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THE REQUIRED RESERVE RATIO AND ITS INFLUENCE ON MACROECONOMIC INDICATORS

WARTOŚĆ STOPY REZERWY OBOWIĄZKOWEJ I JEJ WPŁYW NA MAKROEKONOMICZNE WSKAŹNIKI

ЗНАЧЕНИЕ НОРМАТИВОВ ОБЯЗАТЕЛЬНОГО РЕЗЕРВИРОВАНИЯ И ИХ ВЛИЯНИЕ НА МАКРОЭКОНОМИЧЕСКИЕ ПОКАЗАТЕЛИ

Abstract

The world practice of using such a tool of monetary policy as the regulation of required reserve ratio by central banks has been researched and analyzed. The influence of regulation of required reserve ratio on macroeconomic indicators has been identified. The hypothesis of the possibility of using the long-term money supply law for monetary regulation of the economy and the effectiveness of the instrument for regulating required reserve ratio for achieving the monetary policy objectives of the central banks is proved.

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Keywords: central bank, monetary policy, required reserve ratio, impact, macroeconomic indicators

Streszczenie

Została zbadana i przeanalizowana światowa praktyka stosowania przez banki centralne takiego narzędzia polityki pieniężnej, jak regulacja stopy rezerwy obowiązkowej. Stwierdzono wpływ regulacji stopy rezerwy obowiązkowej na wskaźniki makroekonomiczne. Została potwierdzona hipoteza stosowania prawa długotrwałej podaży pieniądza do pieniężnej regulacji gospodarki i efektywności stosowania instrumentów regulacji stopy rezerwy obowiązkowej do osiągnięcia celów polityki pieniężnej banków centralnych.

Słowa kluczowe: bank centralny, polityka pieniężna, stopa rezerwy obowiązkowej, wpływ, wskaźniki makroekonomiczne

Аннотация

Исследована и проанализирована мировая практика использования центральными банками такого инструмента монетарной политики как регулирование нормативов обязательных резервов. Идентифицировано влияние регулирования нормативов обязательного резервирования на макроэкономические показатели. Доказана гипотеза возможности применения закона долгосрочной денежного предложения для монетарного регулирования экономики и эффективность применения инструмента регулирования нормативов обязательного резервирования для достижения целей монетарной политики центральных банков.

Ключевые слова: центральный банк, монетарная политика, нормативы обязательного резервирования, влияние, макроэкономические показатели

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Introduction.

One of the most important tools of monetary policy is a regulatory treatment of the required reserve ratios, which is established for financial corporations at the time of fund raising and its allocation (forming a credit portfolio and making investment decisions). The regulation of required reserve


ratios refers to a group of economic monetary policy tools of indirect influence. It is considered that such a tool is one of the most effective and fastest in application. At the same time, it is also the most stringent, since it significantly affects the financial results of depository corporations.

Analysis of recent research and publications.

The main studies in the field of application of monetary policy tools, in particular, the regulation of required reserve ratio, was carried out by V.S. Stelmakh (Stelmakh V., 2009), B.I. Pshyk (Pshyk B., 2017), A. Y.

Kuznetsova (Kuznetsova A., 2010), V.I. Mishchenko, A.V. Somik (Mishchenko V., Somik A., 2008), A. Abakumenko, T. Dorosh (Abakumenko A., Dorosh T., 2016), A. V. Somik (Somik A., 2014), D. I.

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Boyko, A. A. Kokovikhi (Boyko D., Kokovokhi A., 2010), K.L. Larionova, G.I. Kapinos (Larionova K., Kapinos G., 2010), N.I. Demchuk, A.N. Koval (Demchuk N., Koval A., 2017), I. Y. Perkonos, A. N. Kostina (Perkonos I., Kostina A., 2016), V. V. Seliverstov (Seliverstov V., 2014) and other academic economists.

