MINISTRY OF EDUCATION OF THE REPUBLIC OF AZERBAIJAN

AZERBAIJAN STATE UNIVERSITY OF ECONOMICS

INTERNATIONAL MAGISTRATE AND DOCTORATE CENTER

MASTER DISSERTATION

on the topic

"THE IMPACT OF (COVID-19) PANDEMIC ON THE WORLD ECONOMY: POLICIES AND MEASURES PURSUED BY CENTRAL BANKS"

Bayramova Ulvira Yavar

BAKU-2022

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Elm andı

Mən Ülvira Bayramova and içirəm ki, “The impact of covıd-19 pandemic on the world economy:policies anf measures pursued by central banks” mövzusunda magistr dissertasiyamı elmi əxlaq normalarına və istinad qaydalarına tam riayət etməklə və istifadə etdiyim bütün mənbələri ədəbiyyat siyahısında əks etdirməklə yazmışam.

“COVİD-19 PANDEMİYASININ DÜNYA İQTİSADİYYATINA TƏSİRİ: DÜNYA BANKLARININ HƏYATA KEÇİRDİYİ SİYASƏTLƏR VƏ TƏDBİRLƏR”

XÜLASƏ

Mövzunun aktuallığı: COVİD-19 pandemiyası dövründə mərkəzi bankların yürütdüyü siyasətlər daxili iqtisadiyyata və dünya iqtisadiyyatı siyasətlərinə böyük təsir göstərmiş, mərkəzi banklar gözlənilmədən bu problemlə üzləşmişdir.

Tədqiqatın məqsədi və vəzifələri: antiböhran tədbirlərinin formalaşmasının xüsusiyyətlərini və COVID-19 dövründə və ondan sonra Mərkəzi bankların pul siyasətinin inkişaf tendensiyalarını təhlil etməkdir.

İstifadə olunan tədqiqat metodları: Tədqiqatda müxtəlif xarici və daxili amillərin təsirlərini nəzərə alan sistem-funksional yanaşmadan istifadə edilmişdir. Bu, öz növbəsində, müəyyən tədqiqat prosedurlarının - tarixi və məntiqi biliklərin və müqayisəli, empirik və statistik məlumatların əldə edilməsi üçün metodoloji vasitələrin tərtibini və istifadəsini asanlaşdırdı.

Tədqiqatın informasiya bazası: Tədqiqatda yerli və beynəlxalq təşkilatların araşdırmalarına və hesabatlarına əsaslanan keyfiyyətli məlumatlardan istifadə edilmişdir.

Tədqiqatın məhdudiyyətləri: İşin bəzi məhdudiyyətləri var: Əsas məhdudiyyət inkişaf etməkdə olan ölkələrdə koronovirus vəziyyəti ilə bağlı məlumatların olmamasıdır. Digər məhdudiyyət Azərbaycanda mövzu ilə bağlı araşdırmaların olmaması və nəhayət, müvafiq orqanlar tərəfindən verilənlər bazalarının yenilənməməsidir.

Araşdırmanın yeniliyi və praktiki nəticələri: Tədqiqat göstərir ki, hökumətlərin və mərkəzi bankların növbəti bir neçə il ərzində həyata keçirdikləri kütləvi antiböhran tədbirləri ödəniş və fiskal sistemlərin balanssızlığı ilə xarakterizə olunan qlobal iqtisadi böhrana səbəb ola bilər.

Nəticələrin elmi-praktik əhəmiyyəti: Dövlət borcunun sürətli artımı, ölkələrin iqtisadi potensialını xərcləməsi, inflyasiyanın kəskin artması və milli valyutaların devalvasiyası. Milli hökumətlər iqtisadiyyatı tamamilə rəqəmsallaşdırmaq və şəbəkə platformalarını və maliyyə aktivlərini milliləşdirməklə bu problemi həll edə bilər.

Açar sözlər: Covid-19, Pul Siyasəti, Mərkəzi Bank, Kəmiyyət yumşalması (QE), Yoxsulluq.

“THE IMPACT OF COVID-19 PANDEMIC ON THE WORLD ECONOMY:POLICIES AND MEASURES PURSUED BY CENTRAL BANKS”

SUMMARY

The actuality of the subject: The policies pursued by the central banks in the time of the of the COVD-19 pandemic have huge impact on the domestic economy and on the world economy policies, central banks faced with this problem unexpectedly.

Purpose and tasks of the research: is to analyze the features of the formation of anti-crisis measures and trends in the development of a monetary policy of Central banks during and after COVID-19

Used research methods: A system-functional approach was used in the study, which considers the effects of various external and internal factors. In turn, this facilitated the design and use of a specific set of research procedures - methodological tools for acquiring historical and logical knowledge and comparative, empirical, and statistical information.

The information base of the research: The study used the qualitative data based on the studies and reports of the domestic and international organizations.

Restrictions of research: There work have some limitations: The primary limitation is the lack of data relating the coronoviruse situation in developing countries. Another limitation is the lack of the research in the topic in Azerbaijan and lastly , the relevant authorities does not update the datasets.

The novelty and practical results of investigation: The research indicates that governments and central banks' massive anti-crisis measures over the next few years can precipitate a global economic crisis characterized by an imbalance of payment and fiscal systems.

Scientific-practical significance of results: The rapid growth of sovereign debt, countries' spending of economic potential, and a sharp increase in inflation and devaluation of national currencies. National governments can resolve this problem by completely digitizing the economy and nationalizing network platforms and financial assets.

Keywords: Covid-19, Monetary Policy, Central Bank, Quantitative Easing (QE), Poverty.

ABBREVIATIONS AND SYMBOLS

APP	Asset Purchase Program
CBDC	Ccons of issuing their digital currency
CCFF	Corporate Finance Fund
COP	Conference of the Parties
CPI	Consumer price index
ECB	European Central Bank
ESCB	European System of Central Banks
ESM	European Stability Mechanism
ESM	European Stability Mechanism
EU	European Union
FAO	Food and Agriculture Organization
GDP	Gross domestic product
IMF	International Monetary Fund
LFDS	Low-income Food-Deficit Countries
MPP	Master of Public Policy
MPP	Master of Public Policy
OECD	Organisation for Economic Co-operation and Development
PEPP	Pandemic emergency purchase programme
QE	Quantitative Easing
QQME	Quantitative and Qualitative Monetary Easing
SDGs	Sustainable Development Goals
SDGS	Sustainable Development Goals
SMEs	Small and Mid-size Enterprise
SMP	Securities Market Program
UK	United Kingdom
USA	United States America
WHO	World Health Organization

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INTRODUCTION

Relevance of the research topic: It is possible to use the main provisions and conclusions of the study to specify the target mandates of central banks' monetary policy, as well as their tools, channels, and mechanisms, all of which are directly related to the implementation of anti-recessionary measures by sovereign governments and Central banks in the event of a COVID-19 pandemic, as well as to the radical digital transformation of the entire global monetary-credit system following completion of all predicted stages of the coronavirus epidemic.

The COVID-19 coronavirus pandemic came as an unexpected and severe shock to most of the world's countries. Even though medical and epidemiological problems initially provoked this crisis, its development has a significant economic aspect since the measures introduced to combat the virus carry high financial costs (Goldstein et al., 2021). Currently, the level of uncertainty associated with the pandemic's medical factors and the economic consequences is exceptionally high. So, there are still very rough estimates of mortality from COVID-19 and the total number of people who have recovered (often asymptomatic) with this virus. Concerning assessing the economic costs of the current crisis, there is also a wide range of opinions since its nature is significantly different from the nature of the financial crises that we have observed over the past few decades. In such a situation of high uncertainty, a structured discussion of possible scenarios and the consequences of various measures taken becomes especially important (Kennedy et al., 2006).

The COVID-19 pandemic has taken a heavy toll on the global economic system. Measures to curb the spread of the virus, which have been carried out in different countries since spring 2020, have led to large-scale disruption of traditional economic relations in the domestic economic turnover and the system of international economic relations. In terms of the types and nature of the measures being taken, central banks' monetary policy largely coincides with the policy of the period of the world financial crisis of 2007–2009 (Ibn-Mohammed et al., 2021). The significant differences are observed in the causes of the emergence of crisis phenomena and its influence on the countries different sectors.

The economic downturn in 2020 affected primarily the real sector, especially the service sector (transport, catering and entertainment, the recreational sector). It affected both the supply of goods and services and the value of effective demand. As for the financial industry, there has been no customer raid on banks, a massive withdrawal of deposits, and a violation of the payment system. The availability of bank loans for clients with a low credit rating decreased. There was an overflow of funds into risk-free assets and a lack of liquidity in certain groups of investment institutions. In connection with COVID-19, there have been many forecasts of the depth and duration of the decline in production and the slowdown in economic growth in countries with a significant number of diseases. Most experts believe that the coming economic downturn will be much longer and more damaging than the events of 2007-2009. The April OECD report, "Assessing the Initial Impact of COVID-19 Containment Measures on Economic Activity," projected a 20-25% decline in output in 2020 and consumer spending by a third. At the same time, it was emphasized that "these general assessments relate only to the initial direct impact on the situation in the considered sectors of the economy and do not consider additional effects that may occur later" (OECD, 2020).

Such uncertainty in forecasts of the dynamics of economic processes in the context of the development of a pandemic is characteristic of analysts and heads of central banks and representatives of financial circles to an equally fragile recovery.

C.Lagarde referred to the current downturn's more dire impact on the service industries than in previous crises when the industry and construction sectors were hit hardest. According to C.Lagarde, the expectation of "fragility of recovery" is associated with the likelihood of a repetition of the cycles of the spread of the coronavirus and new periods of tightening quarantine restrictions up to a complete lockdown (European Central Bank, 2021). The cyclical nature of the reach of the COVID-19 pandemic can lead to sustainable changes in the behavior of businesses and have a negative impact on the timing of the exit from the recession. Therefore, Lagarde reasonably believes it is necessary to look for a new set of monetary and fiscal policy measures to boost economic activity. Despite significant differences in

the reasons for the emergence and features of the development of crisis phenomena, central banks' monetary policy in the periods under review was very similar, if not identical. The measures used will be discussed in more detail below on the example of the actions of the US Federal Reserve System, the European Central Bank, the Bank of England, and the Bank of Japan.

In the study, primary attention was paid to the analysis of the main directions of anti-crisis policy, the peculiarities of monetary programs in individual countries, and a preliminary assessment of the impact of the measures taken on the dynamics of the leading macroeconomic indicators. Three main financial steps have been intensively used to contain the decline in economic activity in 2020: interest rate regulation, "quantitative easing" policy, and Central banks responses to Covid.

Statement of the problem and learning level: This study addresses the factors affecting the effectiveness of decision-making in enterprises and the application of modern methods, and research has been conducted. The problem has been studied and researched by foreign scientists and specialists, and monographs have been written. At the same time, many articles have touched upon this issue and made suggestions. Scholars of the country also come across research on certain aspects of this topic, but it is not very large-scale and has not been the main subject of research.

Purposes and objectives of the research: The objective of the study is to analyze the impact of the COVİD19 pandemic on the world economy policies and measures pursued by central banks; to explain the main postulates and discussions in the field of modern monetary theory; to show the features of the formation of anti-crisis measures and trends in the development of a monetary policy of Central banks during and after COVID-19.

Object and subject of the research: The subject of the study is the fiscal and monetary policies pursued in the international arena during the Covid-19 pandemic and other historical economic crises. As the study analyzes the policies of the international community during the crisis, it was considered appropriate to take the World Bank as the object of this study.

Research methods: In order to analyze central banks' current monetary and credit policies in a time of Covid pandemic, a system-functional approach is used, which takes into consideration the effects of various external and internal factors. In turn, this facilitated the design and use of a specific set of research procedures - methodological tools for acquiring historical and logical knowledge and comparative, empirical, and statistical information.

Research database: During the research, many statistical indicators, annual reports of international journals and journals, scientific researches and articles were included and used in the analysis.

Research limitations: There work have some limitations: The primary limitation is the lack of data relating the coronoviruse situation in developing countries. Another limitation is the lack of the research in the topic in Azerbaijan and lastly, the relevant authorities does not update the datasets.

Scientific novelty of the research: The main scientific novelty of the study is the results obtained during the study comparing budget, monetary and fiscal policies during the Covid-19 period with the policies before the Covid-19 pandemic.

Scientific-practical significance of the results: The research indicates that governments and central banks' massive anti-crisis measures over the next few years will precipitate a global economic crisis characterized by an imbalance of payment and fiscal systems, the rapid growth of sovereign debt, countries' spending of economic potential, and a sharp increase in inflation and devaluation of national currencies. National governments will resolve this problem by completely digitizing the economy and nationalizing network platforms and financial assets.

