

Shkodina I.

*Doctor of Economics, Professor,
V. N. Karazin Kharkiv National University, Ukraine;
e-mail: iryna.shkodina@karazin.ua; ORCID ID: 0000-0002-4816-4579*

Melnychenko O.

*Doctor of Economics, Doctor habilitowany,
Professor at Department of Finance,
Gdansk University of Technology, Poland;
e-mail: oleksandr.melnychenko@pg.edu.pl; ORCID ID: 0000-0002-7707-7888*

Babenko M.

*Ph. D. student,
SHEI «Banking University», Kyiv, Ukraine;
email: babenkomv2011@gmail.com; ORCID ID: 0000-0001-6792-3465*

QUANTITATIVE EASING POLICY AND ITS IMPACT ON THE GLOBAL ECONOMY

Abstract. Based on the analysis of the impact of quantitative easing policies on the global economy, there was concluded that the world's largest central banks and widespread debt stimulation have created the model of economic growth. This model was based on the productivity growth. The lack of productivity growth in the developed world, the active integration of developing countries (first of all China and India) in the global economy have completely changed the directions of global financial flows and caused fundamental geopolitical changes.

Striving to confront the cyclical nature of the economy, government regulators transform the global economy into a «zombie economy». There are unprofitable companies and banks, which operate on cheap money from central banks and government bailouts. The monetization of fiscal policy transforms the risks from governments to central banks and destroys their independence.

We concluded that the strategy of tackling the global economy through cheap credit is doomed to failure because governments do not solve the problems of real economy, productivity increase, management of public and corporate debt, stagflation, unemployment, and increase in income differentiation.

Nowadays, in the context of COVID-19 pandemic, central banks use the new and forgotten old tools to expand economic activity (so-called QE and «Not QE»). These tools provide the necessary stimulus only in the short-term period, but in the long term period it will inevitably lead to serious disparities, undermine the market mechanism, increase the administrative influence and lead the global economy to a choice between depression, unemployment, hyperinflation or systemic collapse.

We believe that the global coronavirus pandemic stimulates the scientific debate on rethinking monetary policy goals and instruments, as the use of various «non-standard tools» has repeatedly proven ineffective in combating crises and it has helped only to create new global imbalances and crises.

Keywords: financial market, quantitative easing policy, monetization of public debt, zombie economy, labour productivity.

JEL Classification E44, E49, E50, E58

Formulas: 0; fig.: 2; tabl.: 1; bibl.: 18.

Шкодiна I. В.

*доктор економічних наук, професор,
Харківський національний університет імені В. Н. Каразіна, Україна;
e-mail: iryna.shkodina@karazin.ua; ORCID ID: 0000-0002-4816-4579*

Мельниченко О.

*доктор економічних наук, доктор габілітований,
професор кафедри фінансів,
Гданьська Політехніка, Польща;
e-mail: oleksandr.melnychenko@pg.edu.pl; ORCID ID: 0000-0002-7707-7888*

Бабенко М. В.

аспірант,

ДВНЗ «Університет банківської справи», Київ, Україна;

email: babenkomv2011@gmail.com; ORCID ID: 0000-0001-6792-3465

ПОЛІТИКА КІЛЬКІСНОГО ПОМ'ЯКШЕННЯ ТА ЇЇ НАСЛІДКИ ДЛЯ ГЛОБАЛЬНОЇ ЕКОНОМІКИ

Анотація. На основі аналізу впливу політики кількісного пом'якшення на глобальну економіку прийшли до висновку, що найбільші світові центральні банки і масштабне стимулювання боргів порушили модель економічного зростання, яка була заснована на зростанні продуктивності праці. Відсутність зростання продуктивності праці в розвинених країнах світу, активна інтеграція країн, що розвиваються (перш за все Китаю та Індії), у глобальну економіку кардинально змінили напрями глобальних фінансових потоків і викликали фундаментальні геополітичні зрушення.

Прагнучи боротись із циклічністю економіки, державні регулятивні органи перетворюють глобальну економіку на «зомбіекономіку», де збиткові компанії та банки функціонують на дешевих грошах від центральних банків і рятувальних програмах урядів. Монетизації фіскальної політики трансформує ризики від урядів до центральних банків і знищує їхню незалежність.