K. L. Larionova and G. I. Kapinos studied the current state of monetary policy (Larionova K., Kapinos G., 2010, pp. 136-141). N. A. Tushnitsky considered the methodology of monetary tools in his writings (Tushnitsky, 2000, pp. 58-59); N.I. Demchuk, A.M. Koval dealt with the general principles of required reserve ratio and money supply (Demchuk N., Koval A., 2017, pp. 86-88); and D.I. Boyko and A.A. Kokovikhi investigated the specifics of the application of the required reserve ratio for Ukrainian banks and concluded that the liquidity of banks and their creditworthiness is significantly influenced by this tool of monetary policy (Boyko D., Kokovokhi A., 2010). I.E. Perkonos and A. N. Kostina analyzed the advantages and disadvantages of the application of the required reserve ratios as a tool of monetary policy, and also proved the impact of the change in the required reserve ratios on GDP (Perkonos I., Kostina A., 2016, pp. 43-49).

V.S. Stelmakh believes that the best solution for effective regulation of the monetary

market is the moderation and deliberateness in the use by deposit corporations of such a tool of monetary policy as the required reserve ratio (Stelmakh V., 2009, p. 120). T.A. Krichevskaya expresses the same opinion, stressing the need for a liberal monetary policy and the use of an adjustment mechanism for required reserve ratio (Krichevskaya T., 2014, pp. 42-47). But B.I. Pshik argues that it is advisable to use the required reserve ratio to regulate the liquidity of the banking system and to increase the impact of a change in the key interest rate on interest rates on the interbank market (Pshik B., 2017, p. 17).

The foreign researchers S. Demiralp and D. Farley believe that lower standards of required reserve ratio are needed for the stabilization of the dollar in the global financial market (Demiralp S., Farley D., 2005). But A. Abakumenko and T. Dorosh note the need to increase reserve requirements for banking activities (Abakumenko A., Dorosh T., 2016, p. 117).

Since the regulation of required reserve ratio has played a sizable role in the academic writings of many scientists, and the impact of changes in required reserve ratio on macroeconomic indicators is always significant, therefore, the research is of high relevance.

The purpose and objectives of the research.

The purpose of the research is to analyze and identify the impact of measures on the economic development to regulate required reserve ratio, as a tool for monetary policy of central banks. The following objectives of the study were set to achieve the goal of the research:

- to investigate and analyze the dynamics of the required reserve ratios that was

established by the National Bank of Ukraine (NBU) and other central banks;

- to consider and evaluate the relationship between the dynamics of required reserve ratios and key macroeconomic indicator.

Analysis of the practice of applying the required reserve ratio: world experience.

The value of required reserve ratio is established in each country on an individual basis by the decision of the central bank (depending on the economic state of national economies and objectives of monetary policy). We shall study the dynamics of the

values of the required reserve ratio in different countries. The dynamics of the required reserve ratio in Ukraine during 2004-2017 is given in Table 1.

Table 1. Values of the required reserve ratio in Ukraine during 2004-2017.

Date	With funds on current accounts and deposits at the request of non-financial corporations and households, %		On fixed-term deposits of non-financial corporations and households, %		
	in national currency	in foreign currency	in national currency	in foreign currency	
				Short-term	Long-term
01.10.2004-24.12.2004	8	8	7	7	
25.12.2004-31.08.2005	7	7	6	6	
01.09.2005-09.05.2006	8	8	6	6	
10.05.2006-31.07.2006	6	6	4	4	
01.08.2006-30.09.2006	3	5	2	3	
01.10.2006-04.12.2008	1	5	0,5	4	
05.12.2008-04.01.2009	0	5	0	3	
05.01.2009-31.01.2009	0	7	0	4	
01.02.2009-30.06.2011	0	7	0	4	
01.07.2011-29.11.2011	0	8	0	6	2
30.11.2012-30.03.2012	0	8	0	7,5	2
31.03.2012-29.06.2012	0	8,5	0	9	2
30.06.2012-30.06.2013	0	10	0	9	3
01.07.2013-29.09.2013	0	10 and 15 respectively	0	10	5
30.09.2013-30.12.2014	0	15	0	10	7
c 31.12.2014 – until now	6,5		3		

Source: formed by the authors according to the data (Official website of the National Bank of Ukraine).