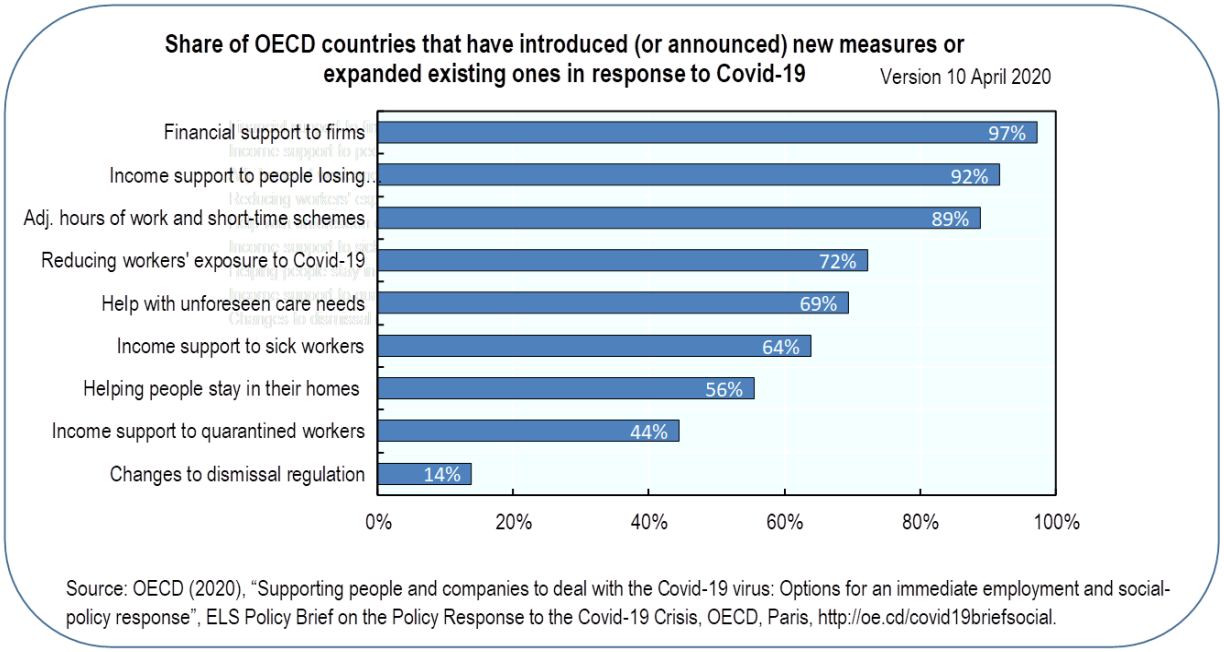
CHAPTER I. THE IMPACT OF THE COVID-19 PANDEMIC ON GLOBAL ECONOMIC ACTIVITY AND SOCIETY

1.1. COVID-19 in the world and different economic policies to cope with it

On December 31, 2019, the World Health Organization (WHO) announced an outbreak of pneumonia of unknown origin in Wuhan, China (COVID-19 and China: A Chronology of Events (December 2019-January 2020)). On January 30, 2020, the global disease situation was declared a "public health emergency of international concern." At this time, other countries, including France, Germany, and the United States, began to report cases of infection. On March 11, WHO announced the beginning of a coronavirus pandemic - by this time, a new viral disease had been detected in 114 countries, more than 118 thousand people were already sick with COVID-19. As of February 1, more than 100 million cases of COVID-19 have been identified worldwide, more than 2 million people have died (WHO, 2020). The spread of Covid-19 around the world was uneven, reflecting the existing problems in different countries: the availability and coverage of medical care; the speed of the government's reaction and the degree of public confidence in the authorities; issues of internal social policy and the standard of living of the population (many continued to go to work with symptoms, spreading the virus, since they did not have enough money to live). Countries have taken various measures - from closing external borders and restricting transport links to introducing a full lockdown, closing shops and public institutions, and transferring employees to remote work to prevent disease spreading.

Experience has shown that countries with earlier and coordinated measures have been able to cope with the pandemic quickly and with fewer losses, and scientific research is also supported (Caselli et al., 2020).

Figure 1: Share of OECD countries that have introduced new measures or expanded existing ones in response to Covid-19



Source: https://voxeu.org/article/options-immediate-employment-and-social-policy-response-covid-19

The analysis of the sequence of the introduction of measures in some countries suggests that strict lockdowns for a short period are preferable to soft but long-term restrictive measures, both to save lives and for long-term support of economic activity in the country (see, Figure 1). However, there are other views on the most effective strategy for containing the epidemic. For example, (Bergeijk, 2021) believe that the best strategy should be based on a policy of universal testing and case tracking (as in New Zealand and South Korea), effective communication policy (for example, in Uganda, distancing measures were reported on the radio for the poor areas without internet access) and a gradual easing policy (Denmark). However, researchers who support one or another containment model agree that measures that have worked successfully in one country may not be applicable in others. For example, the strict contact tracing policies in China and South Korea cannot be imagined in liberal Western countries. China's epidemic containment policy indeed proved to be effective so that the last infected patients were discharged from hospitals in April 2020, and the situation remained relatively stable until September 2021 (apart from a few local outbreaks). The critical factor in containing the

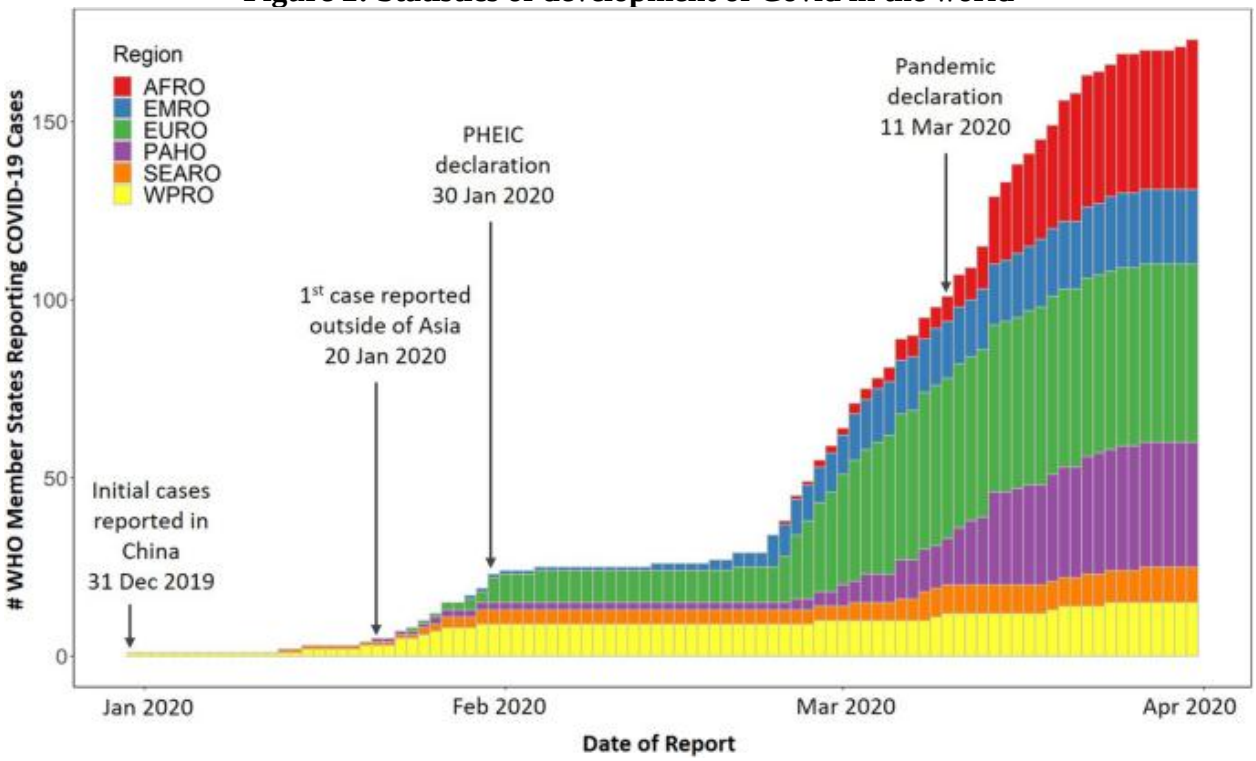
epidemic was a quick and brutal response - a complete lockdown in the foci of infection and the use of digital technologies to track the health and contacts of the population (health codes, contact identifier, outdoor cameras, and thermal scanners). The movement of the people in the foci of infection was strictly controlled, a ban was introduced on leaving the outbreak, on leaving the micro-district without a permit and a mask, all cultural, tourist and entertainment facilities were closed. The highest response mode was declared, hospitalization was carried out with any suspicion of infection; for those unwilling to be treated or comply with quarantine and harming health workers, criminal punishment was introduced (up to the death penalty) (Gogley, 2020).

On the other hand, a reward was promised for everyone who "surrendered" on their own or for reporting other cases. At the same time, China promptly launched widespread rapid testing to detect coronavirus in Hubei province, even with minimal suspicions of the disease. The Chinese model of quick response made it possible to localize the focus of infection and limit the spread of the virus as early as 2 months after the pandemic. At the same time, the weakening of quarantine restrictions in China took place gradually while maintaining reasonable precautions: total disinfection continued social distancing and monitoring of morbidity. At the beginning of 2021, China has lifted all restrictions except for mask mode. The negative aspects of organizing the fight against coronavirus in China include hiding information in the early stages of the spread of the virus, insufficient protection of medical workers, fears of total government control over people's lives after the epidemic due to the versatile collection of data through special applications without protecting this data1. It is because of this that China's experience in containing the epidemic turned out to be inapplicable in Western countries and the United States, where a more difficult epidemiological situation has developed - perhaps not so much because of the inapplicability of total lockdown and tracking measures, but because of the lack of a quick response from the authorities and inconsistency. measures (in the USA) (Mai, 2020). In general, several models of combating the spread of the epidemic can be distinguished: the already described Chinese (hard

lockdown and contact tracing), Asia-Pacific (universal testing and contact tracing), Western (milder but prolonged lockdown), and Swedish (no restrictive measures in the purpose of developing herd immunity). They will be discussed in more detail below. In 2020, the world experienced two waves of the spread of the epidemic: the first fell in the spring and ended in most countries in the summer with the onset of warmth, the second - in the fall. However, in the context of individual countries, the dynamics of the incidence were uneven. For example, in Italy, Russia, and Iran, one can clearly distinguish between the onset and decline of the first and second waves of diseases. In the USA, Sweden, and the UK, the second wave as of the end of January 2021 was still ongoing; in India, in which the outbreak of diseases occurred in the summer, the first and so far only wave of the epidemic is dying out; in Brazil, both waves began later than in other countries, but over the entire period (even during the weakening of the first wave), a significant number of cases and deaths from the virus remained (VOA News, 2020). weakening quarantine: in addition to reducing the detected cases of diseases, people tired of restrictions also played a role. First of all, small shops, open-air establishments were opened, movement to longer distances was allowed. At the second stage, schools, pubs, restaurants are opened, borders between regions are opened. However, while restrictive measures are eased, national governments rely on a "test, track and isolate" system to prevent a second outbreak. In Italy, bookstores and children's clothing stores were first opened, subject to mandatory disinfection 2 times a day; some small non-food stores have also been opened in Germany since early May. In the United States, recommendations were issued for three phases of easing restrictions: first of all, shopping, sports, and restaurant zones with large areas that can provide distance are opened, construction, realtors, and civil servants resume work. However, there was a rather abrupt and untimely cancellation of measures in several states, which led to a resumption of the growth of diseases and the return of restrictions in the summer. The seasonal sensitivity of the virus caused the expectation of a second wave of morbidity in the fall in many countries, especially in those where the most stringent social distancing measures were taken in the spring (and a significant part of the

population did not acquire immunity) (Cantú et al., 2021). Therefore, by the time of the onset of the second wave, most countries turned out to be more prepared - more medical equipment, protective equipment, and places in hospitals were prepared; significantly more tests were carried out than in the first wave, including for asymptomatic patients. On the one hand, this allowed a better and faster response to the spread of the virus. On the other hand, the statistics on the incidence of the second wave became much higher in many countries. With the onset of 2021, the policy on implementing restrictive measures in different countries also differs - depending on the situation with the number of infected people, the rate of spread of the infection, and the availability of medical care. In several countries, the morbidity situation has improved, as a result of which restrictions have been relaxed, while in others, on the contrary, stricter restrictions were introduced or returned in winter - the closure of schools, bars, and non-grocery stores, a curfew, and a complete lockdown1. Since about May, in most Western countries, the first wave of the epidemic began to fade, and the reason for this was the introduced restrictive measures and the weather conditions (CDC,2020). Thus, many countries decided to take advantage of the summer period for incidence rates remain the United States (over 26.1 million people as of January 31), India (over 10.7 million), Brazil (9.2 million), Great Britain, and Russia (3,8 million), France (3.2 million). At the same time, the leaders in the number of new cases per 1 million people are Portugal (over 1000 new cases), Israel, Spain, Montenegro.