Прийшли до висновку, що стратегія розв'язання проблем глобальної економіки шляхом дешевих кредитів приречена на поразку, оскільки уряди не вирішують питання реальної економіки, збільшення продуктивності праці, управління державними і корпоративними боргами, стагфляції, безробіття та посилення диференціації доходів населення.

Сьогодні в умовах пандемії COVID-19 центральні банки використовують нові та забуті старі інструменти із стимулювання економіки (так звані QE та «Not QE»), які лише в короткостроковому періоді забезпечують необхідний стимул, але в довгостроковому періоді незмінно призведуть до серйозних диспропорцій, підірвуть ринковий механізм, посилять адміністративний вплив і поставлять глобальну економіку перед вибором між депресією, безробіттям, гіперінфляцією або системним крахом.

Вважаємо, що світова пандемія коронавірусу стимулює наукову дискусію щодо переосмислення цілей та інструментів монетарної політики, оскільки використання різного роду «нестандартних інструментів» уже неодноразово доводило свою неефективність у боротьбі з кризовими явищами і лише допомагало створювати нові глобальні диспропорції та кризи.

Ключові слова: фінансовий ринок, політика кількісного пом'якшення, монетизація державного боргу, зомбіекономіка, продуктивність праці.

Формул: 0; рис.: 2; табл.: 1; бібл.: 18.

Шкодина И. В.

доктор экономических наук, профессор,

Харьковский национальный университет имени В. Н. Каразина, Украина;

e-mail: iryna.shkodina@karazin.ua; ORCID ID: 0000-0002-4816-4579

Мельниченко А.

доктор экономических наук, доктор habilitowany,

профессор кафедры финансов,

Гданьская Политехника, Польша;

e-mail: oleksandr.melnychenko@pg.edu.pl; ORCID ID: 0000-0002-7707-7888

Бабенко М. В.

аспірант,

ГБУЗ «Университет банковского дела», Киев, Украина;

email: babenkomv2011@gmail.com; ORCID ID: 0000-0001-6792-3465

ПОЛИТИКА КОЛИЧЕСТВЕННОГО СМЯГЧЕНИЯ И ЕЕ ПОСЛЕДСТВИЯ ДЛЯ ГЛОБАЛЬНОЙ ЭКОНОМИКИ

Аннотация. Деятельность крупнейших мировых центральных банков последних десятилетий нарушила модель экономического роста, основанную на росте производительности труда. Стремясь бороться с цикличностью экономики, государственные органы превратили глобальную экономику в «зомбиэкономику», где убыточные банки и компании функционируют на дешевых деньгах от центральных банков и спасательных программах правительств. Пришли к выводу, что решение проблем глобальной экономики путем монетизации долга обречено на поражение, поскольку не решаются вопросы реальной экономики, а только создаются новые глобальные диспропорции и кризисы.

Считаем, что мировая пандемия коронавируса стимулирует научную дискуссию по переосмыслению целей и инструментов монетарной политики, поскольку использование разного рода «нестандартных инструментов» приведет к серьезным диспропорциям, подрвет рыночный механизм, усилит административное влияние и поставит глобальную экономику перед выбором между депрессией, гиперинфляцией или системным крахом.

Ключевые слова: финансовый рынок, политика количественного смягчения, монетизация государственного долга, зомбиэкономика, производительность труда.

Формул: 0; рис.: 2; табл.: 1; библи.: 18.

Introduction. In recent years, the global world was preparing for a global crisis, because there were created many «bubbles» in the securities market, in the debt market, and in the real estate market. However, despite the readiness for a recession in 2020, any governments, financial institutions and analytical agencies did not expect the real characteristics of the new crisis.

The outbreak of the COVID-19 pandemic has led to significant reductions in financial asset prices, GDP reduction both globally and nationally, corporate bankruptcies and unemployment rising. According to IMF prediction, the living standards will fall in 170 countries and the global economy will decline in record level not seen since the Great Depression [5]. Developing world economies will be especially hit, because they have immediately faced one of the strongest outflows of financial flows in the history (both in dollar terms and as a percentage of GDP). Under such conditions, the governments of most countries have resorted to social protection, administrative regulation and debt monetization. According to the IMF, governments around the world will spend more than \$ 10 trillion to fight the COVID-19 pandemic [12].

In the discussions of scientists and practitioners, financiers and government officials, it is oftener heard about the necessity for «helicopter money» to be distributed to households and companies [9]. The Ukrainian business community is also debating the need to allow the National Bank of Ukraine to print money or come up with a prototype of its quantitative easing policy through bond redemptions and refinancing programs [Ukrainska Pravda, 2020]. In these conditions, scientific awareness of the character and consequences of debt monetization is extremely important.