The NBU actively uses the regulation of required reserve ratio as an instrument of monetary policy. The ratio estimated as per current account balances and deposits at the request of non-financial corporations and households as of 01.07.2004 and 01.07.2011: in national currency - 8% and 0%, in foreign - 8% in both cases; as per term deposits of non-financial corporations and households: in the national currency - 7% and 0%, in foreign - 7% in 2004 and 6% and 2% for short- and long-term deposits respectively. On November 30, 2012, the required reserve ratio remained unchanged as per funds on current accounts, while as per term/short-term deposits it increased from 6% to 7.5%. On March 31, 2012, the NBU set a new normative ratio in foreign

currency as per current accounts - 8.5%, as per time deposits, changes occurred only in short-term deposits from 7.5% to 9%. During the period of 30.06.2012-29.09.2013 the ratio continued to change in such categories as per current accounts in foreign currency and short-term / long-term deposits in foreign currency.

According to the resolutions of the NBU Board of 16.06.2012 No. 248 and No. 371 of 19.09.2013 "On Certain Issues of Regulation of the Monetary Market", the required reserve ratio in 2014 as per current accounts and deposits at the request of non-financial corporations and households in national currency is set at 0%, and in foreign currency - at 15%. As per time depos-

its of non-financial corporations and households in 2014, the rate of such a tool of monetary policy in national currency was 0%, and in foreign - 10% and 7% in short- and long-term deposits (Resolution, 2012; Resolution, 2013).

In 2014, the NBU set a new goal - to simplify the procedure for the formation and maintaining of legal reserve requirements by depository corporations, as well as to increase the level of integration of domestic banking legislation with the European legal system. The NBU Board adopted Resolution No. 820 of December 18, 2014 "On changing the procedure for the formation and maintaining of legal reserve requirements," according to which, as of December 31, 2014, changes were made in the procedure for the formation and maintaining of legal reserve requirements, namely: by means of legal and private entities in national and foreign currencies on demand and as per funds on current accounts - 6.5%; as per fixed assets and deposits of legal and private entities in national and foreign currency - 3% (Resolution, 2014). Starting from 2015 and up to today, the required reserve ratio has not changed.

The NBU formed a positive base for banks to raise funds in foreign currency on time deposits of non-financial corporations and households by lowering the required reserve ratio for short (from 10% to 3%) and long-term (from 7% to 3%) deposits,. This led to a change in the goals of depository corporations to raise funds in foreign currency, rather than in the national one.

During all the period under review, the reduction in the amount of the required reserve ratio in Ukraine was observed, as well

as the simplification of the calculating procedure for the amount of required reserves, as there was a decrease in the groups of deposits for which different rates for reserving funds were established. This dynamic of required reserve ratios indicates the liberalization of monetary policy and the promotion of transparency, as well as the NBU's focus on economic development, providing it with sufficient money - that is, implementing a cheap money policy.

However, such a dynamic of the required reserve ratio cannot be justified during all the periods of economic development, as there were at least 2 financial crises (in 2008 and 2013-2014) during the analyzed period, when the NBU was advisable to limit the money supply, slow its growth, impose additional limitations for depository corporations in order to keep a lid on the monetary sphere. Therefore, it is arguable that the use of regulation of the required reserve ratio as a tool of monetary policy was not a priority for the NBU in times of crisis development in the monetary sphere and the financial system as a whole.

Since the methods for establishing the required reserve ratios in each country are different and may differ significantly, it is advisable to investigate the dynamics of the values of such norms.

We shall analyze the amount of the required reserve ratios that are applied by the central banks of the Russian Federation, Georgia, the Republic of Belarus, the Republic of Poland and the European Central Bank.

There are unequal rates of the required reserve ratios for individuals, legal entities and other credit institutions in the Russian Federation (Table 2-3).

Table 2. The required reserve ratios in the Russian Federation for legal entities and individuals in 2017

Date	The required reserve ratios by means of non-resident legal entities,%				The required reserve ratios by means of individuals, %	
	With the exception of fixed deposits		on fixed deposits			
	in rubles	in foreign currency	in rubles	in foreign currency	in rubles	in foreign currency
01.01.17-30.11.17	5	7	5	7	5	6
01.12.17	for banks with a general license, for non-bank lending institution					
	5	7	5	7	5	6
	for banks with a standard license					
	5	7	5	7	1	6

Source: formed by the authors according to the data (Official website of the Central Bank of the Russian Federation).