Figure 2: Statistics of development of Covid in the world



Source: https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-021-00678-4

The United States is in 12th place with a daily incidence of 458 people per 1 million people. The tightening of measures in European countries is associated with the emergence of a new, rapidly spreading "British" strain, in connection with which many countries have introduced a ban on entry from the UK. In the UK itself, with the discovery of a new strain at the end of December, restrictions were tightened in several regions, and a nationwide lockdown was introduced on January 5. Restrictive measures were quite strict, schools were closed, most of the employees were transferred to a remote mode of work, and they were allowed to leave the house only to visit a grocery store or a doctor and play sports near the house. Thus, this is the third lockdown introduced during the pandemic in the UK (Stynes, 2021). Measures are also being tightened in Germany, France, and Portugal; in Sweden, restrictions were introduced. In Germany, the full lockdown was introduced even earlier than in the UK - on December 16. Only stores of necessary goods remain open; schools, bars, restaurants, most of the offices are closed. People are allowed to meet on the street with no more than one person. In addition, in early February, an even greater tightening of existing measures is expected (restrictions on the operation of

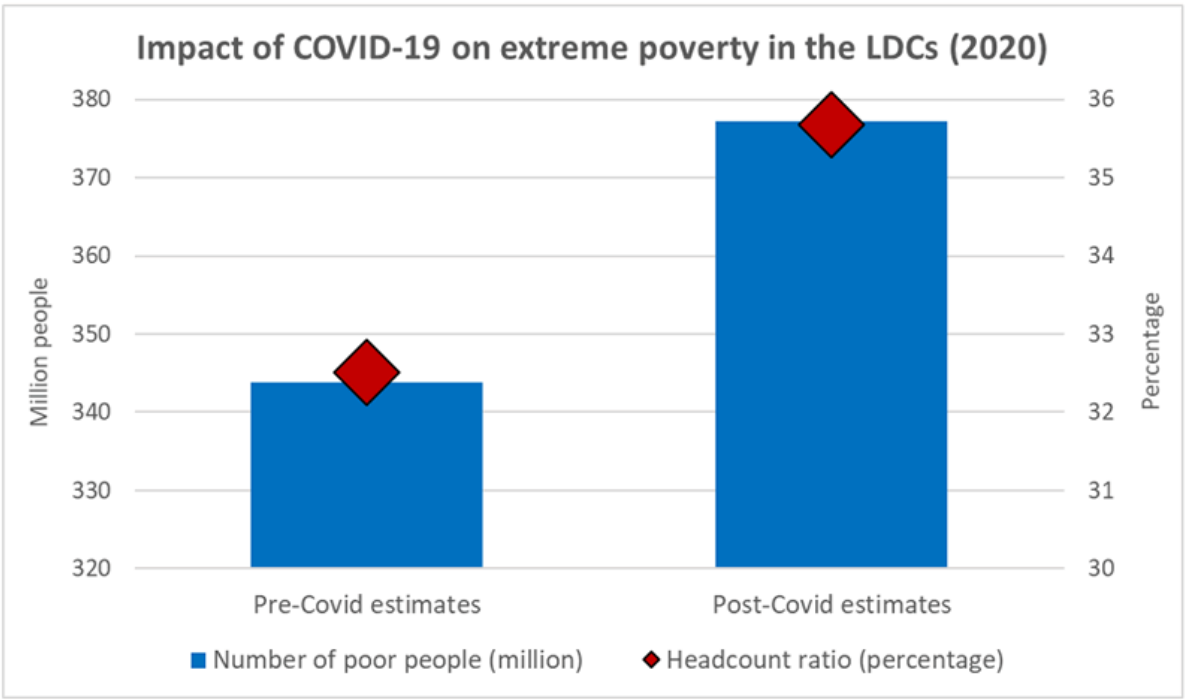
transport, curfew). In December, France introduced a curfew (from 20:00 to 06:00). On January 16, the time was extended when people should not leave their homes, and shops and offices should be closed (from 18:00 to 06:00). Schools remain open - students can attend if they have a negative test. A negative test is also required when entering the country and mandatory self-isolation upon arrival for 3 days. Bars, restaurants, resorts have remained closed since October. As in Germany, further tightening of measures is expected in February, up to a complete lockdown. In Portugal, a new quarantine has been introduced since January 15: most shops and entertainment venues have been closed, bars and restaurants work only for take-out, offices have transferred employees to a remote mode. Schools and universities remain open. On the contrary, in Greece and Italy, quarantine measures introduced promptly in the fall made it possible to overcome the second wave of diseases outbreak, and the restrictions are beginning to ease. The measures introduced in different countries to contain the pandemic included a wide range of restrictions: restrictions on freedom of movement, the closure of schools and universities, the closure of entertainment and catering establishments, the transfer of employees to remote work, the suspension of part of production activities, and a lockdown. Many countries have consistently and promptly introduced several measures at once, and the effectiveness of individual measures is difficult to assess, even though the sequence was generally similar. In general terms, there are several models of policies against the spread of the virus. The Chinese model, which implies a hard and fast lockdown in foci of infection, tracing contacts, movements, and people's health, made it possible to stop the epidemic and prevent new waves of infections quickly, but such a model based on control and intervention in privacy is not applicable in Western countries. The Asia-Pacific model (South Korea, New Zealand, Australia, Japan) relies on universal testing and contact tracing and has also been effective in stopping the epidemic during the first wave, despite milder restrictions than in China. The Western model (European countries, USA, Latin America, Russia) uses the possibility of introducing soft but long-term measures, but this model had its own characteristics in different countries. The earlier the first restrictive measures were

introduced and coordinated, the faster it was possible to stop the spread of the virus in the country. So, in France, Spain, Germany, and Italy, faster than in other Western countries, they were able to stop both the first and even the second wave of diseases. On the contrary, in Sweden (which did not introduce any measures until almost the end of 2020), in the USA (heterogeneous and inconsistent policy in different states, sharp lifting of restrictions) and in Brazil (very late response of the authorities), where the second wave of diseases was significantly more serious, and during the summer plateau, there was a high incidence of diseases (Baldwin & Beatrice, 2020). It allows us to conclude that early restrictive measures with their gradual relaxation allow better control of the incidence, and lockdowns should be seen as an effective intervention by the health system to stop the spread of the epidemic. The COVID-19 pandemic had a powerful negative impact on economic activity in the first half (especially in the second quarter) of 2020 (Cantú et al., 2021). The quarantine and self-isolation regime has caused ruptures of production and trade and distribution chains, full or partial cessation of activities in several sectors of the economy, especially in the service sector and transport. The need for social distancing has led to a deformation of the labor market, especially in small and medium-sized businesses. According to IMF estimates, as of early July 2020, global production losses due to a pandemic shock amounted to over $ 12 trillion in two years (2020–2021). In absolute terms, the bulk of these losses was in the countries with the largest GDP.

1.2. COVID-19 and world poverty

After decades of steady decline in 2015, the dynamics of global hunger prevalence reversed: the number of people suffering from hunger - measured in terms of the majority of undernourishment - began to increase gradually. In 2018, this figure reached 820 million, highlighting the critical importance of achieving one of the Sustainable Development Goals (SDGs) - ending hunger by 2030. The State of Food Security and Nutrition in the World last year found that uneven recovery from the 2008-2009 global recession and continued weak economic performance in many countries were among the key factors undermining efforts to eliminate hunger and malnutrition (FAO, IFAD, UNICEF, WFP and WHO, 2019). Most of the countries (65 out of 77) that experienced an increase in the prevalence of undernourishment between 2011 and 2017, found in this report, were simultaneously experiencing a slowdown or recession. This observation was timely in 2019 given financial difficulties, rising trade tensions, and a deteriorating financial situation, all contributing to the uncertainty of the global economic outlook. Today, the unprecedented COVID-19 pandemic shatters these global economic prospects in ways no one could have foreseen.

Figure 3: Impact of COVID-19 on extreme poverty in the LDCs (2020)



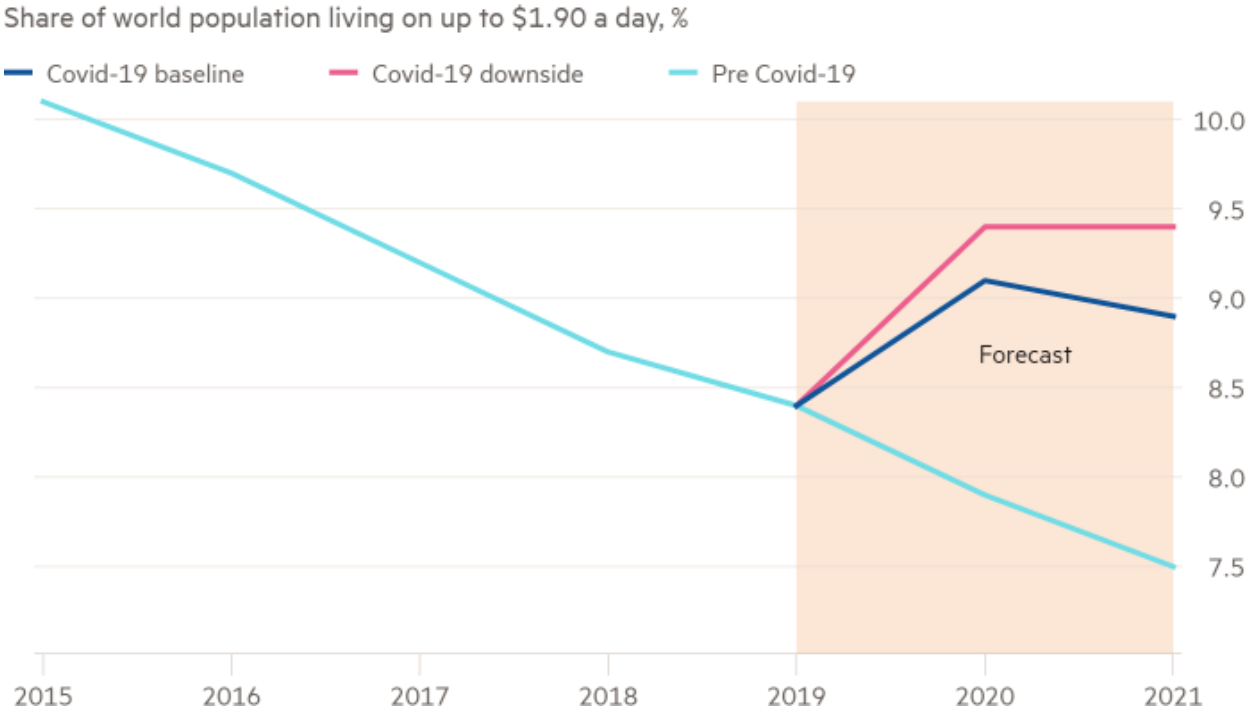
Source: https://unctad.org/news/when-it-rains-it-pours-covid-19-exacerbates-poverty-risks-poorest-countries

In 2020, the link between economic performance and malnutrition has become even more relevant. The State of Food Security and Nutrition in the World also calls for action on two fronts (FAO, IFAD, UNICEF, WFP, and WHO, 2019). The first is to ensure food security and nutrition through economic and social policies to deal with the effects of a slowdown in economic growth or an economic downturn. The second is to tackle existing inequalities at all levels through multi-sectoral policies that better prevent food insecurity and malnutrition. In the face of the COVID-19 pandemic, these policy recommendations take on even more importance. In the current situation, economic forecasts are primarily characterized by uncertainty and will remain so for some time. While pandemic experts are considering different scenarios, FAO quantitatively predicts the potential impact of the global economic downturn on hunger. There are good reasons for this work: no matter how optimistic the scenario may be, the toll from hunger can be significant, so proper action should be taken before it is too late. FAO's statistical analysis of low- and middle-income countries over the period 1995-2017 shows that the impact of economic downturns and temporary recessions on food availability is determined by the rate of decline in GDP per capita. The relatively limited growth slowdown appears to impact the net food supply in food-importing countries significantly. The food supply in low-income food-deficit countries (LFDS), which lack the capacity to produce the food they consume independently, is severely affected in almost any type of economic downturn. The analysis shows that, on average, a one percentage point decline in GDP growth resulted in a 0.306 percent reduction in the food supply in these countries. By comparison, for the group of net food importers and middle-income countries, a one percentage point reduction in GDP growth translates into a 0.154 percent reduction in the food supply. For countries - net food exporters, this relationship is not statistically significant. For more information on the methods underlying these statistical estimates, the definition of country groups and samples, and subsequent analysis, see Conti, Cafiero, and Sánchez (2020). Using these calculations, we estimated the impact of three hypothetical scenarios of declining

real GDP growth on net food supply in 101 net food-importing countries (of which 47 are in the NIPS group) to predict the effect on PH in all of these countries. The countries in this sample, with a population of 5.2 billion in 2018, cover a huge area.) One of the limitations here is that this analysis may not reflect the cumulative impact of reduced GDP growth on ROP, as it does not consider the possible impact of reduced access to food ("Document Card, FAO, Food and Agriculture Organization of the United Nations"). Moreover, even the numbers presented here under the most pessimistic scenario should be seen as underestimating the potential impacts of the COVID-19 pandemic on global food security, as they only focus on malnutrition or hunger that is the result of complete food insecurity. Many more people worldwide are likely to be severely impaired to have regular access to food, at least in the short term, due to various measures taken to limit the spread of infection. Because food value chains are globally integrated, cooperation and coordinated work at the international level and within individual countries are paramount. The central role belongs to key structures of the international community, in particular, the United Nations system. So far, the main policy response in most countries has been to inject huge amounts of liquidity through fiscal and monetary mechanisms to support market demand, including deferring financial commitments, connecting social safety nets such as cash benefits for those who have lost their jobs, and providing loans on preferential terms. Central banks in high-income countries have reverted to emergency quantitative easing and debt buying programs to raise bond prices and curb interest rate increases. In March, the European Central Bank allocated an additional 120 billion euros for the needs of the bond buyback program, and then another 750 billion euros. European Union (EU) leaders are discussing the issue of offsetting costs through the possible creation of a European recovery fund for transfers (not loans!), In the amount of 1.5 trillion euros, using the same mechanism as the EU budget, with a period of two to three years. In March, the United States Federal Reserve also announced a $ 700 billion similar program, with an additional round being considered. In the second week of April, it announced the creation of $ 2.3 trillion in new credit lines (bond purchases) to provide loans to small businesses

and municipalities. Injection of liquidity and significant cumulative spending commitments will challenge emerging economies and the poorest countries. These countries likely do not have the tools to leverage these incentive policies at the level needed to cope with the massive damage from COVID-19.

Figure 4: Possible scenarios and forecast on the impact of covid on poverty level in the world



Source: https://www.ft.com/content/3bd80712-4e24-45cf-b433-397020c67d99

The unexpected effects of the pandemic crisis include a slight decrease in income inequality, which is due to the emphasis on supporting families with children: the income of this category of the population has decreased to a lesser extent than other social groups. However, the risk of poverty increased among low-paid workers and those who were not formally laid off but lost in earnings. Overall, the epidemiological crisis has further actualized the problem of fighting poverty, which does not look promising within the established social support system. Issues in medicine and the health care system acquired a genuinely existential character, which practically nowhere did have a sufficient "margin of safety" to meet such a disease. The new virus turned out to be both more infectious and deadly than the most dangerous infections developed countries have dealt in modern history.

