The role of the Central Bank in the Economic Slow-down in Russia.

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Abstract

This paper is looking into the causes of the GDP decline in Russia during 2008-2009 and the slow-down of the GDP growth during 2012-2013. The impact of the money supply on the GDP is discussed. Analogies are drawn with the crises in the USA: the Great Depression during 1929-1933 and the 2008-2009 crisis. Possible measures necessary for growth in Russia are investigated.

Key words: money supply, Great Depression, recession, central bank

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Влияние Центрального Банка на замедление экономики России.

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Introduction

There are many theories as to the reasons why the 2008 crisis happened particularly in Russia. To this day, this question continues not to be abundantly clear to the general public. Just as unclear remains the reason for Russia's deeper slump compared to other countries. At the same time, an insight into these causes would be conducive to overcoming also the current economic slow-down, meaning the slow-down that set in during late 2012 and continued throughout 2013.

In this paper, an attempt has been made to address the following questions:

1. Why was the downturn in Russia, during the 2008-2009 crisis, worse than in the U.S.A. and many other countries?
2. Was this downturn brought about by external causes or internal ones? If the causes were external, what prevented the economy from resisting them?
3. Does the current economic slow-down in Russia (2012-2013) have the same roots as the crisis in 2008-2009?
4. What measures are necessary for the economy to grow?

First, we make the assumption that the key cause of the deep slump in Russia was the contraction of money supply. Then, using the historical example of the Great Depression, it is shown that it was precisely the contraction of the money supply that impacted the U.S.A. economy in those years. It is described what the "proper" policy of the Federal Reserve System of the U.S.A. should have been during the years of the Great Depression. After that follows a discussion of the mechanism for reduction of the money supply in Russia that culminated in a deep crisis. The influence exerted by the international flows of capital is highlighted and erroneous steps taken by the Central Bank of the Russian Federation are pointed out which did not serve to retain or lead to further growth of the money supply. This is followed by a review of the case of a successful policy by the central bank using the example of the Federal Reserve of the United States. An attempt is being undertaken to answer the question of the effect of the money policy waged by the Central Bank of the Russian Federation on the current economic slow-down. And in conclusion, some proposals are put forward regarding possible vectors of the Central Bank's policy and, in broader terms, regarding possible expansion of the Central Bank's capability to control the money supply.

Part 1. The Cause of the Economic Decline in Russia During 2008-2009 is the Contraction of Money Supply.

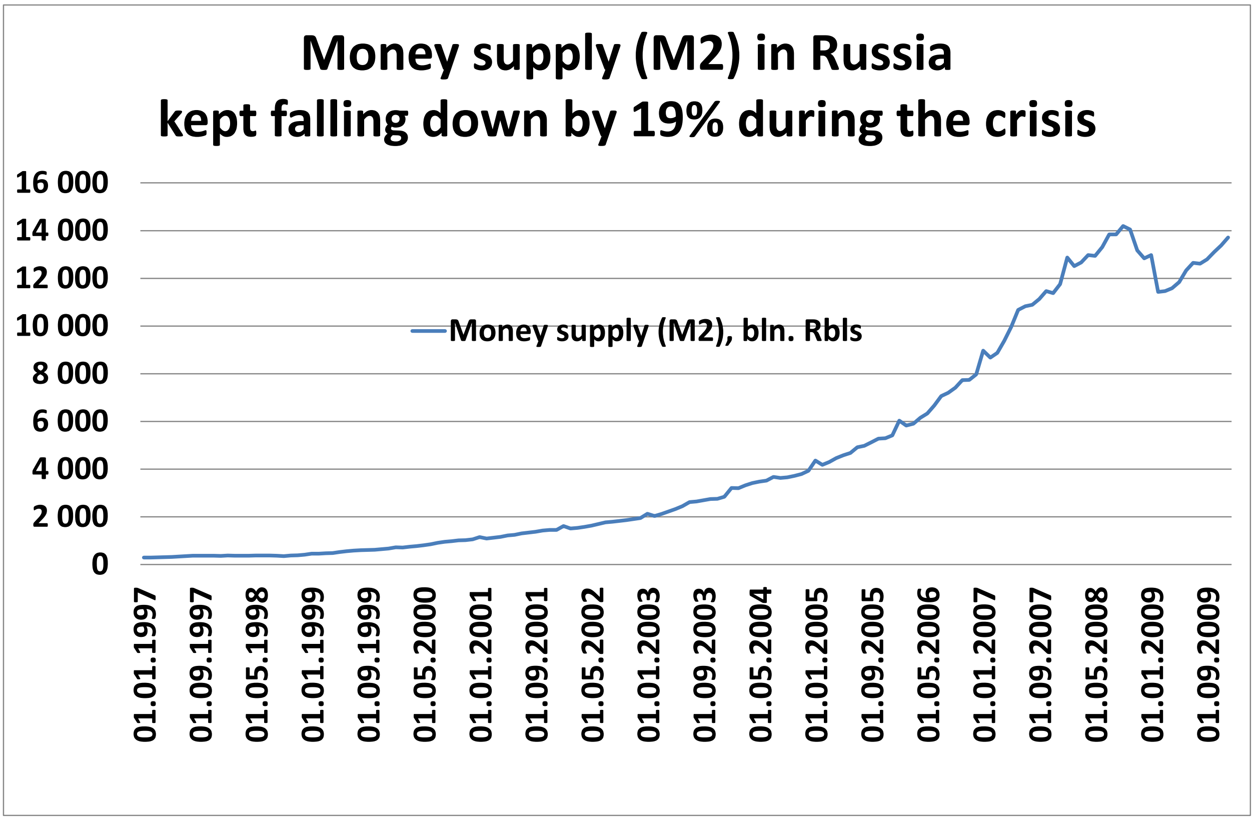
Hypothysis of the Causes of Crisis in Russia.