Table 3. The required reserve ratios in the Russian Federation for other credit institutions in 2017

Expiration date	The required reserve ratios, %			
	With the exception of fixed deposits		on fixed deposits	
	in rubles	in foreign currency	in rubles	in foreign currency
01.01.17-30.11.17	5	7	5	7
01.12.17	for banks with a general license, for non-bank lending institution			
	5	7	5	7
	for banks with a standard license			
	1	7	1	7

Source: formed by the authors according to the data (Official website of the Central Bank of the Russian Federation).

Since March 1, 2013, the Central Bank of the Russian Federation has changed the rate of the required reserve ratio in rubles and foreign currency for non-resident individuals from 5.5% to 4.25%, for individuals and other credit organizations - from 4% to 4.25%. These rates of ratios were unchanged until 01.08.2016, but in August 2016 the Central Bank of the Russian Federation changed the regulation of the monetary policy to establish the required reserve ratios, the rates of which have not changed to the present (see Table 2-3) (Official site of the Central Bank of the Russian Federation). As we can see, in 2017 the Central Bank of the Russian Federation implemented a stringent cheap money policy, which is justified in a down economy that takes place in the territory of the Russian Federation. The use of the required reserves ratio by the Central Bank of the Russian Federation is both legitimate and necessary, which makes it possible to accomplish identified goals of monetary policy related to curbing inflation.

The situation in the Republic of Poland is slightly different: in 2014-2017 the required reserve ratio was 3.5% for individuals and legal entities (that is, it was applied for all liabilities), except funds received from repo transactions and transactions with purchase and sale contract. The rate of the ratio for them was 0% (Official website of the Bank of Poland). Depository corporations, credit unions and the National Credit Unions Association are required to maintain a certain amount of funds in the accounts for servicing the reserves for a certain period at a level not lower than the required reserve, since the Central Bank of the Republic of Poland is convinced that such a monetary policy tool stabilizes the level of short-term interest rates. As we can see, the required reserve ratio is higher in Ukraine and in the Russian Federation, therefore it can be argued that, these countries implement a stringent monetary policy as compared to Poland.

The minimum reserve requirements are determined by the Monetary Policy Committee in Georgia for funds raised in national and foreign currencies. The calculation of the required reserves is carried out within 14 days. In 2017, the required reserve ratio was 7% of funds raised in national currency and 20% of loans in foreign currency (Official website of the National Bank of Georgia). In the context of changes in reserve requirements, the National Bank of Georgia can have a rapid impact on lending volumes and the dynamics of interest rates of depository corporations, namely: the reserve demand for funds attracted in foreign cur-

rency can be used as an opportunity to influence interest rates on loans in this currency. Liabilities with a maturity of more than 1 year in national currency and more than 2 years in foreign currency are free from required reserve. As we see, the required reserves on credits are much higher in Georgia than in Ukraine or the Republic of Poland, although the greatest problems in the monetary sphere and the economy are observed in Ukraine rather than anywhere else.

The National Bank of the Republic of Belarus actively uses the policy of regulating the required reserves, changing their rates on average 2-3 times a year (Table 4).

Table 4. The rate of required reserve ratios in the Republic of Belarus for 2014-2018.

The effective date of the ratio	On attracted funds in national currency, %		On attracted funds in foreign currency, %
	by means of legal entities	by means of private entities	
01.02.2014	9	0	13
01.01.2015	9	0	12,5
01.02.2015	9	0	10
01.03.2015	9	0	9
01.07.2015	7	7	7
01.09.2015	8	8	8
01.04.2016	7,5	7,5	7,5
01.02.2017	4	4	11
01.07.2017	4	4	15
01.01.2018	4	4	17

Source: was compiled by the authors according to the data (Official website of the National Bank of the Republic of Belarus).