Moreover, the rapid expansion of healthcare capacities, the largest mobilization since the Second World War in the fight against the pandemic, negatively affected

the availability of medical care in other areas. At the same time, the very nature of the pandemic not only objectively limited the operation of enterprises and entire industries, radically influenced logistics and the use of established trade and economic ties, but also stimulated the choice of restrictive, protectionist, and isolationist policies. The system of multilateral cooperation, already weakened by geopolitical and trade conflicts, has undergone additional tests. The world is confronted with a crisis of global collaboration at the very moment when it has needed this cooperation the most in all recent decades. Information noise does not allow one to look beyond the horizon of even one year. Today we believe that the state is back, and without it, the development of the economy is impossible. But what are the limits to the rationality of public spending, and where does the state ultimately get its revenues from - isn't it from the private sector? A large state helps its citizens, but does it not take away in exchange for supporting their rights and freedoms? Tracking systems prevented the spread of infection, but will they not now curb the spread of free opinions, will not come along with the accelerated digitalization of human functions, Big Brother, digital authoritarianism, and in the most developed democracies? Regional and social differences as a result of the pandemic have now received a new dimension - the digital divide, including in educational practices. The famous phrase "The world will never be the same again" is very effective, but the question is: what will this world be like? Today's predictions about the situation in the economy the day after tomorrow are often refuted by tomorrow's day - never before have the forecasts of economists and representatives of other social and even natural sciences so much reminded of fortune-telling on coffee grounds.

The nature of the infection, the specifics of its spread, the pandemic's very nature, and its biological, psychological and political effects are not fully understood. The pandemic crisis forces us to think about the effectiveness of industries that develop and protect human capital. And also about the accuracy of the choice of priorities in budgetary policy, including the world economic, demographic, humanitarian trends. COVID-19 - for all its extremely negative effects

- has returned a person to the center of attention of both states and societies. What will change such a protracted coronavirus crisis in demographic trends, in fertility and mortality, in life expectancy, finally? What will happen to the nature of relations between people who maintain a social distance, who see each other almost exclusively in masks and on the screens of gadgets, which are now replacing direct communication? How will - and forever - the quality of teacher-student and teacher-student contacts change? And these are just a few of the disturbing new questions to which there is no clear answer. At first, it seemed that the coronavirus crisis would unite people regardless of the characteristics of national economic and political systems. The unification did not work out - at least not yet.

Moreover, pandemic frustration has often provoked distrust of "outsiders" carrying viruses. De-globalization has become the focus of discussions. It manifested itself in the most bizarre ways, including in the form of a kind of "graft nationalism" or in the growing attractiveness of populist and conservative discourses, which is becoming noticeable, for example, in Great Britain and France. Even though isolation during the lockdown period unexpectedly entered different countries into a single global context: the threats and challenges were, in fact, common for all. Is it possible to learn how to respond to them together? This is perhaps the main question that the unprecedented pandemic crisis posed to humanity. The $ 1 trillion IMF fund and long-term financial support from the World Bank may not be sufficient. Therefore, now the international community structures must act together to support the economy in countries that do not have savings that would allow them to solve emerging problems independently. These countries, in turn, have a responsibility to be financially responsible and forward-thinking by redirecting their own resources to meet the most pressing needs associated with the COVID-19 pandemic and create an effective incentive system for the private sector, ensuring coherence in its actions.

CHAPTER II. ANTI-CRISIS BUDGET POLICY

2.1. Anti-crisis budget policies during Covid-19

The overall assessment of all anti-crisis actions taken in response to the coronavirus pandemic in developed and developing countries illustrates the unprecedented state of aid to the population and the economy. In the current crisis, governments use a wide range of instruments: direct budget spending, tax spending, government guarantees, capital injections, the use of extra-budgetary funds, direct lending, and quasi-budgetary support. The countries made priority anti-crisis decisions in the spring of 2020. Many of them were initially calculated for several months. However, the development of the crisis and the deterioration of the epidemic situation demanded an increase in the scale of state aid. Most countries have extended certain support measures (except for a further increase in government guarantee programs) and, less often, adopted new ones for 2021. Some governments have announced the implementation of anti-crisis measures for the medium term, for example, in Australia and New Zealand - until 2024.

The record holders for the total volume of planned support are Germany (39% of GDP), Italy (38% of GDP), Japan (35% of GDP) and the United Kingdom (30% of GDP). Aid packages for other developed countries are several times smaller: Australia and Canada have 15-17% of GDP, Finland and the Netherlands have less than 10% of GDP. The scale of anti-crisis response in developing countries is much more modest. Due to the limited possibilities for easing the budgetary policy, the volume of anti-crisis support in them does not exceed, on average, 7–8% of GDP. In the structure of state aid around the world, there are significant disparities between contingent liabilities and direct fiscal stimulus measures. The preference for expanding programs for providing state guarantees to the private sector of the economy as the basis for anti-crisis packages was given mainly by developed economies - Italy (86.5% of the total volume of anti-crisis measures), Spain (73.3%), France (65.5%), Germany (63.4%). %), Finland (57.3%), Great Britain (54.6%), as well as some developing countries - Turkey (73.9%) and India (64.3%). The state

guarantees have provided many of the listed states with an impressive scale of assistance to the national economy. At the same time, the actual business support provided in these countries is likely to be more modest. According to preliminary estimates, the demand for state guarantees is several times lower than the announced packages: in Spain, the share of guarantees provided is less than 50% of the volume declared by the government, in France - 36%, in Italy and Great Britain - less than 20%, in Germany - less than 10%. Thus, the mechanism of state guarantees as a tool for providing liquidity to businesses in practice turned out to be involved in a significantly smaller volume compared to the amount declared by the governments. All countries, without exception, carry out an anti-crisis response through budgetary instruments: additional budgetary allocations and tax incentives for the affected categories of economic agents. However, in the structure of fiscal incentives in some countries, these instruments are key: the share of budgetary measures in the USA, New Zealand, Australia, Canada, China, Chile, Saudi Arabia, Indonesia, Brazil accounts for more than 2/3 of the total volume of anti-crisis response (Thorbecke, 2020). Delays in tax and insurance payments have become an almost integral element of anti-crisis policy in world practice. As a rule, the assessment of such measures is not included in the cost of the crisis response, although in some countries, the deferred payment programs for businesses are equivalent to a few percent of GDP. For example, in Denmark and Sweden, deferred income due to the provision of these preferences exceeds the volume of direct budgetary incentives and amounts to 7.9 and 6.5% of GDP, respectively. Internationally significant deferral programs have been adopted in Japan (4.9% of GDP), Canada (3.9% of GDP), and among developing countries - in Brazil (2.9% of GDP) and Chile (2.3% of GDP) (European Commission. Directorate General for Economic and Financial Affairs., 2020). With COVID-19 spreading, governments have supported national health systems, households, businesses, and regions. Of these areas, the largest budgetary incentives in developed countries are provided for business (in many cases, provided by large-scale programs of state guarantees). Direct budget aid is also predominantly distributed among companies and households. Comparatively, fewer incentives are used to keep the

health system functioning in a pandemic, compensate for declining revenues, and maintain a balanced subnational budget. A set of measures to support the economy's private sector aims to provide enterprises with liquidity to support their activities and maintain wages and employment. The solution of these problems is carried out through variable measures of state aid, of which in world practice, in addition to the provision of state guarantees, direct subsidies to enterprises are most often used (including grants for maintaining jobs, wages), reducing the tax burden (tax incentives, exemption from payment), reduction/deferral of liabilities for insurance premiums, soft loans. In the current crisis, central governments paid special attention to financial support for self-employed entities and industries that are more affected by the spread of coronavirus (hotel business, tourism, air travel) due to the specifics of their activities. Governments have significantly expanded national social protection programs to support household income. A relatively large amount of direct budgetary incentives in this direction is accounted for by developed countries. Due to the specifics of the current crisis, budget support is provided to a wide range of recipients, not just the unemployed and the needy. The most common anti-crisis solutions in foreign countries include an increase in benefits for disability, underemployment, unemployment, low-income people (including in the form of lump-sum payments), as well as child benefits. Reducing the tax burden and mandatory payments of the population is quite rare. Support for the national health care system, carried out in all countries, is an uncharacteristic direction of anti-crisis policy for previous economic crises. The main measures of government response were allocating additional budgetary allocations for the material equipment of health care institutions to combat the spread of COVID-19, incentives for employees of institutions in the sphere (in cash and another form), as well as experimental development and research. The scale of fiscal stimulus in this area is varied: from 1.5% of GDP in the UK, 0.5% of GDP in the United States, to 0.3% of GDP in Sweden and New Zealand. Developing countries, on average, have allocated less support to the health sector than developed economies and concentrated on the material equipment of institutions in the sphere. The spread of the coronavirus and

the restrictive measures taken by the central governments have created challenges to the stability of subnational finances: a reduction in budget revenues, while spending on the implementation of regional anti-crisis solutions increases. Additional transfers provided in order to balance the budgets of the budgetary system and compensate for the reduction in revenues have become a widely used tool in foreign countries to support the regions. As part of the first anti-crisis decisions, central governments focused on supporting the regions regarding health services delivery. In particular, in Australia, Brazil, Sweden, the United States, additional resources were allocated to the subnational level to cover health care costs caused by the pandemic. Another form of national support was the advance transfer of approved inter-budgetary transfers to the regions (Spain, China, USA) (European Central Bank, 2020). To ensure greater flexibility in fiscal policy in the context of the crisis in individual countries, central governments have eased restrictions on the main parameters of subnational budgets (the ceiling for deficit and debt).

2.2. Macroprudential policy in a time of Covid-19

According to traditional views, the spheres of action of the budgetary and monetary authorities should be delineated since there is an apparent conflict between the task of maintaining price stability and the issue of ensuring financing of the state budget. This approach discourages excessive fiscal expansion financed by the issue of money since it places the case decided in the hands of an independent central bank (Laurens & Piedra, 1998). In addition to the legally guaranteed autonomy of the central bank, the described disciplining principle is expressed in the prohibition of direct financing of the budget deficit by the central bank in the form of both lending and the purchase of government bonds in the primary market. However, in conditions of weak aggregate demand, when inflation and interest rates fluctuate near zero and the risks of falling into a prolonged economic depression increase, the task of maintaining strict fiscal discipline fades into the background, and the return of the output to a potential level becomes a priority of economic policy. One of the reasons monetary stimulus should be combined with fiscal expansion is that, as noted above,

monetary policy becomes ineffective at low rates. Unable to lower the rate significantly below zero, the central bank loses its principal instrument of influencing macroeconomic dynamics. Quantitative easing gives a much better result in promoting economic growth if accompanied by adequate fiscal stimulus in terms of volume. Japan was the first country in the 20th century to experience long-term stagnation. With the onset of the 2020 crisis, the likelihood of a scenario in which developed countries will suffer from chronic inadequate demand for many years has increased significantly. The central bank and budgetary authorities coordinate their actions in such conditions, pursuing joint, stimulating policies. Maintaining low-interest rates is coupled with significant fiscal deficits, and it is this combination of measures is more effective in helping boost economic activity. A similar policy was pursued in many developed countries after the onset of the global financial crisis of 2008. At the same time, throughout the post-crisis decade, central banks introduced new instruments to stimulate growth, which are de facto hybrid fiscal and monetary instruments. In 2020, coordination between fiscal and monetary authorities reached a new level, and the line between the spheres of action of the two branches of economic power became even thinner. The following distinctive features of the reaction of the economic authorities to the current crisis can be distinguished (Ramírez de la Cruz et al., 2020).

First, the scale of budget support measures is unprecedented. According to the IMF, the aggregate support measures amount to about 12% of world GDP. Additional government spending and provide tax incentives on average in developed countries reach 9.3% of GDP, excluding loans and guarantees. At the same time, the volume of incentives is incredibly high in some countries: in Canada - 12.5% of GDP, in the USA and Australia - about 11.8% of GDP, in Japan - 11.3% of GDP. Accordingly, budget deficits also increased significantly (IMF, 2020).

According to preliminary estimates, the average deficit in developed countries for 2020 is 14.4% of GDP. At the same time, in all the largest developed countries, except for Germany, the budget deficit will significantly exceed 10% of GDP. In developing economies, the situation is generally similar - the average expected

budget deficit, taken for the group of emerging markets and middle-income countries, is equal to 10.7% of GDP. Second, the budgetary authorities' response to the crisis was very prompt, while the fiscal authorities constantly coordinated their actions with the central banks, although implementing budget support measures usually takes much more time. From the experience of the anti-crisis policy carried out during the world financial crisis of 2008-2009. and in the post-crisis years, conclusions were drawn; as a result, it was possible to take the necessary measures to support the economy promptly. Third, the volume of asset buyback programs by central banks in many countries was comparable to the size of the deficits. The ECB and the Bank of Japan bought back government bonds for more than 70% of all government debt placed in 2020, the volume of the Fed's buyback program amounted to 57% of the volume of bonds issued by the US Treasury and the Bank of England bought government bonds for an amount equal to half of the volume of debt issued by the British government in 2020 (IMF, 2020). Thus, a significant share of the financing of budget deficits came from the issue of money, which affected the size of the balance sheets of the respective central banks. Emission financing of budget deficits did not lead to an increase in inflationary expectations or to the rise in credit risk premiums. The only exceptions were made by only a few European countries: Italy, Portugal, Greece, and Spain. In the spring of 2020, the long-term yields on government bonds of these countries increased. However, after the announcement of the asset repurchase program, within the framework of which these securities were purchased, their yields decreased following the yields of bonds of other European countries (Kranke, 2020).