The famous principle of «Occam's razor» reads that if one parameter suffices to explain a phenomenon, it is unnecessary to resort to other parameters.

To explain the decline of GDP, it is quite enough to make one assumption and that is to assume that the said **decline was due to a drastic reduction in the Ruble money supply between August 2008 and January 2009.** ***This, incidentally, happened to***

be the root cause of the crisis. This is exactly what we will be talking about here below.

Fig.1. During 2008-2009, there took place a sharp drop in the Ruble money supply which was mainly responsible for the decline in GDP.



The 19-percent reduction in the money supply caused the GDP to slump by more than 10% (see below) and unemployment as well as other negative consequences to jump.

In order to satisfy ourselves that Russia was not a unique case and it, on a more modest scale, made the same main mistake as the U.S.A. had done during the period of the Great Depression, let us delve into the history of the issue

Historical Background: The Great Depression.

The linkage between the money supply and economic downturns was brought up for the first time as late as 1963 with the publication of the book «Monetary History of the United States», whose authors Milton Friedman (subsequently a Nobel laureate) and Anna Schwartz asserted that the cause of the Great Depression in the U.S.A., during 1929-1933, had been the considerable shrinkage of the money supply for which the blame was to be laid at the door of the Federal Reserve System (Bernanke, 2004).

It needs to be mentioned that before the Great Depression there did not exist any such science as macroeconomics. Keynes, author of the famous book «The General Theory of Employment, Interest and Money» (1936), actually became its spiritual father. Keynes also spoke of the need for soft monetary policy but since interest rates, during the Great Depression, had gone down considerably as it is (which was consistent with Keynes' recommendations), while the FRS was printing more money, the opportunities on the «money» front were considered to have been pretty much exhausted. Keynes' recommendations and those of his followers (he died in 1946) in a situation like this boiled down to escalating government expenditure to stimulate the economy.

Keynsians were of the opinion that, in the monetary sphere, there was nothing left to do, as interest rates were low as it is and the money base had expanded.

The book «Monetary History of the United States» is at variance with the point of view adhered to by the Keynesians. Friedman and Schwartz (Bernanke, 2004) have shown that

- Despite the low nominal interest rates, the real interest rates were sky high because of deflation.
- ***Money supply in the USA dramatically decreased***, despite some increase in the money base.

Why did the money supply in the USA shrink during 1929-1933? What was the mechanism of this shrinkage?

In order to understand it, let us consider a very simplified scheme of «creating» the money supply:

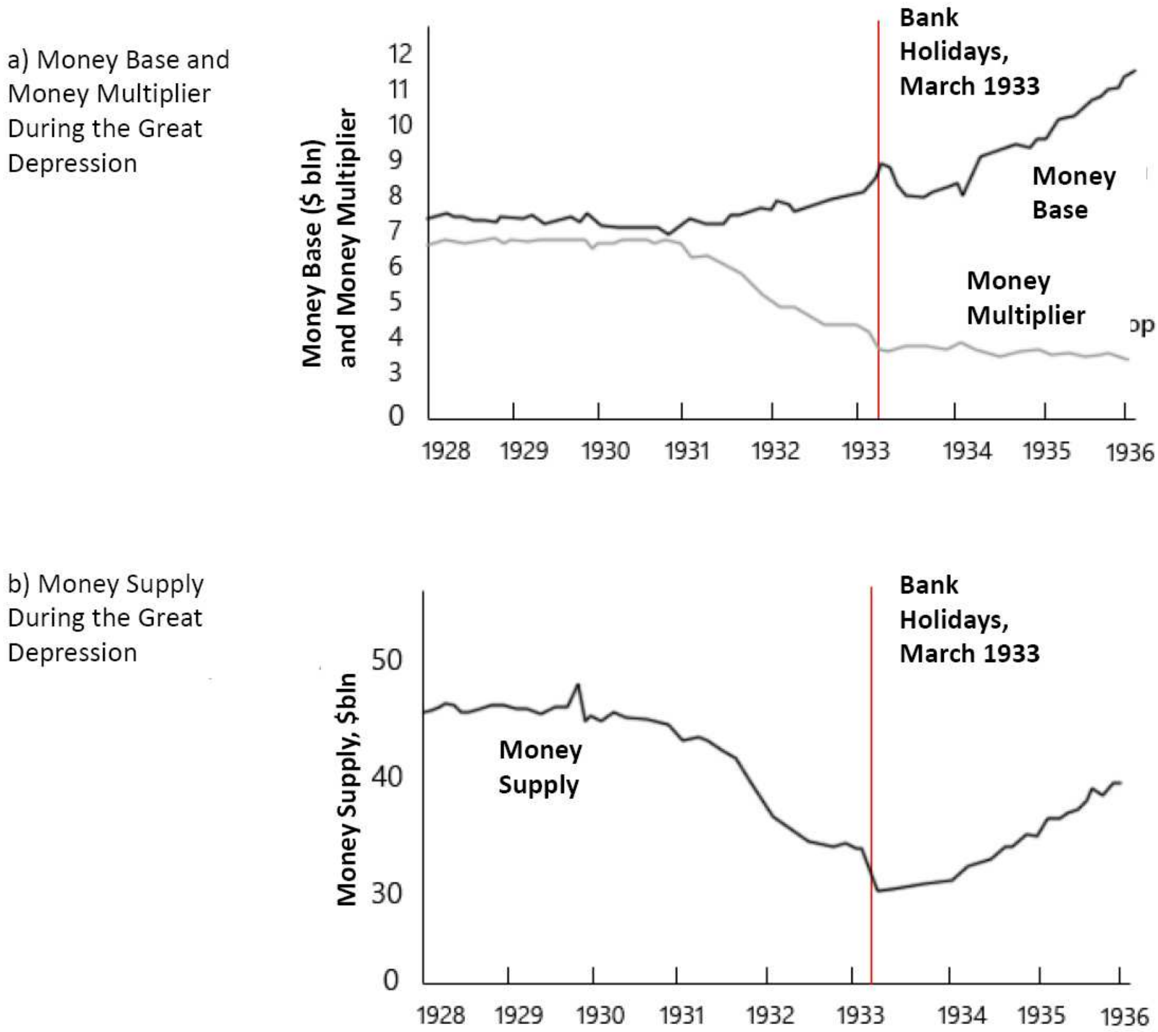
MS=m*MB

1. **MB – Money Base.** FRS «prints» money and gives it to banks on credit. This is money base.
2. **m - multiplier.** The banks increase this money several times. Depending on their own rules, their own inclination to risk and on the so-called reserve requirements, a bank, out of 100 dollars received from the FRS or the bank's depositors, can «create» credits both in the amount of 500 and 900 dollars. The coefficient by which in this case the money base is multiplied, is called "multiplier".
3. **MS – Money Supply.** This money increased several times, as a matter of fact, is the money supply[2]. Money supply is produced by multiplying the money base by the multiplier. It is on these two indicators that it actually depends.

Friedman and Schwartz' idea is fundamentally simple: despite a small growth of the money base, the multiplier had been tumbling so precipitously that it resulted in an overall reduction in the MS money supply.

[2] There are several money aggregates (M2, M3, etc.). Further on, in the paper, the MS means the M2 money aggregate due to it being the most common and widespread.

Fig.2. Money Supply and Money Base During the Great Depression.



Source: Abel, Bernanke, 2005.

Why had the multiplier been falling down? Why did the banks reduce the volumes of credit facilities? They were forced to do it for many reasons, including such reasons as the so-called «depositors' runs on the banks», which is when many depositors simultaneously withdraw their deposits. But, as was described above, on each hundred dollars' worth of deposits rested a «pyramid» of credits, which could have amounted to 500-800 dollars. And this pyramid was collapsing. The banks were also tightening up their reserve requirements.