Analyzing the required reserve ratios established by the National Bank of the Republic of Belarus, we can conclude that the basis for regulation and stringent monetary policy is the regulation of attracting deposits in foreign currency, which indicates a desire to restrict foreign currency transactions and stimulate the use of the national currency. The changes in the reserves for deposits of individuals are due to the need for growth in their volume and maintain the liquidity of the banking system. That is, we can conclude that the National Bank of the Republic of Belarus uses the required reserve ratio to regulate the structure of the money supply in terms of currencies, and not in terms

of attracting deposits or entities (in particular, starting from 01.02.2017).

The European Central Bank may require that credit institutions operating in the member states of the European Union maintain minimum reserves in the accounts of the European Central Bank and national central banks in order to achieve the objectives of monetary policy according to Article 2 of the Protocol on the Statute of the European System of Central Banks and the European Central Bank [27]. The values of the required reserve ratios established by the European Central Bank in 2014-2017 are given in Table 5.



Table 5. The required reserve ratios of the European Central Bank for 2014-2017.

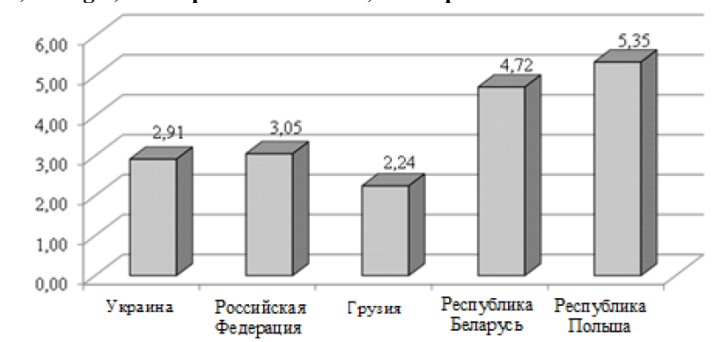
Year	2014	2015	2016	2017
Reserve ratio, %	0,05	0,05	0	0

Source: Created by the authors according to the data (Official website of the European Central Bank).

The European Central Bank since 2016 does not use such a tool of monetary policy as the regulation of required reserve ratios. The reason for this is that the high level of development of the monetary sphere and financial markets, which makes it possible to use other, less stringent, economic instruments of monetary policy with greater efficiency to achieve the development goals. The NBU uses the required reserve ratio as one of the tools of monetary policy to control the volume of the money supply through an increase or decrease in the money multiplier. The money multiplier increased from 2.87 to 2.96 in 2015-2016 with a reduction in the required reserve ratio. The results of the performed calculations reflect that the actual value of the

money multiplier was about 3 (as of 01.09.2017 - 2.91) during the analyzed period in Ukraine, that is, each hryvnia issued in circulation turns into 3 hryvnias. The permissible conversion can be more than 15 times. That is, the effect of the money multiplier is used by no more than 20%, and accordingly the change in the reserve requirements does not have a significant (decisive) impact on the change in the money supply. And in comparison, we will analyze the actual levels of monetary multipliers in Ukraine, the Russian Federation, Georgia, the Republic of Belarus, and the Republic of Poland as of September 1, 2017 (Figure 1).

Figure 1. The values of actual monetary multipliers in Ukraine, the Russian Federation, Georgia, the Republic of Belarus, the Republic of Poland as of 01.09.2017



Source: calculated and constructed by the authors according to the data (Official website of the International Monetary Fund: statistical data).

As you can see, the actual money multiplier isn't equal to the normative one in any of the considered countries. The only exception is the Republic of Belarus in the context of the formation of reserves for raised funds in foreign currency (the normative value of the money multiplier is 5.88 with the actual value at 5.35), which is due to the peculiarities of the monetary policy of this country.

The efficiency of using a money multiplier in all the other countries under consideration, like for Ukraine, is about 20% of the normatively possible effect. Therefore, we can conclude that the use of required reserve ratios as a tool of monetary policy is possible, but does not lead to a significant immediate impact on the change in the supply of money.

Identification of the impact of regulation of required reserve ratios on macroeconomic performance.