During the COVID-19 pandemic, macroprudential policy (MPP) measures have become another important tool for monetary authorities to stabilizing the economy and financial markets in a crisis. Given that the causes of the crisis were not related to the financial sector, it could be assumed that MPP would be applied on a relatively small scale (Ćehajić & Košak, 2021). However, the practice of using anti-crisis measures to counter the negative effects of the pandemic has shown that MPP tools are among the most in-demand. At the same time, we can say that the

developing countries' experience repeats the best world practices, although it has some peculiarities. Using MPP to achieve financial sustainability and manage financial crises has become a widely accepted approach since the 2008–2009 global financial crisis. and the inclusion of the goal of ensuring financial stability in the mandates of monetary authorities in many countries of the world. The allocation of MPP as a distinct type of economic policy required significant preparatory work for regulators and financial market participants over the past 10 years. At the moment, we can say that the goals and objectives and the set of MPP tools have become relatively more standardized, and the financial authorities have accumulated experience in using them to ensure financial stability. Many researchers point out that the financial sector was not a source of instability in 2020. However, the shock to the economy due to epidemiological restrictions was severe, and the financial sector could become a factor in its strengthening and further spread. After introducing the most significant quarantine restrictions, signs of increased financial turbulence in the global market in 2020 after introducing the most significant quarantine restrictions include severe stress and a sharp decline in demand in the US Treasury market with maturities of more than one year and a sharp decrease in the liquidity of the corporate bond market. This fact resulted in a rapid growth the yield of these securities in mid-March 2020, a significant outflow of funds from investment funds and money market funds, which, according to the Bank for International Settlements, for funds in the United States amounted to more than $ 160 billion, or 15% of their assets under management6; the threat of a halt or a significant slowdown in payments in the event of increased instability, including the threat of a shortage of dollar assets for international settlements (OECD, 2021). It is important to note that the financial system, especially commercial banks this time, turned out to be much more prepared for the crisis. The key factors, in this case, were a more streamlined system of financial regulation, which was based on the implementation of Basel III standards, higher levels of capital adequacy and liquidity ratios, and greater transparency in asset pricing. Thus, we can say that the main goals of IMF in 2020 on a global scale were to prevent the spread of the economic shock

to the financial sector and ensure the financial system's normal functioning. As additional tasks, one can single out support for economic agents in the most vulnerable position during the pandemic (tourism and transport industries; small and medium-sized businesses; households left without a source of income), and the distribution of negative economic effects over time. In the context of IMF, support measures for non-financial organizations and the population are related to the financial aspects of their activities and, as a rule, include ensuring continuity and reducing the costs of bank lending, assistance in making or postponing loan payments, non-application of penalties for late loan payments, and other similar measures. Even though it is too early, to sum up the final results, many researchers believe that the listed goals have been achieved. In emerging market countries, the need for additional coordination of monetary and fiscal authorities was less or absent, as these countries are characterized by higher inflation, interest rates, and economic growth. In such conditions, monetary policy remains effective even in the absence of fiscal incentives, and the risks of a significant deviation of inflation down from the target and falling into long-term stagnation are small. At the same time, confidence in the policies of the fiscal and monetary authorities is lower than in developed countries. Therefore, the task of ensuring proper discipline remains urgent, for which it is necessary to maintain an institutional barrier between the central bank and the government (Трунин, 2020). Central banks have shifted from rigidly dividing fiscal and monetary policy spheres in some emerging market economies. In Indonesia and the Philippines, central banks purchased government bonds in the primary market. The corresponding volume of buyback programs in 2020 amounted to about 4.5% of GDP in Indonesia and about 3% of GDP in the Philippines (Cooper & Aitchison, 2020). While the received funding from the regulator is targeted and intended to implement government programs of anti-crisis support for the economy and spending on social and health care. Currently, direct central bank financing of the state budget is not widespread in emerging market economies.

With the onset of the economic crisis caused by the spread of coronavirus infection, the normalization of monetary policy in developed countries is postponed

indefinitely, and the unconventional measures that the monetary authorities of developed countries were forced to resort to restoring economic growth after the global financial crisis of 2008-2009 will become an essential tool central bank policies. The effectiveness of interest rate policy will remain very limited. Central banks will raise rates as economic activity recovers and inflation approaches target levels, but they are highly likely to return to zero during recessions. It is unlikely that macroeconomic conditions will normalize shortly, which will allow the central banks of developed countries to return to traditional inflation targeting with a nominal rate as the primary and only instrument.

2.3. Interest rate and Budget Policy during Covid-19

1. The impact on the level of market interest rates, that is, on the cost of funds provided as a loan to clients of financial institutions, is one of the traditional monetary policy instruments. The role of this measure has repeatedly changed under the influence of the specifics of the business cycle and the effectiveness of the application of the interest rate that influenced the level of business activity. So, during the ten years of relatively stable development of the world economy before the 2007-2009 crisis. Controlling market fluctuations through interest rate regulation has figured prominently in the arsenal of central banks. For example, in the United States, the Fed actively used changing the federal funds rate targeting to maintain the money market environment and influence economic activity in general (https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2313). At the same time, the so-called Taylor rule was applied as a kind of policy benchmark. According to which during periods of economic recovery and inflationary price increases, the target interest rate level should be increased to limit the scale of bank lending and in the context of an aggravating economic recession - to reduce the target rate and thereby stimulate development credit expansion of financial institutions. The peculiarity of this method of monetary policy is the passive nature of the central bank's actions. The regulator reacts to fluctuations in the money market environment but does not initiate its fundamental changes. Another feature of regulating the target

level of interest rates is that they, as a rule, do not affect the structure and size of the central bank's balance sheet, unlike other monetary policy measures. Crisis 2007-2009 revealed the narrow boundaries of interest rate regulation in developing a severe economic downturn (Discussion Paper - Central Bank Digital Currency: Opportunities, challenges and design (bankofengland.co.uk). In the context of the new financial crisis provoked by the COVID-19 pandemic and the rapid decline in world oil prices, central banks' balance sheets are actively using anti-crisis measures of unconventional monetary credit policies are proliferating again. The prominent leaders here are still highly developed countries such as the United States, the European Union, and the United Kingdom. Emerging market economies are also keeping pace with significant leaders.

2. *The US.* The anti-crisis package developed by the state and monetary authorities in the United States is estimated at approximately 6.2 trillion dollars, of which 4 trillion, or 21.8% of GDP, is planned to be directed to support the financial sector and 2.2 trillion, or 12.0% of GDP (as of March 2020), to finance budget expenditures (support of the population, financial organizations and enterprises in the form of direct cash payments, an increase in unemployment benefits, instalments and concessional lending, tax incentives, as well as for the health care system). The implementation of this package of anti-crisis measures, carried out in stages, is associated with the following initiatives: - On March 15, the Federal Reserve System, for the second time during the month, reduced the rate of the federal reserves by 1.0 percentage points, to 0–0.25% (Covid-19 to send almost all G20 countries into a recession - Economist Intelligence Unit (eiu.com). At the same time, the regulator expects to maintain this target range until it is sure that the economy is on track to achieve its employment and inflation (CPI) targets - The FIMA Repo Fund (FIMA Repo Facility) to ensure the smooth operation of the US Treasury market and ease tensions with US dollar liquidity for foreign central banks and international financial institutions. This liquidity is available to all FIMA account holders for a minimum of six months starting from April 6, 2020, 0% countercyclical buffer in commercial banks' capital, and on March 17, the Treasury announced the creation of a Corporate

Finance Fund (CCFF) to purchase commercial paper for up to one year. At the same time, the Bank of England increased the volume of buybacks of risky assets from the market - from 435 billion to 645 billion pounds, coordinating a significant increase (210 billion) with the UK government to jointly provide maximum support households and businesses during the COVID pandemic.

Russia. On April 2, 2020, the Russian government approved a list of measures for the sustainable development of the country's economy on April 1, to ease tensions in the Treasury market and increase the ability of financial institutions to provide loans to households and businesses, the Fed announced a temporary change until March 31, 2021 leverage regulation rules for commercial banks.

- On April 3, the CARES Act issued recommendations allowing federal agencies and financial control authorities to implement more flexible policies concerning mortgage borrowers experiencing difficulties, directly or indirectly caused by the COVID-19 pandemic. For example, defer payments on mortgage loans to borrowers for up to 180 days or more; - On April 9, the Fed announced measures in the amount of $ 2.3 trillion, which will be aimed at supporting the economy with liquidity: secured by loans previously issued to households and businesses; to cover the costs of small companies for the salaries of assisting small and medium-sized enterprises (hereinafter - SMEs) within the framework of the MSLF; buying bonds from states and municipalities.

European Union. On March 12, 2020, the European Central Bank (hereinafter - the ECB) to overcome the consequences of the COVID-19 pandemic, announced the launch of a program of emergency purchases of private and public securities for a total of 750 billion euros, which, along with the current This year, the EUR 120 billion QE program will become the main factor in the injection of excessive liquidity into the European system of central banks (hereinafter - the ESCB).

At the same time, the ECB also expanded its capacity to provide long-term liquidity to private banks under the TLTRO III target program. Under this program, banks until June 2021 can receive liquidity up to 50% of their loan portfolio at a negative interest rate of 0.75% (previously, the lower limit was 0.5%). As part of the

anti-crisis measures of their governments, the EU finance ministers are considering the possibility of using the financial stability fund (ESM) for this purpose, which currently amounts to about 410 billion euros. In early April, the head of the European Commission, Ursula von der Leyen, announced that the European Union, as part of the short-term preservation of employment (SURE) program, is urgently allocating 100 billion euros to mitigate the risks of unemployment in the EU.

The United Kingdom. On March 11 and 19, 2020, the Bank of England cut its key interest rate by 65 bp. p., up to 0.1%, and organized the Emergency Business Financing Fund with Additional Incentives for Small and Medium Enterprises (TFSME). On March 9, the FPC of the Bank of England reduced to the conditions of the spread of the COVID-19 pandemic. The resolution states both the provision of financial support to organizations and individual entrepreneurs engaged in the spheres of activity most affected by the coronavirus infection and the introduction of several priority measures related to tax payments, insurance premiums, and advance payments taxes and insurance premiums. On April 3, 2020, the Bank of Russia approved a program of additional measures to support lending to the economy and protect the interests of citizens, namely, to help mortgage lending, preserve the potential for lending to SMEs, provide liquidity to credit institutions, maintain the availability of insurance services for businesses, and support professional market participants securities and trading and clearing infrastructure, as well as participants in the collective investment market. Thus, individuals who find themselves in a difficult life situation (loss of monthly income up to 30% and more) can take advantage of credit holidays, which allow them to postpone compulsory loan payments for up to six months. For the same period, bank loans to SMEs will be issued to pay wages at the rate of 0% per annum.

Banks will attract additional liquidity by expanding the Lombard List and softening the requirements for the level of liquidity of securities used in refinancing operations.

On April 10, the Bank of Russia approved another series of additional measures to protect the interests of citizens and support lending to the economy, in particular,

measures related to support: companies affected by the pandemic and corporate lending; remote customer service; insurance companies and non-state pension funds (hereinafter referred to as NPF); measures to protect the rights of borrowers and maintain the sustainable functioning of microfinance institutions (hereinafter - MFI).

Key initiatives valid until September 30, 2020 included: non-deterioration of the debt service quality assessment as of March 1, 2020; undercharging of provisions for losses (for loans and securities) in the event of a deterioration in the financial situation of the borrower after March 1, 2020; non-decline in the quality of debt service on loans of I and II quality categories as of March 1, 2020, provided to leasing companies; calculation of the capital adequacy ratio and related credit risk based on the internal rating system; the absence of measures of influence for violation by insurance organizations of the requirements of the maximum share of corporate securities in assets in which insurance reserves are invested, and in assets in which the insurer's own funds are invested. The total expenditures allocated by the Russian Government and the Central Bank to combat the negative consequences of the COVID-19 pandemic in the Russian economy will not exceed 2.5% of GDP (approximately 2.5 trillion rubles). It is several times less than for these purposes is allocated by other countries, for example, in the United States (33.8% of GDP). Good or bad, such "underfunding" can affect the recovery and further development of the Russian economy, as time seems. But world practice also shows that too large amounts of financial support associated with the flooding of economic entities and the budget with "helicopter money" can, in the medium term, provoke an imbalance of the entire budget system, the rapid growth of sovereign debt, active "eating up" of the financial capital of the state, private business, and households, as well as the rapid rise in inflation and devaluation of the national currency.

Attempts by central banks, primarily the Fed, to revive the economy in these conditions by lowering the target rate in the federal funds market or other key rates (for example, the "discount window" rate) were not successful. When key rates, as a result of successive reductions in them, reached the zero limit, the method of interest regulation lost any efficiency. With the onset of the COVID-19 pandemic,

the central banks of the United States and Europe, as in 2007–2009, first tried to apply cuts in crucial rates to contain the decline in business activity. So, in March 2020, the Federal Open Market Committee of the Federal Reserve System, in several stages, lowered the target rates on federal funds by 150 basis points to 0-0.25%. Similarly, the Bank of England reduced the Bank Rate from 0.75 to 0.1%.