What could the FRS have done? The formula of the money supply is simple enough, therefore there were only two possible avenues of approach:

1. Keep the multiplier from falling down
    a. for example, by giving guarantees to avoid «runs on the banks» (Federal Deposit Insurance Corporation ,FDIC, was created by the Banking Act only in 1933)
2. Build up the money supply faster

a. for example, «print» as much money (and give it to the banks) as would make up for the decline in the multiplier (that required that the country should go off the «gold standard», this started only in 1934 by changing the value of the dollar from $20.67 per ounce to $35 per ounce, a devaluation of over 40%)

In 1929-1933, FRS was doing «precisely the opposite»: it kept on raising interest rates at the initial stage, it deemed it to be unnecessary to support the banks (and the idea was that «let the weak banks go bust to clean up the banking system»)

Subsequently, the mechanism of the effect produced by the money supply on the GDP of other countries during the depression was investigated which proved the assumptions made by Friedman and Schwartz. Recent research undertaken in the 1990-s provided final and conclusive proof that this approach is correct: *"… during the past twenty years or so economic historians have come to a broad consensus about the causes of the Depression"* (Bernanke, 2004)

It is common knowledge that **an official representative of the FRS,** in 2002, in a speech dedicated to Milton Friedman's 90-th anniversary said: *« Let me end my talk by abusing slightly my status as an official representative of the Federal Reserve. I would like to say to Milton and Anna (Schwartz): Regarding the Great Depression. You're right, we (i.e. Federal Reserve) did it. We're very sorry. But thanks to you, we won't do it again»*. This representative of the FRS (at that time, he was not yet the Chairman, he was just a member of the Board) was Ben Bernanke (2002). It was precisely he, only 6 years later, who, in the capacity of the Chairman of the FRS, was destined to get to grips with the problems of the 2008-2009 crisis.

History brooks no subjunctive mood, but still it would be worthwhile to look back and see how the 2008 crisis would have worked out, had at the helm of the FRS there been the leaders who had been there in 1929.

Table 1.

Comparative parameters of the 1929 and 2008 crises.

	Multiplier			Potential of Money Supply Decline (Following the Multiplier)			Actual Decline of the Money Supply		
	Max	Min	Decline	Max	Min	Decline	Max	Min	Decline
1929-1933	6.6	3.5	46%	46 bn.	25 bn.	46%	46 bn.	30 bn.	35%
2008-2013	8.97	3.3	63%	7.6 trillion.	2.8 trillion.	63%	7,6 trillion.	10,6 trillion	No decline (Growth)

Source: 2008-2013 – FRS Data; 1929-1933 – Abel, Bernanke, (2005), author's calculations.

<u>During the Great Depression</u> the multiplier fell down by 46% (see the «Multiplier» column). This, given all the other equal conditions, was supposed to have resulted in the money supply also declining by 46% (see the column «Potential of Money Supply Decline»). The actual decline of the money supply amounted to 35%, as insignificant (though insufficient) increase in the money base by the FRS was indeed made. The

consequences for the economy were disastrous: actual output dropped down virtually by 30%, unemployment grew from 3% up to 25%.

During the 2008-2013 crisis, the multiplier declined by 63%. That means its reduction was much greater than during the Great Depression. In the case of the FRS policy being just as short-sighted as it had been during the Great Depression, both the money supply decline and its consequences would have been still more deplorable than during the 1930-s.

Table 1 shows that no actual decline in the money supply took place during 2008-2013. On the contrary, the money supply even increased. It is exactly this that explains why, given the potentially much greater scale of decline than during the 1930-s, the correct course of action steered by the FRS led by Ben Bernanke in those years, leveled off these risks.

Bernanke Professionally Resolved the Problem of Exiting from the Crisis.

Still before his appointment as Chairman of the FRS in 2006, Bernanke earned the nickname «Helicopter Ben» as he had quoted Friedman's light-hearted statement that during the crisis similar to the Great Depression the idea of printing dollars and spreading them from the helicopter was not bad, at all.

What tools did Bernanke employ to resolve the crisis?

One of the known tools of increasing the money base (and, consequently, the money supply) was to reduce the interest rate at which commercial banks could borrow loans from the central bank. The lower the interest rate was, the more willing the commercial banks were to receive credits from the Central Bank and the money supply grew. The FRS kept on reducing the interest rate, but at the time when the crisis was at its peak this tool had already been used: the interest rates were at their lowest possible level, within the range between 0%-0,25%. In other words, there was nothing to do with the interest rates (unless negative interest rates are considered to be possible).