Impact assessment of the application of required reserve ratios by central banks as a tool for monetary regulation on the development of the economy will be assessed on the basis of M. Fridman's rule of forming a long-term money supply (Ilchuk P. & Ors., 2016, p. 226). The results of the calculations were made according to the data of the central banks of Ukraine, the Russian Federation, Georgia, the Republic of Belarus, the Republic of Poland. The research will

formulate and verified the hypothesis of the possibility of applying M. Fridman's rule of long-term money supply for monetary regulation of the economies of the countries under study.

Let us consider the main macroeconomic indicators in Ukraine, namely, the level of inflation, real and nominal GDPs (Table 6) in order to analyze the effectiveness of the use of regulation of reserve requirements as a tool for monetary policy.

Table 6. The main macroeconomic performance in Ukraine for the period 2014-2017.

Indicators	Indicator values over the years			
	2014	2015	2016	2017
Inflation index.%	124.9	143.3	112.4	113.7
Real GDP, mln. UAH	1365123,0	1430290,0	203430,0	2085290,7*
Nominal GDP, mln. UAH	1586915,0	1988544,0	2383182,0	2777419,8*

* - it is indicated the findings predicted by the authors according to the data from the Official Website of the Ministry of Finance of Ukraine.

Source: Official Website of the National Bank of Ukraine. Monetary Policy Tools.; Official Website of the Ministry of Finance of Ukraine; Official Website of the State Statistics Service of Ukraine).

Since the data related to nominal and real GDP was not available at the end of 2017 at the time of writing the article at official sites, then the data in the Table 8 is based on the actual values of 2016 and forecasts made by the Ministry of Finance of Ukraine for GDP growth in 2017 (Official website of the Ministry of Finance of Ukraine).

In general, reserve requirements are used by central banks to address long-term macroeconomic objectives regarding the stabilization of monetary turnover and control over the volumes of money supply. Comparing the relationship between the required reserve ratios and the level of inflation, we can see that with the increase of required reserve ratio (on funds in current accounts and deposits on demand of non-fi-

ancial corporations and households in foreign currency from 0% to 6.5%, on time deposits of non-financial corporations and of households from 0% to 3%) in 2015 compared to 2014, inflation will increase from 124.9% to 143.3%, that is, by 18.4%. A similar situation exists in 2016-2017, where there was a tendency to increase inflation from 112.4% to 113.7%, respectively. So, we can conclude that there is a certain time lag of the influence of such a tool of monetary policy on inflation processes. The NBU uses the required reserve ratio along with other monetary policy instruments to implement anti-inflationary regulation of the economy.

We shall analyze the dynamics of macroeconomic indicators for Ukraine for 2015-2017 (Table 7).

Table 7. Indicators of the dynamics of macroeconomic performance

Year	Indicators							
	Money supply, mln. UAH	Monetary base, mln. UAH	Nominal GDP, mln. UAH	Inflation, %	Money supply, mln. UAH	Monetary base, mln. UAH	Nominal GDP, mln. UAH	Inflation, %
Absolute change in the indicator								
basic				chain				
2015	37334.3	2806	401629	18.4	37334.3	2806	401629	18.4
2016	145972.5	48381	796267	-12.5	108638.2	45575	394638	-30.9
2017	147893.3	45815	1190504.8	-11.2	1920.8	-2566	394238	1.3
The growth rate of the indicator,%								
basic				chain				
2015	3.9	0.8	25.3	73.9	3.9	0.8	25.3	73.9
2016	15.3	14.5	50.2	-50.2	10.9	13.6	19.8	-71.4
2017	15.5	13.8	75.0	-45.0	0.17	-0.67	16.5	10.5

Source: calculated by the authors according to the data from the Official website of the National Bank of Ukraine, Monetary Policy Tools.: Official Website of the Ministry of Finance of Ukraine, Official Website of the State Statistics Service of Ukraine).

In general, the money supply, the monetary base and nominal GDP have undergone a positive increasing tendency, while inflation does not have a stable trend to change - there is a decrease in inflation in the basic dimension for 2014-2017, but the chain rates of growth have shown, that in 2017 there is an increase in inflation compared with 2016. It has a negative impact for the economy of Ukraine and indicates a lack of effectiveness of monetary policy.