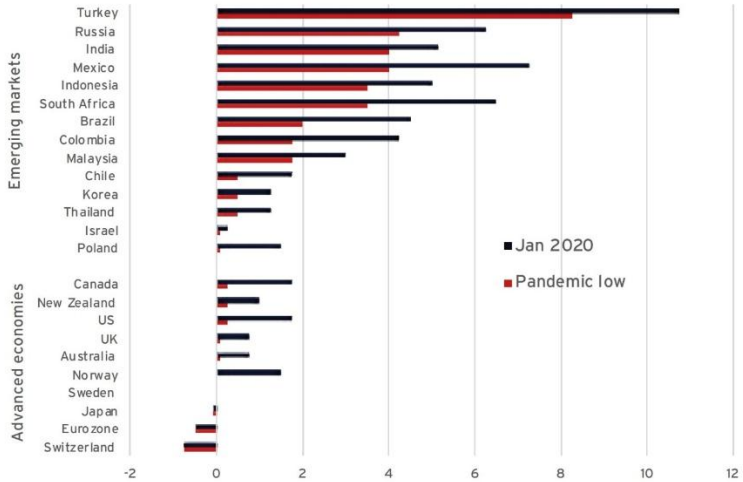
As for the European Central Bank and the Bank of Japan, their key rates have already been around zero for several years and therefore have not changed in 2020. The ineffectiveness of interest rate manipulations led to a quick transition to previously tested monetary measures, namely: quantitative easing (QE) operations, the purchase of large lots of government securities by the central bank for its own portfolio, and credit facilities to provide targeted financial assistance to specific groups of the population and small and medium-sized businesses. These two groups of measures formed the basis of monetary policy during the fight against the consequences of the pandemic.

CHAPTER III. ANTI-CRISIS POLICY OF CENTRAL BANKS DURING COVID-19

3.1. Monetary Policy and Banking before Covid-19

The current economic crisis, called by the IMF experts "The Great Lockdown," made us think about the possibility of changing approaches to implementing monetary policy on a global scale. The primary trend in the coming years may be the greater reliance of central banks on unconventional monetary policy measures and the adaptation of inflation targeting to conditions of low inflation and chronically weak aggregate demand. This trend is most clearly manifested in developed countries, where unconventional monetary policy measures have occurred since the global financial crisis of 2008–2009. became an essential part of the toolkit of monetary authorities. However, countries with emerging markets, whose central banks began to use unconventional monetary policy measures in 2020 actively, may continue to use them in the future to maintain liquidity and stability of the financial market. The need to use such efforts is associated with the exhaustion of the potential of central banks' traditional interest rate policy. Classical inflation targeting, which has become the benchmark for monetary policy, works effectively only when nominal money market rates remain in the positive zone. As inflation eases, rates are approaching zero, and the central bank's ability to stimulate demand by easing interest rates dries up.

Figure 5: Interest rates determined by Central banks before Covid and after.



Source: https://voxeu.org/article/monetary-policy-and-central-banking-covid-era-new-ebook

A stable disinflationary trend emerged in the world back in the late 1980s, and it manifested itself not only in developed countries but also in developing countries, where the problems of high inflation and low monetary discipline were especially acute. There are various hypotheses about the factors that played a decisive role in the slowdown in global inflation, but most authors agree that the widespread inflation targeting regime since the early 1990s has made a significant contribution to it. Consumer inflation, especially with a considerable constant rise in prices, has always been viewed as a harmful phenomenon. Therefore, its global decline can be considered a success of the policy of central banks. Paradoxically, overcoming the inflation problem and ensuring anchored inflation expectations have brought central banks closer to the border, beyond which traditional monetary policy instruments are losing their effectiveness. A qualitatively new period in the evolution of monetary policy began in 2008–2009, when, in the context of the global financial and economic crisis, the possibilities of interest rate policy of the central banks of developed countries reached their limit. There was a departure from the traditional monetary policy regime and a transition to a policy of "quantitative easing," primarily in the form of large-scale purchases of financial assets. This policy raises the monetary base, which in theory should stimulate lending activity at zero rates. Quantitative easing resulted in the multiply increased balance sheets of central banks. From January 2008 to January 2020, the assets of the US Federal Reserve grew 4.7 times, the assets of the ECB - 3.5 times, the assets of the Bank of Japan - 5.1 times, and the assets of the Bank of England - 5.8 times.

One of the consequences of the rapid expansion of money supply was a boom in stock markets, which, despite a large-scale crisis after the fall in the spring, quickly recovered almost all over the world and grew until the end of the year. At that time, it was assumed that the use of unconventional measures would be temporary and limited, and subsequently, when rates and inflation recovered, it would be possible to return to the old traditional arsenal of monetary policy instruments. However, weak macroeconomic dynamics and meagre inflation observed in the post-crisis decade in developed countries did not allow most of them

to move to tightening interest rate policies and required some central banks to conduct additional rounds of quantitative easing. Thus, the ECB, which launched the quantitative easing program during the global financial crisis, suspended its effect only at the end of 2018, while in November 2019, the regulator was forced to resume operations to buy bonds of the eurozone countries, keeping the key rate at zero and updating historical minimum of the deposit rate (-0.5% per annum). The US Federal Reserve curtailed the quantitative easing program adopted during the global financial crisis in 2014, and at the end of 2016, it was able to move to a phased tightening of monetary policy. The local maximum of the target interest rate on federal funds was reached in December 2018, increasing to 2.25–2.5% per annum.

Nevertheless, already in 2019, to support economic activity, the US Federal Reserve again moved to a phased rate cut to 1.5-1.75% per annum. As a result, by the beginning of 2020, many developed countries came up with inflation below the target level, significantly expanded central bank balance sheets, interest rates close to zero, and economies teetering on the brink of stagnation. Thus, the median inflation rate at the beginning of 2008 was 3.9%, while by the beginning of 2020, it dropped to 2.1%. The rate of economic growth of the economies of developed countries in the period 2011–2019. also remained at a low level (1.8% on average). Inflation targeting emerging market economies has experienced a downward inflationary trend since the global financial crisis, which, as noted above, is essentially the result of the successful implementation of inflation targeting policies. Median inflation declined from 6.6% in early 2008 to 3.5% in early 2020. As a result, critical rates from central banks in emerging markets have dropped significantly over the past decade, and several countries (Chile, Hungary, Poland) approached the zero mark. In the context of global uncertainty, a slowdown in the growth rates of the economies of developed countries, and strengthening of trade barriers, the rates of economic growth of emerging market countries had been steadily declining from 7.5% in 2010 to 3.7% in 2019.

The growth of the monetary base in emerging markets in the period after the global financial crisis in the context of weak growth in private sector lending, a

comparable rapid increase in the money supply was not observed. The money multiplier in several developing countries remained relatively stable (for example, in the period 2010-2019 in Chile - 13.5, in Colombia - 4.9, in Thailand - 10.3), and in some countries, this indicator fell. For example, in South Africa, it decreased from 15.3 in 2010 to 13.3 in 2019, Malaysia from 17.4 in 2010 to 11.7 in 2019, and Hungary from 5, 2 in 2010 to 3.1 in 2019.

A significant amount of accumulated international reserves played a specific role in ensuring financial stability in emerging markets in the crisis conditions of 2020. In the aftermath of the global financial crisis, the foreign exchange reserves of most emerging market economies have increased. Thus, the increase in foreign exchange reserves in 2019 compared to 2010 averaged 23.2%. Implementing such a policy in developing countries adhering to the inflation targeting regime was associated with the need to restore the pre-crisis level of international reserves. As a result, most countries in this group by the beginning of 2020 had a sufficient degree of protection from external shocks. As a rule, a relatively high level of international reserves helps maintain foreign investors' confidence in national assets, signalling the solvency of external liabilities and somewhat reducing the cost of external financing. To one degree or another, the crisis phenomena affected most sectors of the economy and required the urgent implementation of a set of measures in the field of monetary policy by both developed countries and countries with emerging markets.

3.2. Easy Monetary Policy and boundaries of monetary stimulation during Covid-19

The essence of "quantitative easing" (QE) is the systematic or periodic purchases by the central bank in the financial market of large lots of long-term government securities, mainly treasury bonds and obligations of government agencies secured by mortgages, as well as various types of municipal obligations and bonds of private companies low risk. Such actions, at first glance, represent a modification of yet another (along with the regulation of interest rates) classical method of monetary policy - open market operations. However, there are very significant differences between the two instruments in terms of implementation methods and the impact on the state of the financial sector and macroeconomic processes. The central bank carries out open market transactions in the form of occasional purchases and sales through authorized dealers of relatively small lots of short-term government securities to adjust the reserve position of commercial banks acting as sellers or buyers of these securities to influence their relationships. In carrying out the CC policy, the central bank's actions are aimed at significantly increasing the volume of the monetary base and stimulating the inflow of monetary liquidity into the payment turnover. In addition, the purchase by the central bank of government bonds on a large scale for its portfolio leads to a shortage of these securities in the stock market. As a result, the market rate of these securities grows while the yield decreases. There is a restructuring of investment preferences: investors present an increased demand for securities with higher yields (bonds of private companies, mortgages on real estate), which, according to the theorists of the Constitutional Court, contributes to the revival of the market and the growth of business activity. The Bank of Japan was the first major central banks to begin large-scale purchases of government securities and other liabilities in 2001 to increase effective demand and stimulate price growth. Finally, the QE method entered the system of monetary instruments after its active use by the US central bank in 2008–2014.

During three consecutive stages, the Fed bought back treasury bonds and other securities of various maturities for a total amount of over $ 3 trillion. These operations eased the liquidity situation in the American financial market, but, contrary to expectations, could not ensure the achievement of the macroeconomic goals of monetary policy - an increase in the index consumer prices to the target level of 2% and an improvement in the employment rate in the labor market. At the same time, the operations of the CU led to an unprecedented increase in the amount of the Fed's balance sheet for the period 2007–2014. by $ 3.3 trillion, that is, five times. In 2014, the Federal Reserve's Open Market Committee announced a transition to "normalizing" monetary policy, which aimed to gradually return to classical principles of regulation by raising the target level of the federal funds rate and reducing the balance sheet of the central bank.

An active anti-crisis policy provoked by the COVID-19 pandemic is likely to lead to a serious reformatting of almost all monetary policy of central banks in the medium term. The process of money creation by central banks in the context of coronavirus infection will be rapid, as the quality softening of internal underwriting standards and Basel III international standards (requirements for regulation of market risk and disclosure of information under Component 3) will actively increase lending activity until the beginning of 2023. banks and other financial intermediaries in the economy. Currently, no central bank in the world is able to control the money supply in circulation. It can only have an indirect effect on the money supply in the economy - on the amount of its reserves and the private money of commercial banks - by regulating the positive overnight interest rate in the interbank market. But in conditions when the target rate of the leading central banks has become close to zero (and for some, it is even negative), the interest rate channel of the transmission mechanism of monetary policy ceases to function, excess reserves remaining in accounts with commercial banks begin rapidly in conditions of credit and quantitative easing. monetize the economy and public debt. According to German professor Josef Huber, the world monetary system is likely to be based on the concept of sovereign money in the future (“Options for an Immediate Employment and

Social-Policy Response to COVID-19 | VOX, CEPR Policy Portal"). The essence of this concept is as follows: credit money of private banks will be replaced by sovereign money of the state; only the central bank, which is the bank of the state, will become the issuer of sovereign money; most of the issued sovereign money will be transferred to state enterprises irretrievably and without charging interest; only an insignificant part of sovereign money will be directed to the interbank lending market, but subject to the direct connection of this market with production target investments (Kaneda et al., 2021). However, a further decrease in short term interest rates in the money market, the reasons for the decline of which are quite actively studied in the scientific literature, will most likely, within the next 3-5 years, lead to the replacement of sovereign money of governments with digital money of central banks capable of stopping the deflationary dynamics of the negative target overnight rate. Therefore, it is no coincidence that some central banks began to explore the possibilities, pros, and cons of issuing their digital currency (CBDC), which, in the context of fairly low (zero or negative) interest rates, could guarantee households and businesses macroeconomic, price and financial stability in the medium term. Digital currencies, the peculiarities of their emission, the search for algorithms for circulation and security (solution of the problem of "double spending") are currently quite actively discussed by some leading central banks, such as the Bank of Canada, the ECB, the NBK, Sveriges Riksbank and Bank of England (Haas et al., 2020). This process was joined by research institutes such as Digital Digital MIT and individual private sector representatives. Despite this, there are still not enough publications on this topic for governments and monetary authorities to make the final choice in favour of CBDC. But the developments of the existing research show that the circulation of their own digital currency will allow central banks to increase the effectiveness of monetary policy in the face of negative interest rates. However, this will practically destroy the economic freedoms of private businesses and households. Central banks will issue their own digital currency, accumulating it on their balance sheets within a closed distributed ledger network. In such a network, all participants will be identifiable, access to other participants will be prohibited or

severely restricted, the emission and validation process of the CBDC will be regulated and assigned to the central bank. At the same time, CBDC will integrate into more mature financial technologies, but those that are likely to become fully controlled by the central bank. Therefore, CBDC will never become a public cryptocurrency (like bitcoin); it will be the same electronic central bank currency (like current reserves), but only with several additional benefits guaranteed by new financial technologies. Experts are currently considering two forms of central bank digital currency: the base, or interest-free, form of CBDC and the percentage form of the digital currency I-CBDC. Interest-free CBDCs are endowed with cash-like properties. They are available 24/7, denominated in sovereign currency, and are issued in addition to banknotes rather than replacing them. Interest rate digital currency (I-CBDC) will likely become an alternative to the target (key) interest rate. This could lead to a change in the existing design of the central bank's balance sheet accounts and other implications for both monetary policy and financial stability policy. For example, the payment of interest on I-CBDC, in the face of growing demand for this currency, can lead to an expansion of the central bank's balance sheet, thereby prompting the regulator to keep as much public and private liabilities as possible on its balance sheet. In the context of a negative target rate, this will allow the central bank to eliminate the negative effect of the key rate transfer to consumer and market rates due to the transition of private banks to I-CBDC. As a result, all this will contribute to both an increase in the efficiency of monetary policy and a decrease in the marginal credit risk in the interbank financial intermediation market. Before launching their digital currencies (interest-bearing and non-interest-bearing) into circulation, central banks will need to answer a number of fundamental questions that are likely to make a number of significant changes in the mechanisms, channels and instruments of central banks related to monetary policy. and a financial stability policy. We will list just a few of them: - the transition of private bank clients to digital currencies will lead to a departure from traditional deposits, which means it will reduce the level of liquidity in the banking sector, thereby reducing the volume of bank lending in the real economy; - lending in I-CBDC is likely to become more