Another tool to be leveraged off in order to influence the money supply is the so-called ***«open market operations»***. It was precisely this particular tool that was employed by the Federal Reserve System when «things were especially tough». The key element of the open market operations is simple enough: the central bank buys and sells assets for the national currency. If it buys assets (shares, bonds, foreign currency and any other assets), for this purpose «freshly printed» money is used and the money base increases (to be followed up by increase in the money supply). If it sells assets, the national currency, reaching the central bank's account, disappears from the money base, and thus the money base decreases (to be followed up by a reduction in the money supply).

It was mainly this tool that the FRS used under the leadership of Bernanke. The multiplier declined sharply (to put it in simple terms: the banks losing appetite for giving loans to borrowers). This could end in exactly the same kind of sharp drop in the money supply, i.e. the amount of money in the economy. With a view to avoiding that, the FRS carried out a few programs of the so-called «quantitative easing» whose duration was limited in time. Each time several hundreds of billions' worth of assets were bought out in the market. The money supply grew by the same amount. Following that, practically time infinite program, which has been operating to this date (this version of the article was written in February 2014). Table 2 gives some idea of the volumes for ramping up the money base in the U.S.A.

Table 2.

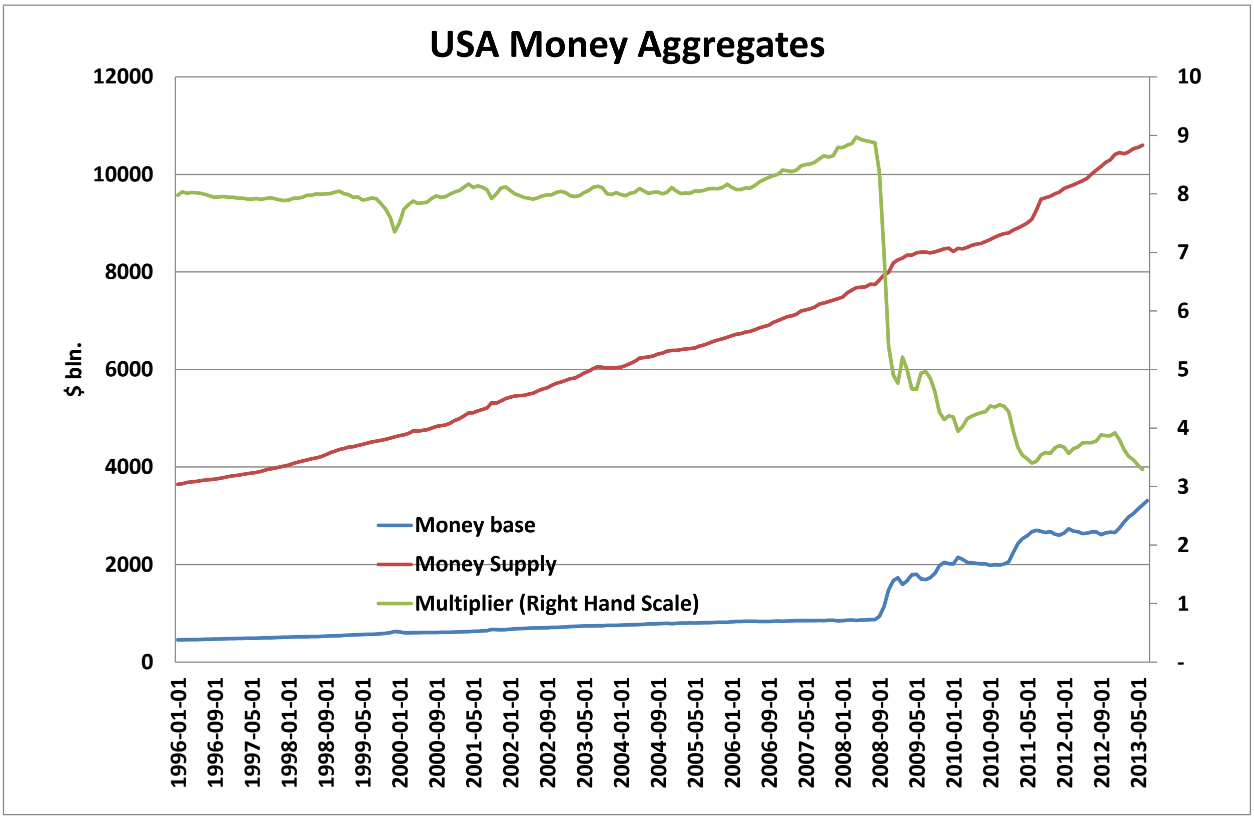
Money base in the U.S.A. according to the FRS.

