risks of exchange rate depreciation and the accompanying increase in inflation. This risk is especially high in the case of a significant presence of foreign investors in the domestic bond market (especially in the context of their low tolerance for lower yields in emerging markets). In addition, the financial markets of developing countries are less capitalized, which limits the scope of intervention of central banks in the market mechanisms of their functioning.

We should not forget about the significant negative consequences of quantitative easing: distortions in the yield curve and pricing in financial markets, including the formation of bubbles in financial markets (money flows into the financial sector instead of the real sector of the economy and households), growth in debt in the economy (and credit risks), inflationary risks, undermining market discipline, risks of political interference in monetary policy.

Assessing the impact of QE on developed and developing countries (past experience)

Quantitative easing carried out by developed countries during the global financial crisis of 2008–2009 played a positive role and helped both developed and developing countries avoid financial collapse. However, in the long term, against the backdrop of economic growth in developing countries in countries that implemented quantitative easing, economic stagnation and weak financial market dynamics persisted, which required new rounds of quantitative easing to revive. In other words, in developed countries there is a growing trend of increasing dependence of their economic well-being on the stimulation of economic activity by the state, the failure of market mechanisms for the functioning of the economy.

Quantitative easing by developed countries carries significant risks for developing countries as well, as it leads to a sharp inflow of speculative capital into their financial markets, which brings higher returns. About 40% of the increase in the money supply in the United States during the period of quantitative easing occurred during the global financial crisis of 2008–2009 (QE 1), turned into capital outflow [5].

This can lead to the formation of bubbles in the stock markets of developing countries,

an increase in the volatility of their exchange rates, the formation of an excessive debt burden of companies, inflationary pressure, and also cause large-scale financial shocks with a sharp increase in the outflow of capital from foreign investors. Therefore, the quantitative easing policy of developed countries has been repeatedly criticized by the BRICS countries.

3. Central bank liquidity provision to financial institutions:

3.1. Decoupled support:

3.1.1. A significant increase in the volume,[10] availability (due to the expansion of the composition of collateral) and frequency of refinancing operations by the central bank of financial institutions, the launch of longer repo operations, and a decrease in interest rates on them.

3.1.2. Issuance of loans at low interest rates. In particular, in Japan, the central bank actively increased the issuance of secured loans to banks at 0.1% per annum (Loan Support Programme); In Brazil, loans from the Central Bank of Brazil have become available against unsecured long-term debt obligations of financial institutions (debentures) as well as against financial institutions' debt obligations secured by financial assets/securities (letras financieras garantidas).

3.1.3. Launch of anti-crisis financing programs for financial market participants. For example, in the United States, since mid-March 2020, a Primary Dealer Credit Facility (PDCF) lending program has been operating under a wide range of collateral, as well as a bank lending program for assets acquired with money market funds (Money Market Mutual Fund Liquidity Facility — MMLF); Since May 2020, Pandemic Emergency Longer-Term Refinancing Operations (PELTROs) have been launched in the EU at reduced interest rates.

The volume of liquidity provided under the programs of refinancing by central banks of financial institutions during the first wave of coronavirus in the world amounted to: in the USA — $ 6 trillion, in the EU — more than 400 billion euros, in China — about 3 trillion yuan (more than $ 400 billion), in Japan — 90 trillion yen (~$ 840 billion), India — 2.75 trillion rupees (~$ 40 billion), Brazil — about 1 trillion reais[11] (about $ 200 billion) [6].

3.2. Targeted support (ensuring lending to business entities most affected by the consequences of the coronavirus, primarily small and medium-sized businesses): concluding targeted repo transactions with banks and launching special lending programs for financial institutions for these purposes. The volume of assistance provided during the first wave of COVID-19: in the United States — $ 600 billion, in the EU — 1.4 trillion euros, in China — more than 3 trillion yuan ($ 440 billion), in Japan — 55 trillion yen (more than $ 50 billion), in India — 2.75 trillion rupees (~$ 40 billion), in Brazil — 260 billion reais (more than $ 50 billion), in Russia — 675 billion rubles (~$ 9 billion).