risky, as it will be associated with increased requirements for the current standards of bank liquidity than in the conditions of traditional lending carried out by banks by attracting deposits; - fears of increasing inequity in the distribution of interest income under I-CBDC between commercial banks and non financial organizations, caused by differences in the differentiation of interest accrued to them by the central bank (Cantú et al.2021). In 2017, it was decided to gradually reduce the number of regular purchases of securities against the backdrop of some improvement in the state of the economy. However, the subsequent decline in assets was minimal: at the end of 2019, the portfolio of Treasury bonds and liabilities of government-controlled agencies amounted to $ 3,849 billion, or 92.2% of the Fed's assets. With the COVID-19 pandemic and the identification of ineffectiveness in interest rate regulation, global central banks have taken a different approach to conduct CU operations. In March 2020, the Fed announced a new perpetual program to purchase $ 500 billion in Treasury bonds and $ 200 billion in mortgage-backed agency securities. The start of this campaign was exceptionally fast. Thus, at the end of March, the Federal Reserve Committee on Open Market Operations daily (!) Bought Treasury bonds in the amount of $ 75 billion. 2007-2009 One of the results of accelerated purchases of securities by the Fed was the rapid growth of the monetary base, which determines the rate of deposit expansion and growth of monetary aggregates. For half a year of active operations of the CU (from February to August 2020), the monetary base increased by $ 1,365 billion (by 39.6%), the narrow indicator of the money supply, the M1 aggregate, increased over the same period by $ 1,438 billion (36.5%), and a broader indicator M2 - by $ 2977 billion (19.3%) (Chen et al., 2021). Thus, the turnover was saturated with additional cash liquidity. Another effect of the CS also worked: the yield on 30-year government securities in January-March 2020 decreased from 2.5% to 0.7%. Investors began selling large lots of long-term Treasury bonds and investing in shorter-term government bonds and mortgage-backed private equity. All this made it possible to somewhat reduce the tension on the financial markets but did not significantly improve the situation in the sphere of actual production. The ECB, like the Fed, used the COP's operations as a means of stimulating business

activity even before the COVID-19 pandemic began (European Central Bank, “Interview with Bloomberg”).

Together with the national central banks of the countries belonging to the euro area, they began purchasing government bonds and securities of private companies (Securities Market Program, SMP) and bonds of commercial banks (Covered Bonds Purchase Program, CBPP), for which 300 billion euros were spent. Then the Asset-backed Securities Purchase Program (ABSPP) and several others were launched. Later, all of these programs were combined into a standard program for purchasing financial assets (Asset Purchase Program, APP). The quota for regular asset purchases was set at 60 billion euros per month, then raised to 80 billion euros. By the end of 2016, the total amount of securities purchased by the ECB under the RDA program amounted to € 1,225 billion.

With the COVID-19 pandemic outbreak, the ECB's COP policy has been continued and significantly expanded. In March 2020, a new campaign was announced to purchase government bonds and securities of private companies in the eurozone called the Pandemic Emergency Purchase Program (PEPP) in 750 billion euros. It included all the programs included in the RDA. At the same time, the range of securities allowed for purchase was expanded, and the requirements for their protection from risks were reduced. In June 2020, the ECB announced an increase in the PEPP program by another 600 billion to a total of 1,350 billion euros. The purchase period was extended until the end of June 2021. In addition, it was envisaged that funds for securities purchased under the PEPP program and for which the maturity date will come and reinvested in new securities under this program. Among the most lengthy and persistent is the strategy of operations of the CU, pursued by the Bank of Japan. His policy, which was especially actively developed when H. Kuroda came to the bank's head in 2013, was called the method of quantitative and qualitative monetary easing (QQME). Its main goal was to raise the annual inflation rate to the target level of 2%. The Bank of Japan set a yearly limit on purchases of government bonds in 50 trillion yen. However, the declared goal was not achieved (www.wto.org/english/news_e/pres20_e/pr855_e.htm).

With the onset of the COVID-19 pandemic, the scale of QE operations in Japan has expanded significantly. The limit on the purchase of government bonds by the Bank of Japan was raised to 80 trillion yen. In addition, the purchase amounts of exchange-traded bonds and Japanese real estate investment trusts were doubled to 12 trillion and 180 billion yen, respectively. The Bank of Japan also provides commercial papers and corporate bonds for 1 trillion yen for each type of securities. As a result of a long-term policy of buying securities by the bank, its balance sheet increased from 154.4 trillion yen at the end of 2012 to 689.9 trillion in September 2020. The data presented indicate a large scale of additional monetary emission due to the operations of the COP undertaken by the world central banks to limit the negative economic consequences of the COVID-19 pandemic. This method of monetizing public debt had a specific positive effect on the state of the economic environment. However, in the long term, the resulting monetary overhang is fraught with undermining financial stability due to a substantial inflationary potential in the economy.

3.3. Analysis of coordination of fiscal and monetary policy during Covid-19

According to traditional views, the spheres of action of the budgetary and monetary authorities should be delineated since there is an apparent conflict between the task of maintaining price stability and the task of ensuring financing of the state budget. This approach discourages excessive fiscal expansion financed by the issue of money since it places the case decided in the hands of an independent central bank. In addition to the legally guaranteed autonomy of the central bank, the described disciplining principle is expressed in the prohibition of direct financing of the budget deficit by the central bank in the form of both lending and the purchase of government bonds in the primary market. However, in conditions of weak aggregate demand, when inflation and interest rates fluctuate near zero and the risks of falling into a severe economic depression increase, the task of maintaining strict fiscal discipline fades into the background, and the return of the output to its potential level becomes a priority of economic policy. One of the reasons that

monetary stimulus should be combined with the fiscal expansion is that, as noted above, at low rates, monetary policy is losing its effectiveness. Unable to lower the rate significantly below zero, the central bank loses its principal instrument of influencing macroeconomic dynamics. Quantitative easing is much more beneficial in promoting economic growth if it is accompanied by adequate fiscal stimulus in terms of volume. Japan was the first country in the 20th century to find itself in a state of long-term stagnation1. With the onset of the 2020 crisis, the likelihood of a scenario in which developed countries will suffer from chronic inadequate demand for many years has increased significantly. Under such conditions, the central bank and budgetary authorities coordinate their actions by pursuing joint, stimulating policies. Maintaining low-interest rates is coupled with significant fiscal deficits, and it is this combination of measures that is more effective in helping to boost economic activity. A similar policy was pursued in many developed countries after the onset of the 2008 global financial crisis.

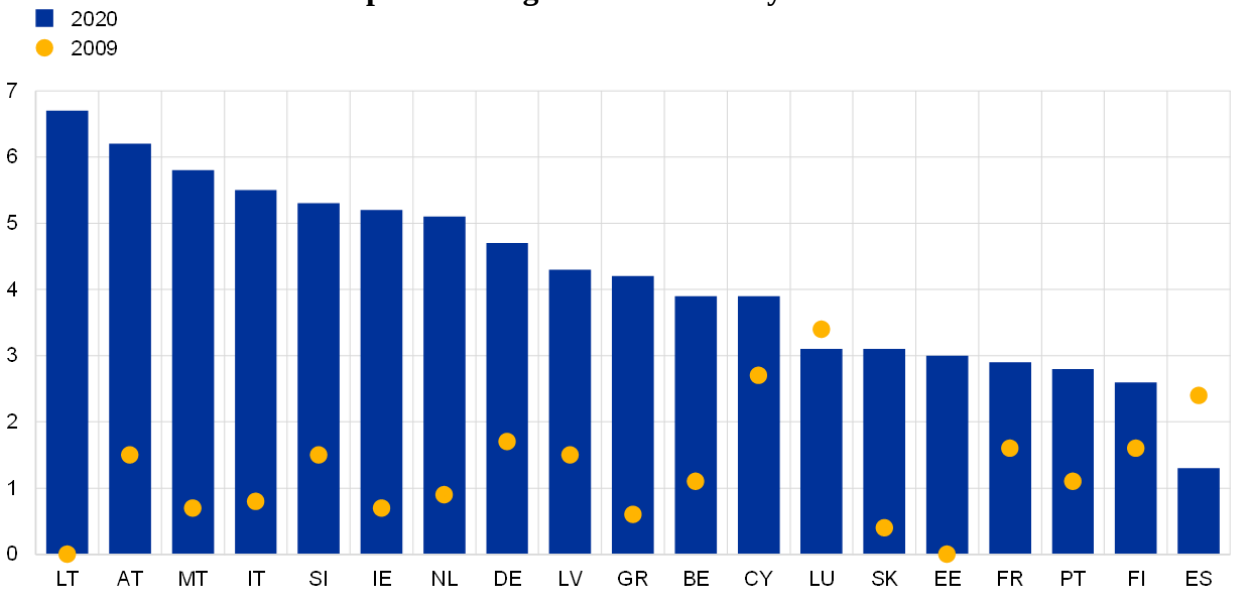
At the same time, throughout the post-crisis decade, central banks introduced new instruments to stimulate growth, which are de facto hybrid fiscal and monetary instruments. In 2020, coordination between the fiscal and monetary authorities reached a new level, and the line between the spheres of action of the two branches of economic power became even thinner. The following distinctive features of the reaction of the financial authorities to the current crisis can be distinguished. First, the scale of budget support measures is unprecedented. According to the IMF, the aggregate support measures amount to about 12% of world GDP (Central Banks at the Frontline of the COVID-19 crisis: Weathering the Storm, Spurring the Recovery. A View from the Mediterranean Countries: IEMed, 2021).

Additional government spending and provide tax incentives on average in developed countries reach 9.3% of GDP, excluding loans and guarantees. At the same time, the volume of incentives is exceptionally high in some countries: in Canada - 12.5% of GDP, in the USA and Australia - about 11.8% of GDP, in Japan - 11.3% of GDP. Accordingly, budget deficits also increased significantly. According to preliminary estimates4, the average deficit in developed countries for

2020 is 14.4% of GDP. At the same time, in all the largest developed countries, with the exception of Germany, the budget deficit will significantly exceed 10% of GDP. In developing economies, the situation is generally similar - the average expected value of the budget deficit taken for the group of emerging markets and for middle income countries is equal to 10.7% of GDP. Thus, the budgetary authorities constantly coordinated their actions with the central banks, although the implementation of measures of fiscal support usually takes much more time. From the experience of the anti-crisis policy carried out during the world financial crisis of 2008-2009. In the post-crisis years, conclusions were drawn; as a result, it was possible to take the necessary measures to support the economy promptly. Third, the volume of central bank asset buyback programs in many countries was comparable to the size of the deficits. The ECB and the Bank of Japan bought back government bonds for more than 70% of all government debt placed in 2020, the volume of the Fed's buyback program amounted to 57% of the volume of bonds issued by the US Treasury and the Bank of England bought government bonds for an amount equal to half of the volume of debt issued by the British government in 2020. Thus, a significant share of the financing of budget deficits came from the issue of money, which affected the size of the balance sheets of the respective central banks. In most countries, assets were repurchased in the secondary market. Except for Great Britain, where the Bank of England was officially allowed to lend to the state budget, other countries continued to prohibit direct central bank financing.

The scale of direct financing by the Bank of England of the British government was moderate, and the conditions for the provision of funds assumed a short borrowing period; therefore, it is impossible to speak of massive emission lending to the state by the Bank of England through this instrument.

Figure 6: Discretionary fiscal measures related to COVID-19 with a budgetary impact in 2020 compared with gross discretionary stimulus in 2009



Source:https://www.ecb.europa.eu/pub/economicbulletin/articles/2021/html/ecb.ebart202101_03~c5595cd291.en.html

Characteristically, long-term government bond yields did not rise in response to widening deficits. Emission financing of budget deficits did not lead to an increase in inflationary expectations or a rise in credit risk premiums. The only exceptions were made by only a few European countries: Italy, Portugal, Greece, and Spain (Hernández De Cos, n.d.2021). In the spring of 2020, the long-term yields on government bonds of these countries increased, but later, after the announcement of the asset repurchase program, within the framework of which these securities were purchased, their yields decreased following the yields of bonds of other European countries. These countries have experienced difficulties financing the state budget in the past and remain on the list of countries - the leaders in the size of public debt in the world. At the end of 2019, the extended government's debt amounted to 95% of GDP in Spain, 117% of GDP in Portugal, 134% of GDP in Italy, and 180% of GDP in Greece. However, it is fundamental for these countries that they are part of a monetary union and cannot pursue an independent monetary policy. The yields on bonds in Japan, the USA, Canada, and Great Britain did not increase, although the level of public debt in these countries is also high: in Japan, it is. Usually, the implementation of measures of budgetary support requires much more time. From

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However, it is fundamental for these countries that they are part of a monetary union and cannot pursue an independent monetary policy. The yields on bonds in Japan, the USA, Canada, and Great Britain did not increase, although the level of public debt in these countries is also high: in Japan, it reaches 238% of GDP, in the USA - 108% of GDP, in the UK - 85% of GDP, in Canada - 88% of GDP. The budgets of these countries must attract financing in a currency that the national central bank can freely issue. Thus, fiscal space and lending opportunities are directly related to pursuing an independent monetary policy. In emerging market countries, the need for additional coordination of monetary and fiscal authorities was less or absent, as these countries are characterized by higher inflation, interest rates, and economic growth. In such conditions, monetary policy remains effective even in the absence of fiscal incentives, and the risks of a significant inflation deviation downward from the target and falling into long-term stagnation are small. At the same time, confidence in the policies of the fiscal and monetary authorities is lower than in developed countries. Therefore, the task of ensuring proper discipline remains urgent, for which it is necessary to maintain an institutional barrier between the central bank and the government.