Date	Money base in the U.S.A. bn. dollars
2012-12-01	2656,879
2013-01-01	2748,980
2013-02-01	2874,405
2013-03-01	2973,347
2013-04-01	3045,675
2013-05-01	3139,124
2013-06-01	3222,299

Money base in the U.S.A. grew from 872 bn. dollars in August 2008 to 3.3 trillion. dollars in July 2013, a 3.8 fold increase (up almost 2.5 trillion.)!

Figure 3 shows that the ramp-up in the money base proceeded as compensation for the sharp decline in the multiplier.

Fig. 3. Money base in the U.S.A., during the crisis, increased several times, compensating for the drop in the multiplier and making the money supply grow.



Source: Federal Reserve.

It was not an easy decision to go for such a ramp-up in the money base. And Ben Bernanke managed to do that because he knew better than the others the causes of the Great Depression in the U.S.A. And jokingly let us say that he still had to keep his promise he had given Milton Friedman and Anna Schwartz (see above).

On December 19-th 2013, in one of his last speeches as the head of the FRS, Bernanke said: *«…if we do not consider the Great Depression when the monetary policy remained, on the whole, rather passive, what we did became* ***one of the first examples of aggressive monetary measures, undertaken under such serious conditions»***[3]

Steps Taken By the Central Bank of Russia in 2008-2009.

Against the background of this resoluteness and full understanding of the situation on the part of the US FRS, the behavior of the Russian monetary authorities looks particularly inapt.

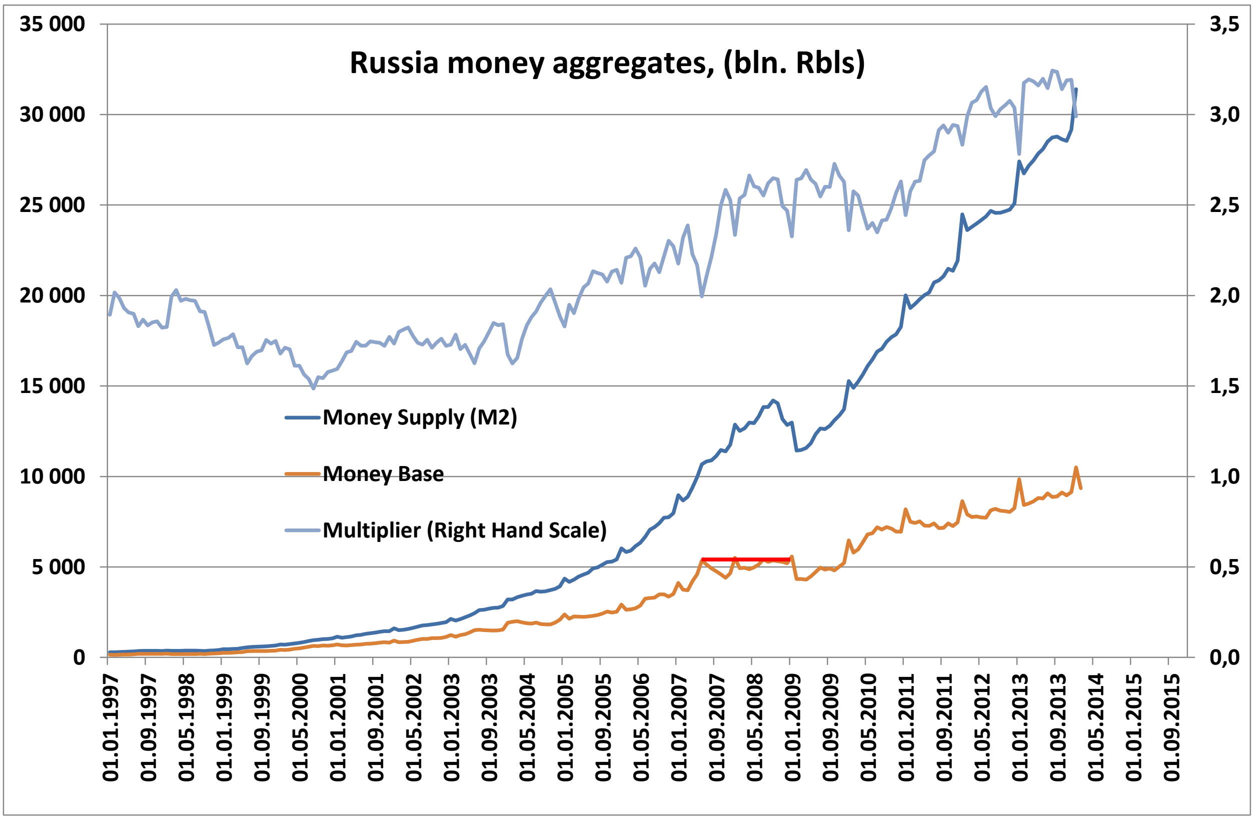
As we will be able to see below, the Central Bank of Russia did not even require to demonstrate such strong resoluteness as was exhibited by the FRS. It was enough to stick to the «Do no harm» principle. The situation in Russia was much more preferable than that in the U.S.A., as will be shown later. But even in this situation the Central