The European Union (about 80%), China (51%), India (50%), Japan (38%) account for a particularly large share of financial assistance in this area of support for financial institutions.

In the EU, the volume of Targeted Longer-Term Refinancing Operations (TLTROs) has been increased.[12]

In China, structural monetary policy instruments (targeted assistance to the most affected sectors/types of companies) became a priority of monetary policy during the crisis: special programs for lending by the central bank to banks were launched to provide the latter with loans at a low interest rate (as well as with a delay interest and principal payments) to companies in industries most affected by COVID-19 (production of goods to combat the virus, agriculture, foreign economic activity, medium, small and micro businesses, etc.); banks began issuing annual loans (Targeted

[10] Including transition to satisfaction of bids at repo auctions in full (India, South Africa, Indonesia, Korea, Mexico).

[11] At the end of June 2020, only 7 billion reais (3.6%) were used.

[12] The purpose of TLTRO is to stimulate lending by banks to the real sector of the economy [non-financial companies and the population (excluding mortgage loans)]: when a bank reaches the planned lending volumes, it gets access to new repo loans under TLTRO, otherwise, early repayment of borrowed funds is required; if the bank exceeds planned lending levels, the cost of borrowing decreases.

Medium-term Lending Facility — MLF) for the purpose of lending to small and medium-sized businesses. An unconventional tool for supporting small and medium-sized businesses has become a temporary (for a year) repurchase by the central bank (through SPV) of loans issued to these business entities by local banks (without charging interest from banks for the use of funds), aimed at stimulating the issuance of new loans to these companies.

The Reserve Bank of India has increased repo operations with banks to ensure that the latter buy back corporate debt (both in the primary and secondary markets) and provide loans to business entities: large corporations, medium, small and micro businesses, mutual funds, exporters/importers, companies in agriculture, mortgage market participants, etc.

The Central Bank of Japan has begun refinancing banks to provide the latest annual interest-free loans to Japanese companies, including medium and small businesses.

In the United States, the refinancing of financial institutions that provide loans to small and medium-sized businesses has begun under the Main Street Lending Facility (MSLF) program.

In Brazil, the growth of lending to the economy and households (with a concomitant reduction in interest rates, prolongation of loans, etc.) by banks with state participation (Caixa, Banco de Brazil, National Development Bank —BNDES) is ensured. The goals of the loans were similar: supporting the liquidity of companies (including the purchase of loans from medium-sized banks to pay salaries), lending to medium, small and micro businesses, agricultural enterprises, etc.

In Russia, the Bank of Russia began lending at a preferential rate to credit institutions for the purpose of lending to small and medium-sized businesses; long-term repo auctions for banks were introduced, providing customers with the opportunity to restructure loans.

In general, liquidity support for financial institutions, including targeted support, has become one of the most common and main measures of countries' monetary policy during the coronavirus pandemic.

4. The launch of targeted financial assistance programs to companies and households through the purchase of both newly issued and already outstanding securities of companies (used mainly by developed countries: the USA, the EU, the UK), lending to companies for the purpose of paying wages, providing state guarantees, paying interest rates for a certain period of time on loans under approved schemes for assistance to the real sector of the economy and the population. The amount of assistance in this area is more modest, with the exception of the United States and Germany.

In the United States, since the end of March 2020, financial support programs for companies through the purchase of commercial paper (Commercial Paper Funding Facility — CPFF) have been implemented; support for large American companies through the implementation of their lending programs, including through the purchase of their securities: both newly issued (Primary Market Corporate Credit Facility — PMCCF) and already in circulation (Secondary Market Corporate Credit Facility — SMCCF); support for consumer loans (Term Asset-Backed Securities Loan Facility — TALF). The total amount of these programs is $ 850 billion.