Analysis of research and statement of the problem. Although the number of researches on the effectiveness of monetary policy is constantly growing [1; 5; 9; 12, 13], many issues remain understudied as new global challenges and regulatory tools are emerging that lead to unpredictable consequences, contribute to large-scale institutional changes in monetary policy, both globally and nationally.

Problem statement. The purpose of the article is to determine the peculiarities of the use of non-traditional methods of monetary policy by the world's central banks and to determine their consequences for the global economy.

Research method. The obtained results in the article are based on the use of a set of general and special research methods — scientific abstraction, system approach, theoretical generalization and systematization (to substantiate the main contradictions and consequences of non-traditional methods of monetary policy in the conditions of technological transformation), observation and generalization, statistical analysis (to get the impact of monetary policy on the global economy), the method of expert assessment (to develop approaches to improve the monetary policy).

The main results of the research. The general form of development of all economic processes is cyclicity, which is shown in fluctuations in economic situations. The approval of neoclassical theory has led to a decrease in researchers' attention to the problems of cyclical economic development, as representatives of this direction believed that economic cycles could be eliminated through regulatory measures of the state.

The cyclical character of economic development means that the main indicators and parameters of this process have a wave character, which is repeated after a certain period. First of all, the economic growth reflects the technical innovations that improve the labor productivity, increase the production efficiency, reduce the production costs, increase the wages. J. Schumpeter has formulated the theory of economic development, according to which scientific and technological innovations are the main factor of economic development of the country. Based on Schumpeter's idea, a technological paradigm is developing, the change of which occurs as a technological revolution, which causes a radical change in the dominant technological paradigm in the economy. As a result of innovative breakthroughs, it is replaced the old and inefficient means of production by more efficient and productive ones. The growth of the global economy at the beginning of the XXI century cannot be explained by the effect of modernization of existing industries under the influence of a new technological wave, because it is still under formation. The rise in asset prices was the result of liberal policies, which is aimed at stimulating the development of the financial sector.

The cyclicity plays an important role not only in the mechanism of economic growth, but also in cleansing the economy from inefficient production and management methods. However, after the crisis of 2008, the use of neoclassical theories in the regulation practice in many worlds' countries actually eliminated or at least seriously distorted market relations, destroyed the relation between risk and profitability. To reduce the cyclical character of the economy, governments and financial institutions have begun to actively use various financial innovations (new technologies of financial and credit operations, new financial and credit instruments and products) [14].

If before the financial crisis of 2008, the independence of central banks was one of the main factors in the effectiveness of its work, after the crisis the boundaries between monetary and fiscal policy became blurred, which caused a debate about the need for independence of central banks.

In 2008, the US Federal Reserve began using a quantitative easing (QE) policy for financial support the economy, which was later implemented by other central banks of the world. Due to their activities in the short-term period, the stability of the banking sector was restored, but it did not grow into long-term economic growth.

Afterward such anti-crisis measures, there have appeared companies «too big to fail». These are some financial institutions, especially banks, which were so systemically important that they had to be financially and economically supported by governments or central banks (Paul Krugman). As a result of such state support, there was a problem of moral damage when companies deliberately took high-risk strategies, because they were confident that the state would never allow it to go bankrupt. Thus, losses and risks of financial institutions were nationalized, and profits remained private.

As a result of government support, most unprofitable banks and companies in the United States and Europe have survived. The low interest rates, combined with asset securitization processes and the expansion of derivatives markets, have accelerated the growth of financial assets, complicated the effects that connect the real economy to the financial sector, and increased the global financial disparities. Moreover, all this is in a context of the highest profitability of the global banking system in the last 20 years [3].

QE has resulted in simplification of crediting, which increases debt at the corporate and government levels. Zombie banks began to provide cheap loans to unprofitable companies, which led to the growth of zombie corporations [1]. The debts of governments and the private non-financial sector in 2020 reached 250% of world GDP.

The negative factor is not only the debt increase, but also the ways of using credit funds. The companies did use the cheap loans not to finance the real investment projects, but to invest in

financial assets in the equity market (Fig. 1). As a result, the stock indices grew, the speculative nature of the stock market intensified and the gap between the financial sector and the real sector deepened, resulting in a slowdown in economic growth.