[3] Source: Euronews with reference to ITAR-TASS (Russian). http://ru.euronews.com/newswires/2265028-newswire/

Bank's actions did not help to keep the money supply from falling down but, on the contrary, it let it drop down.

Now let us have a look at how the monetary variables were performing in Russia during the crisis. In **figure 4**, it is clearly seen that the multiplier (unlike the U.S.A.) did not plummet multiple times, it only sustained the usual small fluctuations. What caused the money supply to decline, then? A sharp decline in the money base caused that. The money base is an indicator which is entirely and fully dependent on the actions of the central bank[4].

Fig. 4. Money supply in Russia fell down in 2008 due to a sharp reduction in the money base of the Central Bank of Russia.



A little later it will be shown that, apart from the sharp reduction in the money base when the crisis was in full swing, the Central Bank of the Russian Federation had been decelerating the money supply growth rate since as early as 2007 (red horizontal line in **Figure 4**).

But now for the obvious: reduced money supply in Russia and hence ***a deeper economic slump in Russia is to be blamed on the passive policy of the Central Bank of Russia***. It was precisely the Central Bank's actions that are responsible for the fact that Russia «slumped» deeper into the crisis than many other economies, including the U.S.A. (see figure 5).

[4] It clearly follows from the text above that the money supply is controlled by the central bank indirectly rather than directly, i.e. through management of the money base and by impacting indirectly the value of the multiplier (for example, by changing the reserve requirements).

What was the mechanism of reducing the money base? We have already mentioned above that one of the tools used by the central bank was the open market operations. When the Central Bank of the Russian Federation buys assets for the rubles which it has printed, it increases the money supply. When it sells these assets for rubles, the money supply decreases (the Central Bank, as it were, «buys out» rubles from the market).

It was precisely this that happened, i.e. the Central Bank of the Russian Federation was buying out rubles from the market, by selling foreign exchange. From August 2008[5] through January 2009 inclusive, the Central Bank sold 177.5 bn. dollars and 22.9 bn. Euros (Source: Central Bank of the Russian Federation). Even with the minimal exchange rate of the dollar and the Euro, that meant a withdrawal of more than 5.5 trillion rubles from the economy within a very short period of time.

Table 3.

Change in the Money Base and the Money Supply in the Russian Federation at the peak of the crisis; the change in the Money Supply is fully conditioned by the reduced Money Base.