In Germany, significant financial resources (more than 650 billion euros) were allocated to provide state guarantees for loans issued to companies to maintain their liquidity by the state bank KfW and a specially created Economic Stabilization Fund (WSF),[13] and the purchase of shares in large companies for the same purposes. A moratorium has been introduced on payments on consumer loans for households affected by COVID-19. At the Land level, tens of billions of euros worth of financial assistance pro-

[13] The provision of state guarantees for loans served as an incentive for banks to continue lending to the economy (in addition to the financial ability to issue loans thanks to the liquidity received from the Central Bank). Government guarantees also protect the central bank from credit risk, which is a transparent and efficient way to maintain its operational independence. 100% state guarantees on loans during the pandemic were issued in Germany, Hong Kong and Switzerland.

grams for companies and households have been launched.

Some developing countries have also used this tool of monetary policy (volumes — several billion US dollars).

For example, in Brazil, the federal government launched the Employment Crisis Program (Programa Emergencial de Suporte a Empregos — PESE), which provides loans to companies to pay wages to workers [limit is 40 billion reais ($ 8 billion)],[14] and funds 85% by the Treasury, 15% — by participating financial institutions. In addition, the five largest banks provided an opportunity to receive a two-month moratorium on payments on loans to small and medium-sized businesses and the population.

In South Africa, loans to small and medium-sized businesses issued during the COVID-19 pandemic to maintain their liquidity, including for paying wages to employees, began to be secured by state guarantees.

Scientific studies of the comparative effectiveness of direct financial support for financial institutions and non-financial companies in the context of the coronavirus pandemic indicate a significantly higher efficiency in directing financial flows to companies in the real sector in order to stimulate aggregate demand [7].

5. Expansion of currency swap lines and repo between central banks and softening of their conditions in order to stimulate liquidity in major world currencies (US dollar, euro, yuan). Foreign exchange interventions to maintain the exchange rate of their own currency for other countries (volumes during the first wave of the pandemic: Brazil — $ 51 billion, India — $ 2 billion, Russia — about $ 10 billion). Central bank provision of foreign exchange liquidity to banks (for example, Brazil, Korea, Mexico; small volumes).

The current crisis has further strengthened the role of the US as a lender of last resort. During the pandemic, the Fed repeatedly increased the size of the current currency swap lines with the central banks of the EU, UK, Canada, Japan and Switzerland, and also entered into temporary swap lines with a number of other countries (9 countries in total) in order to increase global US dollar liquidity. The outstanding volume of currency swaps at the end of April 2020 peaked at $ 450 billion (the main recipients are Japan and the EU). In addition, since the beginning of April 2020, the Fed has provided a temporary opportunity to enter into repurchase transactions in US government securities with national and international financial regulators in order to ensure that the latter attract financial resources without putting negative pressure on the functioning of the US government securities market.

During the crisis, the EU and China also contributed liquidity in euros and yuan, respectively, through currency lines with other countries, but on an incomparably more modest scale compared to the US (provided several tens of billions of euros/yuan).

6. Other tools that facilitate the release of financial resources in the banking system for lending to the economy: the weakening of regulatory requirements for the capital of financial market participants, including the dissolution of capital buffers, for the level of their financial leverage, liquidity, for securing bank loans, asset valuation, reduction of reserve requirements, delaying the introduction of new macroprudential requirements, etc.

Some countries resorted to less common measures, such as the abolition of dividend payments in 2019–2020 by banks on their shares and cash incentive payments to key employees (Great Britain, Brazil, South Africa, Russia[15]), a ban on the buyback of their own shares (Brazil), etc.

The vast majority of central banks in both developed and developing countries used regulatory easing to free up financial resources for banks during the crisis. Because in the pe-

[14] In fact, at the beginning of March 2021, 8 billion reais were provided (20% of the declared amount of the program). Acompanhamento das medidas emergenciais contra o coronavirus. URL: https://www.bndes.gov.br/wps/portal/site/home/bndes-contra-coronavirus/mais-informacoes/acompanhamento-medidas-emergenciais-contra-coronavirus/ (accessed on 13.03.2021).