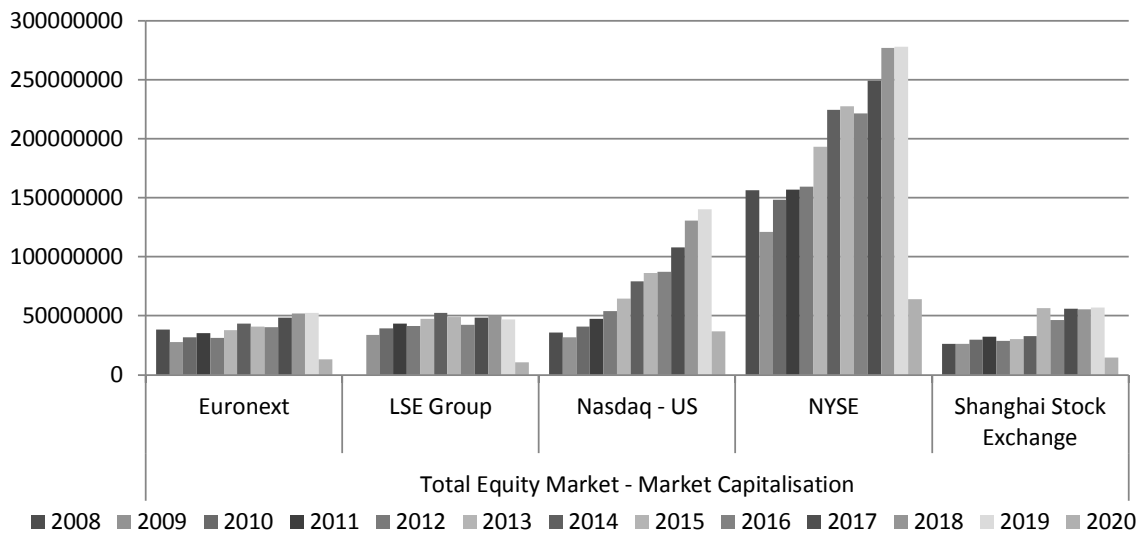


Fig. 1. Capitalization of world equity market, 2008—2020

Source: made from data [11].

The monetary policy of the post-crisis years has led to raising the prices for all financial assets and the formation of speculative bubbles. State and interstate regulatory institutions have not implemented structural reforms of the financial and real sectors that would stimulate economic growth not only in the short term, but, most importantly, in the long term period. With the spread of coronavirus outside of China, prices on world equity market rapidly fell — in March 2020, trading on US stock exchanges was stopped three times.

Since 2014, the world’s central banks started to use another unconventional instrument — negative interest rates, which have actually destroyed the traditional banking, because the most part of bank profits are due to the difference in interest rates between loans and deposits. Not only deposit interest rates became negative, but also the profitability on debt obligations of numerous countries. Negative interest rates have broken the typical relationship between stock prices and treasury yields. Unlike European and Japanese securities, US Treasury securities are still in positive profits, but treasury yields are falling fast and they are at their lowest level in the history (Tabl.).

Table

The Bond Yield Matrix

Country	6-M	1 Year	2 Year	5 Year	10 Year	15 Year	20 Year	30 Year	50 Year
Switzerland	-0.50	-0.40	-0.71	-0.65	-0.49	-0.33	-0.32	-0.35	-0.38
Germany	-0.55	-0.59	-0.65	-0.66	-0.45	-0.23	-0.16	0.01	
Netherlands	-0.55		-0.62	-0.60	-0.25	-0.17	-0.01	0.05	
Austria		-0.53	-0.59	-0.41	-0.13	0.03	0.01	0.05	
France	-0.51	-0.53	-0.53	-0.44	-0.07	0.19	0.44	0.69	0.75
Belgium	-0.51	-0.51	-0.56	-0.38	-0.02	0.20	0.53		
Japan	-0.19	-0.17	-0.56	-0.13	0.00	0.23	0.35	0.49	
Slovakia				-0.15	0.29			0.93	1.03
Slovenia		-0.40	-0.30	-0.03	0.40	0.79	1.07		
United Kingdom	0.00		-0.05	-0.01	0.18	0.37	0.51	0.58	0.40
Czech Republic		-0.06	0.01	0.28	0.70	0.87	0.95		1.98
Italy	-0.03	0.01	0.40	1.02	1.48	1.92	2.10	2.41	2.57
USA	0.17	0.18	0.16	0.30	0.65			0.41	

In recent years, as treasury yields have fallen to a certain level, central banks have launched quantitative easing programs and profits have begun to increase. But nowadays there are no opportunities to reduce rates in almost all central banks of the world (Fig. 2).