Nonetheless, central banks have moved away from rigidly dividing fiscal and monetary policy spheres in some emerging market economies. In Indonesia and the Philippines, central banks purchased government bonds in the primary market. The corresponding volume of buyback programs in 2020 amounted to about 4.5% of GDP in Indonesia and about 3% of GDP in the Philippines, while the received funding from the regulator is targeted and intended for the implementation of government programs of anti-crisis support for the economy and spending on social and health care.

Currently, direct central bank financing of the state budget is not widespread in emerging market economies. In general, in emerging markets, the scope of budget support in 2020 and the volume of asset repurchases was less than in developed countries. One of the reasons for this is the more limited fiscal space, the most important factor of which is the quality of the monetary policy being pursued. The

confidence in the stability of the national currency's purchasing power allows the state to implement large-scale budgetary incentives with the support of the monetary authorities without negative distorting consequences for macroeconomic conditions. Another factor explaining the lower volume of fiscal expansion is the relatively higher growth rates in emerging markets. The countries of this group experienced a smaller decline in output in 2020 than the developed ones, and their growth rates in 2021 are expected to be at a higher leve1; the need for fiscal stimulus was less than in developed countries. In addition to the possibility of emission financing of the state budget deficit, there is another aspect associated with the distinction between the activities of the central bank and the state's financial policy - the provision of state loans, subsidies, and preferences to the private sector. According to modern concepts, the central bank should not lend directly to private enterprises and households. The issue of money should be carried out by acquiring assets with maximum reliability, including government securities and currency. An alternative option is secured loans to credit institutions. Central bank lending to the private sector, like the purchase of corporate securities, carries significant credit risk. If the regulator carries out an issue for the purchase of unreliable assets, this may affect the stability of the national currency. Therefore, in a normal situation, the regulator's lending activity is limited to fulfilling the function of a last institution's lender, which consists of regular refinancing of stable banks against high-quality collateral. When the monetary authorities consider it necessary to support lending to a particular sector directly, either through the provision of government loans or through subsidizing bank loans, this is done so that the central bank does not assume credit risks.

Moreover, if the monetary authorities view such concessional lending as potentially inflationary, an independent central bank could respond by tightening monetary policy. Central bank involvement in lending to select businesses is joint in developing countries where the central bank is not independent, and the government relies on issuing lending to stimulate economic growth. Such policies often lead to surges in inflation and losses for the central bank. With weak demand and protracted

stagnation, central banks deviated from the above approach even before the 2020 crisis hit.

Central banks in many developed countries have resorted to measures that can be classified as quasi-fiscal. These measures include programs for the buyout of non-state assets and refinancing against the security of non-state assets, and providing long-term refinancing to banks subject to expanding their lending activity and providing refinancing to non-bank financial institutions. Since spring 2020, central banks have significantly expanded these operations. Often, the state budget provides the central bank with guarantees for the amount of transactions, and then these transactions do not imply the central bank accepting credit risks associated with lending to the private sector or the purchase of non-state assets. Potentially, such a policy may have inflationary consequences in the long term if the loans issued are not returned and if the acquired assets are devalued.

In this case, the state budget will suffer losses since it will have to compensate for the central bank's losses. When analyzing recent trends in monetary and fiscal policy coordination, the following two considerations are usually expressed. First, in the crisis conditions of 2020, with an unprecedented increase in uncertainty and a large-scale decline in output, the use of such instruments is justified. Without an active policy to maintain liquidity in key markets and the continuity of the credit process, the economic system would most likely not have been able to keep from a catastrophic credit crunch and depression. Secondly, the main long-term risk associated with this policy is the risk of so-called fiscal dominance, which is understood as a situation when the central bank holds too much government debt and therefore cannot default on government debt, as this will lead to losses. This risk reduces the regulator's incentives to raise the rate when inflation rises since as the rate rises, the government budget will find it more challenging to finance the deficit and the risk of default increases. Then the task of ensuring price stability fades into the background for the regulator, confidence in the national currency falls, and the monetary authorities lose control over inflation. During the crisis, governments worldwide made significant financial commitments, including unconditional

obligations in government bonds issued and contingent obligations in the form of guarantees provided. The risk of non-fulfilment of these obligations falls mainly on the central bank, which has a significant share of government debt on its balance sheet, determining the risk of fiscal dominance in the long term. The expert community recognizes this problem, but its solution has been postponed until the moment when economic activity returns to an average level. As already stated, the rapid spread of COVID-19 and the measures to combat it have led to a disaster in the global economy. The monetary regulation measures carried out in these conditions aimed to reduce the liquidity deficit in the money market and expand credit support to enterprises and the population in trouble. Large purchases by central banks of financial assets, mainly long-term government bonds, led to a significant increase in the money supply in circulation, a decrease in government securities yield, and a change in investment policy. All this contributed to an improvement in the state of the economic conjuncture amid a temporary relaxation of quarantine restrictions in the summer of 2020.

Despite particular successes in stabilizing the current economic environment, central banks failed to achieve significant results in achieving the strategic goals written in the charters of these banks and serving as a guideline in the development of scenarios of monetary policy. It is about maintaining a stable price level, ensuring maximum employment of labor resources, and maintaining sustainable economic growth. Maintaining a sound price level has always been considered the primary function of the central bank. As stated in the Fed's statement on long-term goals and monetary strategy, adopted in 2012 and amended in 2019, "in a longer period, the inflation rate depends primarily on monetary policy." Accordingly, the document's authors believe a rigid benchmark for the annual growth of the consumer price index should be established as a strategic goal of monetary regulation. Currently, most central banks record this figure at 2%. The deviation of the actual growth of the consumer price index from the target level serves as the basis for taking corrective measures in determining the course of monetary policy. How does the statement of the financial authorities that monetary policy is the determining factor in changing

the level of commodity prices correspond to current conditions? To answer this question, one can turn to the situation in the economies of the eurozone countries that developed after the end of the 2007–2009 crisis.

During the period following the crisis, the economic development of the countries of this region showed signs of stagnation, as a result of which the annual growth rates of the consumer price index were often below the target level of 2%, and in some years - below zero. With the onset of the COVID-19 pandemic, the indicator decreased from 0.7% in March to minus 0.3% in September 2020 due to a drop in demand for goods and services and a decrease in world energy prices.

Thus, in recent years, the aggregate consumer price index of the eurozone countries has been steadily staying at about zero and does not react to the inflow of additional funds into the economic turnover due to the ECB's "cheap money" policy. ECB leaders admit that the belief in the unlimited possibilities of monetary policy as a factor determining price dynamics in the medium and long term is greatly exaggerated. Thus, the former ECB Chairman M. Draghi said in the spring of 2015: "The situation requires decisive steps from the leaders of the eurozone countries in the field of structural reforms and maintaining aggregate demand, while the expansion of monetary measures is only one of the possible elements of the actions being taken." Thus, it is recognized that the influence of various non-monetary factors was the main reason for low inflation over a long period, despite the efforts of the ECB to accelerate price growth and raise inflation expectations to revive economic development.

Japan demonstrates another example of weak dependence of price level dynamics on monetary measures. Despite occasional upward and downward deviations, the consumer price index in the country for 20 years (1993–2013) remained around 0%. Such a low level of inflation was recognized as harmful to the country's economic development. In 2013, the Bank of Japan launched active "quantitative and qualitative easing measures," seeking to increase the price growth rate due to increased money emission. Despite the rapid growth of the monetary base in subsequent years, it was not possible to break the stable trend of low rates of price

dynamics. Experts attribute this to structural problems in the Japanese economy and the population's low inflationary expectations. For other macroeconomic indicators, like price dynamics, which are used as objectives of monetary policy, the establishment of rigid benchmarks for the current period or long-term perspective was considered inappropriate(Горюнов,2020). The authors of the document already cited above recommend, when making decisions on monetary regulation programs, to assume the forecast estimates of such indicators obtained from periodic surveys of relevant experts. How solid are these forecasts, and can they serve as a reliable benchmark in determining the course of monetary policy? Let us cite as an example the forecast of the US unemployment rate, published by the FED in September 2020. According to the survey participants, the median estimate of this indicator for 2020 should be 7.1%, and for a more extended period - 4.1% 5. Recall in this regard that in April 2020, during a catastrophic drop in production due to antiviral restrictions, the number of employed in the United States decreased by 22 million people, and unemployment reached 14.7%, which became an absolute record for the entire period since the end of World War II. war.

As noted above, a distinctive feature of macroeconomic conditions in developed countries in the pre-crisis years was relatively low and unstable output and inflation growth rates. Key rates in the USA, Japan, Eurozone, Great Britain, and other developed countries did not exceed 200 bp, and in Sweden, Switzerland, and Denmark, they were even negative. Thus, the possibilities of interest rate policy in developed countries were severely limited. In March 2020, the special sessions' central banks of the largest countries decided to reduce interest rates to minimum levels. The Bank of England lowered the rate from 0.75 to 0.1%, the Fed - from 1.75 to 0.25%, the Bank of Norway - from 1.5 to 0.25%, the Reserve Bank of Australia from 0.5 to 0.25 %, Bank of Canada - from 1.75 to 0.75%. The Bank of Sweden and the ECB left the rates at zero, the Bank of Japan and the Bank of Switzerland kept negative rates (-0.1 and -0.75%, respectively) (The Impact of COVID-19 on European Banks, SUERF Policy Brief .:. SUERF - The European Money and Finance Forum, 2021). The monetary authorities' response to the unfolding crisis was quick, while the central

banks did not use fundamentally new instruments but those they used before during the global financial crisis of 2008–2009. and in the post-crisis decade. The choice of anti-crisis actions was decisively influenced by the experience of the global financial crisis of 2008–2009, from which important lessons were learned. First, during the acute phase of the problem, the promptness and decisiveness of the actions of the monetary authorities play a decisive role in maintaining the stability and liquidity of financial markets and preventing a credit crunch. The willingness of the regulator to use all the tools available to it and clear signalling of intentions to make maximum efforts1 to counter the financial crisis allows in the context of deep transnational integration and interdependence of financial systems and markets, and there is a need for coordinated joint actions of central banks to stabilize global markets through the provision of foreign exchange liquidity. In 2007 The Fed opened swap lines to meet the demand from financial institutions outside the US financial system for US dollar liquidity. Swap lines have become a vital element of the collective anti-crisis policy of central banks (Ефимов, 2017). In 2020, the central banks of Sweden, New Zealand, Australia, Denmark, South Korea, Brazil, Mexico, Singapore, Norway resumed swap lines with the FRS. At the same time, the FRS has permanent swap lines with the central banks of the largest developed countries (Canada, Great Britain, Japan, and the euro area, and Switzerland) (COVID-19: Key measures taken by governments and central banks, 2020).

CONCLUSION

The policy pursued amid COVID-19 by the world's central banks using unconventional monetary measures has generally helped stabilize the situation in the financial markets and has provided significant assistance in combating the decline in economic activity. However, when it comes to the strategic goals of central banks, the ability to achieve them is limited by many non-monetary factors, which significantly weakens the impact of monetary instruments. Moreover, the uncontrolled use of monetary levers on a large scale, as has been happening recently with the operations of the Central banks, can lead to the opposite results - weakening the financial stability of the economic system and creating conditions for a new outbreak of the crisis.The findings are in accordance with Ehmedov et al, (2020) and Quliyev (2020).

The study revealed that a phase of aggressive nationalization and capital concentration began in the world's leading economies due to the new financial crisis triggered by the COVID-19 pandemic. Central banks are losing operational and financial independence, and it is increasingly probable that economic challenges (particularly credit) in the real economy will be governed not by market forces but by the arbitrary demands of a national state. It is noted that when national debt increases, central banks' capacity to implement the current anti-inflationary approach deteriorates. The fundamental concepts of modern monetary theory (MMT) are explained, as are the features of national economies operating under MMT as recognized by its inventors. Anti-crisis strategies utilizing unconventional financial systems were explored and evaluated in response to the COVID-19 pandemic by the central banks of the United States, Europe, and Russia. Moreover, a feasible option for how central banks' monetary policies may evolve after the pandemic is outlined, including the introduction of digital currencies.

In the context of the new financial crisis provoked by the COVID-19 pandemic, a period of active nationalization and concentration of monetary capital in the global economy has begun. Governments begin to subjugate central banks, and the emission of money (including credit) is likely to be determined not by the market

but exclusively by the excessive needs of the sovereign government. Credit money from private banks will quickly diminish. In the future, they will be replaced entirely by the state's sovereign capital, most of which will be distributed to state banks and state enterprises on an irrevocable and unrestricted basis on an irreversible and interest-free basis. Massive anti-crisis measures by governments and central banks over the next few years will provoke a global economic crisis, the main characteristics of which will be an imbalance in payment and budget systems, a rapid increase in sovereign debt, states' consumption of economic potential, a sharp rise in inflation and devaluation of national currencies. The states will try to get out of this crisis through the total digitalization of the economy, network platforms, and financial assets, and these processes will begin with the emission of interest-free and interest-free digital currency of central banks.

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