[15] The Bank of Russia recommended that financial institutions pay dividends for 2019 only if they have sufficient capital reserves.

Table 2

Monetary policy effectiveness during the COVID-19 pandemic

USA	Japan	UK	EU	Germany	Brazil	China	India	South Africa	Russia
The volume of declared direct financial support to the economy from the central bank during the first wave of the pandemic (for developing countries, considering the estimated volume of released resources from the easing of regulatory requirements for financial institutions), % of GDP in 2019 (see Table 1)									
48.0	47.1	33.7	25.4	19.6	14.5	7.8	5.0	2.1	1.4
Change in real GDP in 2020 compared to 2019, % (according to OECD)									
–3.5	–4.8	–9.9	–6.8	–5.3	–4.4	2.3	–7.4	–7.2	–3.6

Source: Table 1, OECD Economic Outlook, Interim Report. OECD Publishing, Paris; March 2021. P. 4. URL: https://www.oecd-ilibrary.org/economics/oecd-economic-outlook/volume-2020/issue-2_34bfd999-en/ (accessed on 17.06.2021).

riod after the global financial crisis of 2008–2009 macroprudential supervision tightened in most countries, by the beginning of the pandemic, significant capital and liquidity reserves had accumulated in the financial sectors of the countries, the release of which in connection with the temporary easing of regulatory norms provided significant support to the economies of countries in the context of fighting the consequences of COVID-19.

7. Regional support, for example, in April 2020 the US Federal Reserve launched a program for the purchase of short-term municipal bonds from states and municipalities (Municipal Lending Facility — MLF) (limit — $ 500 billion), financial assistance from the Reserve Bank of India for the states (about $ 30 billion).

CONCLUSIONS: EFFECTIVENESS OF THE COUNTRY'S MONETARY POLICY DURING THE PANDEMIC

Table 2 presents data on the volume of GDP decline by countries in 2020, as well as figures characterizing the declared scale of monetary support for the economies of countries by their central banks.

Although many other factors influence the dynamics of economic development, in addition to the monetary policy of countries, the preliminary data in the table indicate that China conducted the most effective monetary policy during the coronavirus pandemic. Economic growth in this country, unlike most other countries, has not been stopped by the coronavirus pandemic. See [8] for details.

In this country, the main emphasis was placed on structural monetary policy instruments: financial support for the most affected economic entities (mainly through refinancing of banks by the central bank), and the objectives of this policy were achieved. In the first quarter and the first half of 2020, new yuan-denominated loans (7.1 trillion yuan (about $ 1 trillion) and 12.1 trillion yuan ($ 1.7 trillion) loans to micro and small businesses for 5 months of 2020 increased by 28% compared to the value at the end of May 2019. Economic indicators also testify to the high effectiveness of the ongoing monetary policy: the fall in GDP in January-February 2020 was replaced by growth since March 2020; in the second quarter, GDP growth exceeded that of the second quarter of 2019 by 3.2%. In general, for the first half of the year, the fall in GDP amounted to only 1.6%.[16]

Interestingly, in mid-2020, China (unlike the vast majority of other countries) announced the end of monetary easing in order

[16] China Monetary Policy Report Q2 2020. People's Bank of China, Monetary Policy Analysis Group; 2020, August 6. P. 46.

to prevent overstimulation of growth and debt in the financial sector.

When evaluating the effectiveness of monetary policy **in Russia** in 2020, the following features characterizing this policy should be noted:

- **some delay in the implementation of anti-crisis measures, their rapid phasing out**: measures to support the ruble exchange rate began in March 2020; at the end of April 2020, the Central Bank of the Russian Federation announced the transition to a soft monetary policy; on the planned termination of a number of anti-crisis measures with the simultaneous extension of part of the regulatory easing;
- **low volumes of support to the economy from the Bank of Russia (even in comparison with many developing countries**): about 1.5% of GDP (see *Table 1*);
- **the use of traditional monetary policy instruments** to combat the consequences of the pandemic: the main emphasis was placed on supporting the ruble exchange rate (operations on the open market for the sale of foreign currency), a consistent reduction in the key rate, support for small and medium-sized businesses through refinancing of commercial enterprises by the central bank banks, as well as easing regulatory requirements for financial participants in order to stimulate investment/lending to the economy and the population, debt restructuring and resolving problem loans. For more details on the main measures of Russia's monetary policy in the first months of the pandemic, see [9, p. 11].