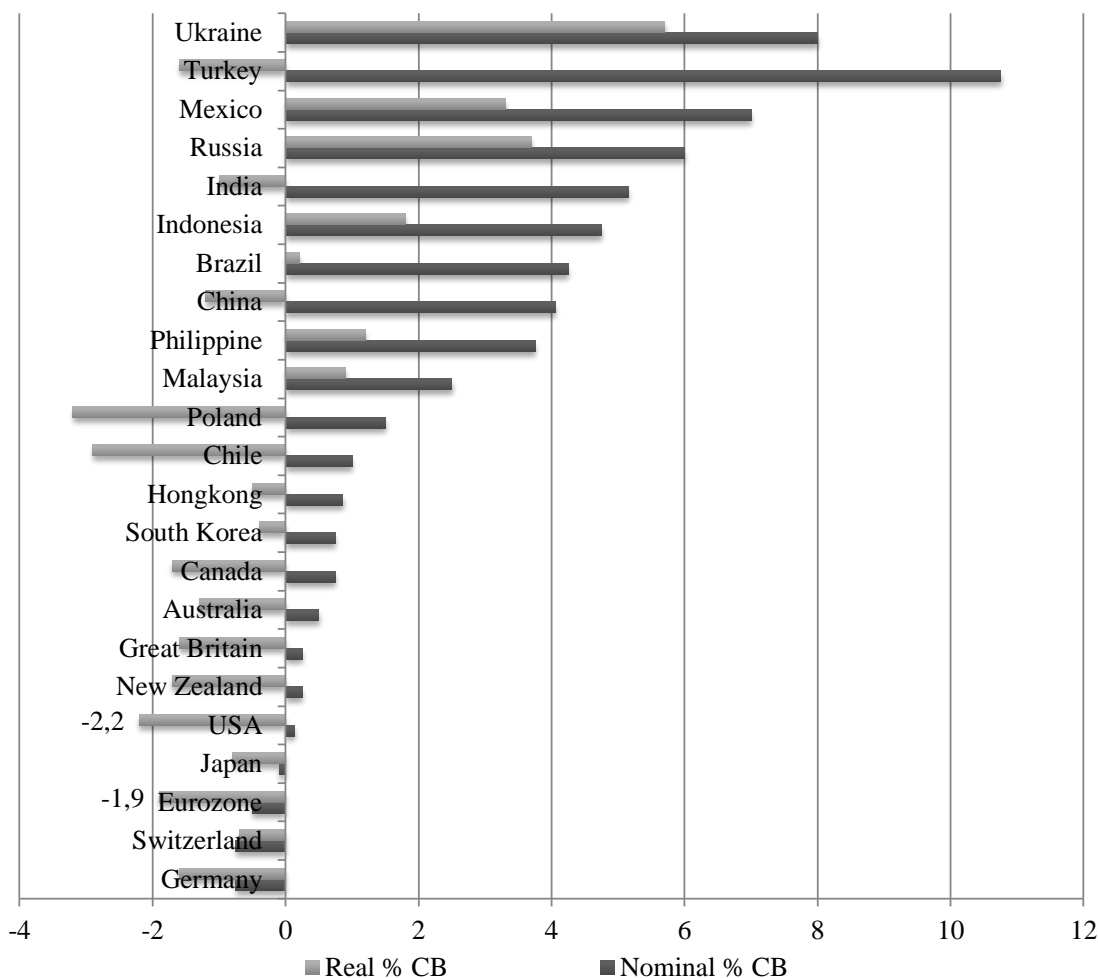


Fig. 2. Real and nominal interest rates of the World's Central Banks (dated April 2020)

Source: world's central banks.

In the context of low interest rates, the quantitative easing policy began to be used by developing countries, such as Poland, the Czech Republic, Turkey, South Africa, Chile and others.