Despite the significant inflation rates, there is a tendency to increase the value of not only nominal but also real GDP during the analyzed period 2014-2017. The dynamics of real GDP characterizes the stability of economic development in conditions of a reduction in the required reserve ratio in 2015. That is, we get contradictory values of the two key indicators of economic development in comparison with the change in the required reserve ratios and GDP. We will perform calculations of the long-term money supply equation according M. Friedman (Ilchuk P. et al., 2016, p. 226) :

$$\Delta M = \Delta P + \Delta Y, \tag{1}$$

where ΔM – the average annual growth rate of money supply, %;
 ΔP – the average annual rate of expected inflation, triggered by economic factors, %;

ΔY – average annual growth rate for nominal GDP, %.

We will express and test the hypothesis that the rule of M. Friedman's long-term money supply works for the economy of Ukraine. We will calculate the magnitude of inflation triggered by economic factors having data on GDP growth and growth of the money supply:

$$0,17 = \Delta P + 16,5,$$

$$\Delta P = 0,17 - 16,5 = -16,37\%.$$

That is, as long as the rule for the formation of a long-term money supply is fulfilled in Ukraine in 2017, there should be deflation at the level of 16.37%, which stays in line with the NBU's goal - stabilizing the purchasing power of the hryvnia. In fact, we had inflation at the level of 13.7% in 2017, therefore it can be affirmed that in Ukraine the currency's stability is determined by speculative factors and therefore the restriction of the growth in the supply of money is the basis for ensuring the stability of the hryvnia. Therefore, the policy of the NBU to establish the required reserve requirements is justified.

We will perform a similar study of the implementation of the rule of long-term money supply for Ukraine, the Russian

Federation, Georgia, the Republic of Belarus and the Republic of Poland in 2016 (Table 8).

Table 8. Results of the study of the law of long-term money supply for M. Fridman for Ukraine, the Russian Federation, Georgia, the Republic of Belarus, the Republic of Poland for 2016.

Countries	The growth rate of money supply, %	GDP growth rate, %	Inflation, provoked by economic factors, % (calculated by the formula (1))	Actual inflation, %
Ukraine	10,93	19,85	-8,92	12,40
Russian Federation	9,20	3,38	5,83	7,05
Georgia	20,24	6,82	13,42	2,13
Republic of Belarus	3,80	4,91	-1,11	11,84
Republic of Poland	9,57	2,88	6,68	-0,61

Source: calculated by the authors according to the data (Official website of the International Monetary Fund: statistical data).

The results of calculations showed that the influence of speculative factors is the basis of inflation in Ukraine and the Republic of Belarus, but it is a source of stabilization of the national currency in Georgia and the Republic of Poland.

Therefore, it is advisable for an effective monetary policy of the NBU to take the economy out of the shadow, to apply the simplest and most understandable tools of the monetary policy for the population, which will reduce the influence of speculative factors on the price level in the country and stabilize the purchasing power of the

hryvnia. It should be noted that the NBU applies the regulation of required reserve ratios as a tool for implementing anti-inflationary policy and preventing the impact of negative consequences of the cyclical nature of the economy. The relationship between required reserve requirements and the volume of money supply and monetary base in the country is obvious and allows to have an impact on the depositary corporations, money and capital market conditions, price level and, as a consequence, GDP dynamics when changing the required reserve ratios.

Conclusions.

Summarizing, it can be concluded that central banks of different countries set the required reserve ratios in accordance with the purposes and types of monetary policy and the available tools. There is no single level of required reserve requirements available, as well as a clear definition of the conditions in which its application can be effective. The main task is the compatible results of the simultaneous application of various instruments of monetary policy and the achievement of the monetary goals. The central bank as an entity performing the administrative, control and supervisory role for commercial banks influences the level


of interest rates on the interbank market, using its financial instruments, by means of which it regulates the amount of money in the national economic. (Prokopowicz D., Gwoździewicz S. 2018 p. 215-232).

So, the central bank must apply measures to reduce the required reserve ratios to stimulate the development of the economy, while the increase in required reserve ratios leads to a reduction in inflationary pressures when changing the basic macroeconomic indicators. Insignificant changes in the values of required reserve ratios cause substantial changes in the volume of deposit investments and, as a result, in the volume of investment in the economy.

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