Thus, it can be stated that during the coronavirus period, the Bank of Russia carried out a cautious easing of monetary policy, which did not correspond to the scale of the crisis in the country's economy. As before, the main guideline in the policy of the Central Bank is the level of inflation, and not the stimulation of economic development (unlike developed countries, whose support for their economies in 2020 was extraordinary in volume, reaching hundreds of billions — several trillion US dollars against several tens of billions of US dollars in Russia). A similar picture can be traced in terms of budget support for the economy by the Russian government. An analysis of the scale of fiscal measures to support the economies of the main developed and developing countries in 2020 indicates much more modest amounts of assistance in Russia compared to other countries. See [10, p. 52].

With the onset of the pandemic, a number of leading Russian scientists expressed their opinion about the inability to provide the economy with sufficient support from the state, about the outdated monetary and economic policy pursued by the country, which consists in trying to "just "wait out" the crisis"[17] and is fraught with the economy plunging into a prolonged economic depression [11, 12]. They presented proposals on using the resources accumulated by the state (National Wealth Fund, foreign exchange reserves), increasing government borrowing (especially in the context of a low level of public debt), launching a quantitative easing program of the Bank of Russia in order to support the economy and stimulate demand. In particular, V. L. Inozemtsev proposed a strategy to stimulate consumer demand for final products (with a categorical refusal to issue soft loans and state support for large enterprises) by increasing lending by the Bank of Russia in the amount of at least 10% of GDP annually for a period of at least the next three years.[18]

CONCLUSIONS: ASSESSMENT OF THE IMPACT OF THE COUNTRY'S MONETARY POLICY IN 2020 ON THE FUTURE DYNAMICS OF ECONOMIC AND FINANCIAL DEVELOPMENT OF DEVELOPED AND DEVELOPING COUNTRIES

In general, when describing the monetary policy of countries during the pandemic, two

[17] For more details, see Inozemtsev V.L. Demand — the state is called to account for. Gazeta.ru. May 31, 2020. URL: https://www.gazeta.ru/column/vladislav_inozemcev/13093363.shtml/ (accessed on 13.03.2021).

[18] Inozemtsev V.L. Demand — the state is called to account for. Gazeta.ru. May 31, 2020. URL: https://www.gazeta.ru/column/vladislav_inozemcev/13093363.shtml/ (accessed on 13.03.2021).

features that are unique to the current crisis can be distinguished. First, it is the **excessive efficiency** of response of the countries' central banks to the crisis, a lesson from the previous major global recession (2008–2009), which showed that the uncertainty of their policies increases the volatility in financial markets. Secondly, **expanding the operational capabilities** of central banks through the inclusion of new non-traditional monetary policy instruments (quantitative easing; temporary redemption of loan portfolios from banks in order to expand lending by the latter to the economy; direct financing of business entities that are not banks; support for regions through the purchase of municipal securities, etc.), making the most of all available means to mitigate the economic and financial impact of COVID-19.

At the same time, developing countries have carried out a fairly conservative and cautious easing of the monetary policy compared to developed countries, which flooded financial markets with liquidity and launched a new, by far the largest round of quantitative easing. Given that in previous rounds of quantitative easing, about 30–40% of funds flowed to the financial markets of developing countries [5], after the end of the pandemic, we can expect another rapid recovery in these markets — recipients of US, EU, UK and Japan-printed money, An influx of capital can lead to temporary economic growth and rapid recovery in the stock markets of these countries (compared to the supposedly long stagnation in developed countries), but in the end, the next crisis will become a trigger for the withdrawal of speculative capital from these markets and their immersion in a new round of devaluation of the national currency, defaults and financial losses.