Nowadays, in the context of the coronavirus pandemic, the new and forgotten old tools for stimulating the economy (so-called QE and «Not QE») are considered. It is remarkable that they began to use them even before the real recession in the autumn of 2019. One of the most popular tools is the issuance of money. The US Federal Reserve has begun to increase actively its balance. Less than in 2 months it grew by 2,4 trillion dollars (up to 6,6 trillion dollars at the end of 2020). This is the largest increase in the history of the US Federal Reserve (10,3% more than in 2008) [4]. As a result, the US public debt increases as well, that in March-April 2020 grew by 1,3 trillion dollars (usually such increase in debt took almost one year). As a result of government infusions, the amount of free money in US banks increased unprecedentedly: in March-April 2020, the amount of free cash balances increased by more than 70%. As a result, the excess liquidity enters the financial market, which increases its speculative nature.

In the United Kingdom, the Bank of England in March 2020 reduced the interest rate to 0.1%. It announced an increase in the acquisition of financial assets under QE by 200 billion pounds

for a total of 645 billion pounds, developed additional incentives for lending to the real economic sector, including small and medium-sized enterprises, by 330 billion pounds (15% of GDP) [11].

The European Central Bank (ECB) has extended its bond-buying program (QE) and it will increase its asset repurchase program by €120 billion. In addition, it will continue the TLTRO III (Targeted Long Term Refinancing Operations) and launch additional Long Term Refinancing Operations (LTROs) that will provide infusion of liquidity on favourable terms to bridge the period until the TLTRO III operation in June 2020 [10].

It will be seen, how modern monetary stimulus will be effective. However, it is already clear that the monetization of fiscal policy transforms risks from governments to central banks, ultimately destroys the independence of central banks that, in its turn, undermines the confidence in both the banking system and the entire financial sector. Thus, unconventional monetary policy methods will lead to higher financial asset prices (as in the last ten years), but the real economy will continue to get worse, labor productivity will fall, unemployment will rise, and the Chinese economy will not be able to revive the world economy because of its crisis from high debts and unproductive investment.

All this has already happened in Japan, which in the 1990s of the twentieth century began to use non-traditional methods of monetary stimulus and fell into the «lost decade» (some financiers use the term «lost N-decade» and the analysis began from 1985). After reducing the interest rates in 1991, in 2001 the Bank of Japan began to use the Quantitative Easing Policy, which became the prototype of the modern QE policy. To support employment, the Japanese government subsidized the companies, and banks were allowed to lend without any requirements to borrowers. As a result, cheap loans for unprofitable companies have led to a long-term reducing in productivity, stagflation and increased public debt.

It is also debating in Ukraine about the need to allow the National Bank of Ukraine to pursue its quantitative easing policy through bond buy-backs and refinancing programs. The state of the domestic economy encourages politicians to look for populist ways to solve problems — to print money to cover the budget deficit. Ukraine already had a sad experience of printing the hryvnia — in 1992—1994. The NBU directly lent to the government and enterprises, which led to hyperinflation of more than 10000% in 1993. In 2014—2015, the government issued bonds to increase the capital of unprofitable Naftogaz and state-owned banks, as a result, the NBU government bond portfolio grew to 2.6 times (14% of GDP) and inflation was 25% in 2014, 43% — in 2015 [13].

Developing a national policy of quantitative easing, we must not allow the political pressure on the NBU and forget that the goal of the policy is not to finance government activities, but to saturate the financial system with liquidity, stimulate economic growth, combat unemployment and raise asset prices. Taken into account the structure of Ukraine's economy, there are rather high interest rates, and the country still has the potential for monetary stimulus by accelerating the structural reforms, lowering the interest rate and the ability to accumulate the additional financial resources through cooperation with international organizations.

Conclusions. The most negative consequence of the anti-crisis measures of the last decade was that the world's largest central banks and large-scale debt stimulation have disrupted the model of economic growth, which was based on the rising labor productivity. Trying to combat economic cyclicity, the government regulators (primarily with the help of «independent» central banks) have transformed the global economy into a «zombie economy» where unprofitable companies and banks operate on cheap money from central banks and government bailouts. The direct monetization of public debt in the short term may provide the necessary incentive, but in the long term it invariably leads to serious disparities, undermines the market mechanism and strengthens administrative influence in the most liberal countries in the world. The world's largest central banks are fighting to delay the collapse of speculative bubbles in financial assets, which were created by their own policies. Thus, the global economy has entered a crisis in 2020 with huge imbalances and unresolved issues.

The economic collapse, strong and large-scale caused by the coronavirus, is temporary. And this understanding again does not create fundamental opportunities to solving the structural imbalances of the global economy. In addressing short-term business and population support, governments are failing to address the real economy, increasing productivity, managing public and corporate debt, stagflation, unemployment, and increasing income differentiation. Today, the world's largest central banks and governments remain the biggest risks to the stability of the global economy, because they unbalance the market mechanism and put the global economy at risk of depression, hyperinflation or systemic collapse.

Література

1. Acharya Viral V. Whatever It Takes: The Real Effects of Unconventional Monetary Policy / Acharya Viral V., Eisert T., Eufinger C., Hirsch C. // *Safe Working Paper*. — 2017. — № 152. — April 11. — Available at : <https://ssrn.com/abstract=2858147>.
2. Azarenkova G. Building strategic orientations of development of regional banking sector [Electronic resource] / G. Azarenkova, B. Samorodov, Y. Olefir // *European Cooperation*. — 2015. — № 2 (2). — № 25—38. — Available at : <http://we.clmconsulting.pl/index.php/we/article/view/24>.
3. Banking around the globe: Where's the money? [Electronic resource]. — Available at : <https://www.mckinsey.com/industries/financial-services/our-insights/banking-matters/banking-around-the-globe-where-s-the-money>.
4. Coronavirus Disease 2019 (COVID-19) [Electronic resource]. — Available at : <https://www.federalreserve.gov/covid-19.htm>.
5. Georgieva K. A Global Crisis Like No Other Needs a Global Response Like No Other [Electronic resource] / K. Georgieva. — Available at : <https://www.imf.org/ru/News/Articles/2020/04/20/blog-md-a-global-crisis-like-no-other-needs-a-global-response-like-no-other>.
6. Girchenko T. Approaches to financing during global crisis / T. Girchenko, O. Yaroshenko // *European Cooperation*. — 2020. — № 2 (46). — P. 32—40. <https://doi.org/10.32070/ec.v2i46.80>.
7. Hlushchenko O. Interest rate channel of monetary transmission mechanism as a constituent of financial architectonics in Ukraine / O. Hlushchenko // *European Cooperation*. — 2016. — № 10 (17). — P. 77—91. — Available at : <http://we.clmconsulting.pl/index.php/we/article/view/239>.
8. Lang F. Assessment of inflation processes in the world / F. Lang, O. Melnychenko // *European Cooperation*. — 2016. — № 11 (18). — P. 84—94. — Available at : <http://we.clmconsulting.pl/index.php/we/article/view/255>.
9. Masciandaro D. COVID-19 Helicopter Money, Monetary Policy and Central Bank Independence: Economics and Politics [Electronic resource] / D. Masciandaro // *BAFFI CAREFIN Centre Research Paper*. — 2020. — № 137. <http://dx.doi.org/10.2139/ssrn.3583466>. — Available at : <https://ssrn.com/abstract=3583466>.
10. Monetary policy decisions [Electronic resource] / European Central Bank. — 2020. — 30 April. — Available at : <https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.mp200430~1eaa128265.en.html>.
11. Monetary Policy Summary and Minutes of the Monetary Policy Committee meeting [Electronic resource]. — 2020. — March. — Available at : <https://www.bankofengland.co.uk/monetary-policy-summary-and-minutes/2020/march-2020>.
12. Policy responses to COVID-19 [Electronic resource]. — Available at : <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19>.
13. Samorodov B. Banks financial performance optimization problem in the context of their financial development [Electronic resource] / B. Samorodov // *European Cooperation*. — 2015. — № 7 (7). — P. 27—33. — Available at : <http://we.clmconsulting.pl/index.php/we/article/view/104>.
14. Shkodina I. Monetary policy as a factor of global financial market volatility increasing / I. Shkodina, Y. Yehorova, V. Yatsyna // *Financial and credit activity: problems of theory and practice*. — 2017. — № 1 (22). — P. 5—17.
15. Treasury Constant Maturity [Electronic resource]. — Available at : <https://fred.stlouisfed.org/series/DGS10>.
16. World Federation of Exchanges (WFE) [Electronic resource]. — 2020. — January. — Available at : <https://focus.world-exchanges.org/issue/january-2020/market-statistics>.
17. Калачова Г. Печатать деньги нельзя терпеть. Где поставит запятую НБУ? [Электронный ресурс] Г. / Калачова. — 2020. — Режим доступа : <https://www.epravda.com.ua/rus/publications/2020/04/23/659630>.
18. Шпек Р. Антикризисний QE: розкіш, до якої нам ще довго йти [Електронний ресурс] / Р. Шпек. — 2020. — Режим доступу : <https://www.epravda.com.ua/columns/2020/04/15/659421>.