The scale of this destabilizing factor in the dynamics of the financial markets of developing countries is evidenced by the scale of the reversal of capital of international investors during the current crisis: in March 2020 alone, emerging markets lost $ 80 billion — a historical record for the monthly volume of capital outflow from developing countries to developed markets.[19] In the future, taking into account the increase in money emission by developed countries, these indicators may increase significantly along with the volatility of the financial markets of developing countries.

Thus, it can be stated that financial crises only aggravate the dependence of their well-being, which is painful for developing countries, on the economic situation in developed countries and on the economic and monetary policies pursued by these countries.

CONCLUSIONS: FORECAST OF THE GENERAL MONETARY POLICY VECTOR AFTER THE COVID-19 PANDEMIC

When forming monetary policy in the near future, the central banks of countries will rely on the following main factors:

1. The state of the banking sector. One of the economic consequences of the pandemic was the transition of the economies of countries to the stage of illiquidity and their rescue by the banking sector with the participation of central banks. However, the stage of illiquidity may be followed by the stage of financial insolvency for a significant number of companies, with subsequent transfer of losses to the banking sector. The probability of development of events in this direction is the higher, the greater the scale of liquidity injections into the economies of countries was carried out during the crisis. For central banks, this will mean the need to start encouraging banks to replenish reserves rather than encouraging them to use them to support the economy.

2. The rate of inflation. There are currently two opposing factors affecting prices globally: a sharp decline in aggregate demand and containment of its recovery in the face of uncertainty with the spread of the virus reduces price growth while rising production costs and lower prices increase labor productivity associated with a number of circumstances (new the realities of the production of goods and the provision of services in the context of social distancing, deglobalization and disruption

[19] Annual Economic Report. Bank for International Settlements; June 2020. P. 10.

of production chains, their reorientation to local markets). In developing economies, prices are also rising due to the depreciation of national currencies.

Experts from the Bank for International Settlements point to the likely predominance of deflationary factors in the short term [13] and, accordingly, the legitimacy of continuing the stimulating monetary policy by the central banks of the countries.[20] The likelihood of such a scenario is growing due to the difficulties that countries are experiencing in containing the spread of coronavirus in 2021.

3. The level of public debt. The crisis associated with the 2020 pandemic has led to a significant increase in the level of public debt in general and its size, and, above all, in developed countries, the share on the balance sheets of central banks. In many advanced economies, central bank balance sheets are at an all-time high and are projected to grow in the future, albeit at a slower pace.[21] Under these conditions, monetary policy will come under pressure due to the fiscal need to maintain low interest rates to service the public debt — even in the face of rising inflation.

Thus, if during the pandemic the interests of central banks and governments coincided, then at the exit from the crisis — in the event of the emergence/intensification of inflation and the deterioration of the financial situation of banks — it would be advisable for central banks to move to tighten monetary policy, this will be contrary to budgetary interests [14, 15]. Under these conditions, the central banks of the countries will be under pressure from the executive authorities, and it will be quite difficult to reverse the vector of monetary policy. This is also evidenced by the experience of the global financial crisis of 2008–2009.

A particularly sharp conflict of interest may arise for the central banks of the largest advanced economies: given the volume of liquidity they throw into the market [in 2020, the G4 countries conducted quantitative easing by about $ 6 trillion, which is comparable to the international reserves of all developing countries (about $ 8 trillion[22])], these countries could face severe banking crises and high inflation rates, requiring a sharp tightening of monetary policy at a high cost of servicing public debt, making such a tightening highly undesirable.

[20] Annual Economic Report. Bank for International Settlements; June 2020. P. 60.

[21] Annual Economic Report. Bank for International Settlements; June 2020. P. 62.

[22] International Monetary Fund (IMF) Data Access to Macroeconomic & Financial Data: Data Template on International Reserves and Foreign Currency Liquidity. URL: http://data.imf.org/ Data as of June 2020. (accessed on 17.02.2021).

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