Статтю рекомендовано до друку 04.06.2020

© Шкодіна І. В., Мельниченко О., Бабенко М. В.

References

1. Acharya Viral V., Eisert T., Eufinger C., & Hirsch C. (2017, April 11). Whatever It Takes: The Real Effects of Unconventional Monetary Policy. *Safe Working Paper*, 152. Retrieved from <https://ssrn.com/abstract=2858147>.
2. Azarenkova, G., Samorodov, B., & Olefir, Y. (2015). Building strategic orientations of development of regional banking sector. *European Cooperation*, 2 (2), 25—38. Retrieved from <http://we.clmconsulting.pl/index.php/we/article/view/24>.
3. Banking around the globe: Where's the money? (n. d.). Retrieved from <https://www.mckinsey.com/industries/financial-services/our-insights/banking-matters/banking-around-the-globe-where-s-the-money>.
4. Coronavirus Disease 2019 (COVID-19). (n. d.). Retrieved from <https://www.federalreserve.gov/covid-19.htm>.
5. Georgieva, K. (2020). A Global Crisis Like No Other Needs a Global Response Like No Other. Retrieved from <https://www.imf.org/ru/News/Articles/2020/04/20/blog-md-a-global-crisis-like-no-other-needs-a-global-response-like-no-other>.
6. Girchenko, T., & Yaroshenko, O. (2020). Approaches to financing during global crisis. *European Cooperation*, 2 (46), 32—40. <https://doi.org/10.32070/ec.v2i46.80>.

7. Hlushchenko, O. (2016). Interest rate channel of monetary transmission mechanism as a constituent of financial architectonics in Ukraine. *European Cooperation*, 10 (17), 77—91. Retrieved from <http://we.clmconsulting.pl/index.php/we/article/view/239>.
8. Lang, F., & Melnychenko, O. (2016). Assessment of inflation processes in the world. *European Cooperation*, 11 (18), 84—94. Retrieved from <http://we.clmconsulting.pl/index.php/we/article/view/255>.
9. Masciandaro, D. COVID-19 Helicopter Money, Monetary Policy and Central Bank Independence: Economics and Politics (2020, April). *BAFFI CAREFIN Centre Research Paper*, 137. <http://dx.doi.org/10.2139/ssrn.3583466>. Retrieved from <https://ssrn.com/abstract=3583466>.
10. European Central Bank. (2020, April 30). Monetary policy decisions. Retrieved from <https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.mp200430~1eaa128265.en.html>.
11. Monetary Policy Summary and minutes of the Monetary Policy Committee meeting. (2020). Retrieved from <https://www.bankofengland.co.uk/monetary-policy-summary-and-minutes/2020/march-2020>.
12. Policy responses to COVID-19. (n. d.). Retrieved from <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19>
13. Samorodov, B. (2015). Banks financial performance optimization problem in the context of their financial development. *European Cooperation*, 7 (7), 27—33. Retrieved from <http://we.clmconsulting.pl/index.php/we/article/view/104>.
14. Shkodina, I., Yehorova, Y., & Yatsyna, V. (2017). Monetary policy as a factor of global financial market volatility increasing. *Financial and credit activity: problems of theory and practice*, 1 (22), 5—17.
15. Treasury Constant Maturity. (n. d.). Retrieved from <https://fred.stlouisfed.org/series/DGS10>.
16. World Federation of Exchanges (WFE). (2020, January). Retrieved from <https://focus.world-exchanges.org/issue/january-2020/market-statistics>.
17. Kalachova, G. (2020). *Pechatat' den'gi nel'z'ya terpet'. Gde postavit zapyatuyu NBU? [Printing money can not be tolerated. Where will the NBU put a comma?]*. Retrieved from <https://www.epravda.com.ua/rus/publications/2020/04/23/659630> [in Russian].
18. Shpek, R. (2020). *Antykryzovyi QE: rozkish, do yakoi nam shehe dovhoy tyty [Anti-crisis QE: a luxury to which we have a long way to go]*. Retrieved from <https://www.epravda.com.ua/columns/2020/04/15/659421> [in Ukrainian].

The article is recommended for printing 04.06.2020

© Shkodina I., Melnychenko O., Babenko M.