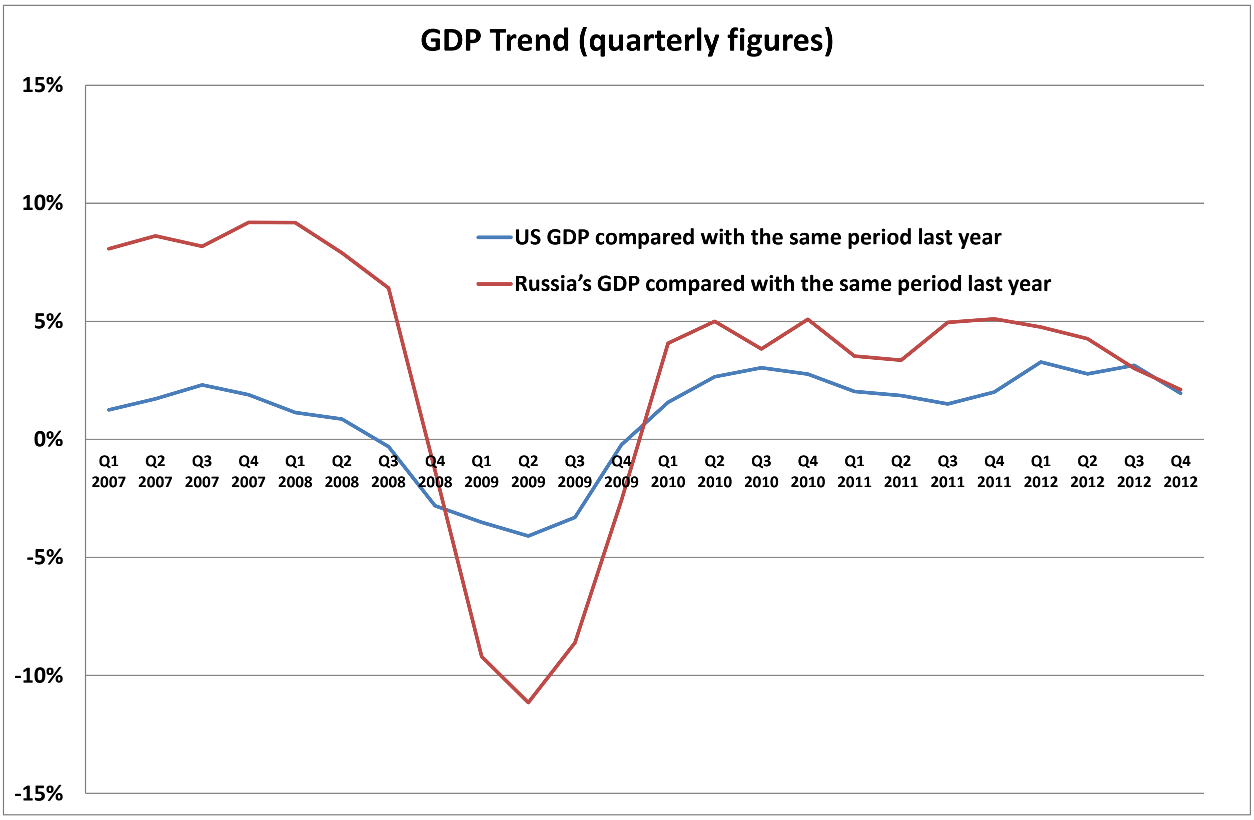
Date	**Money Base**	**Money Supply**
01.08.2008	5 284 bn. Rbls.	13 842 bn. Rbls.
01.02.2009	4 331 bn. Rbls.	11 430 bn. Rbls.
Change	953 bn. Rbls.	2 412 bn. Rbls.
Change, %	-18%	-17.5%

Source: Central Bank of the RF (www.cbr.ru), author's calculations.

The operations by the Central Bank in the foreign exchange market, as it was shown above, withdrew 5.5 trillion. Rbls. from the economy. This means that these operations were indeed the key reason for the money supply to decrease by 2.4 trillion. Rubles.

[5] Data for the period prior to August 2008 are not posted on the web-site of the Central Bank.

Fig.5. The slump in Russia was worse than in the U.S.A.



Sources: www.gks.ru; US FRS.

Conclusion: the cause of the deep slump of the Russian economy was the steps taken by the Central Bank of the Russian Federation

External Influence.

The reader would be right in asking the following question: but there must have been something that forced the Central Bank to sell dollars and euros? And here it would be quite reasonable to detect the influence of the «global financial storm».

The mechanism of influence may be as follows:

1. Foreign holders of ruble assets (shares, bonds, etc.), due to the crisis in their «domestic» markets, found themselves to be short of funds.
2. They started to urgently sell off their ruble assets (hence the collapse in the stock and bond market)
3. Then they started to convert the rubles that they thus obtained to dollars (hence the attack on the Ruble).
4. The Central Bank of the Russian Federation dumped 200 bn. dollars to maintain the Ruble exchange rate (unsuccessful attempt, by the way). In other words, it appears the Central Bank was not at fault, it was the «world financial storm».

Let me make a qualification from the outset that it is always easy to judge the events when they are already over. Maybe, only now it is obvious that such a foreign exchange operation was wrong? Maybe, when the whole world was panic-stricken, the perception of such actions was different?

It may well be so. But, when we compare the steps taken by the Central Bank of the Russian Federation with those which were taken by the US FRS, we still arrive at the following conclusion: the Central Bank of Russia lacked the required competences and the understanding was lacking with respect to the importance that money supply be kept at the necessary level. This lack of understanding is also evidenced by the fact that the Central Bank of Russia raised interest rate at the peak of the crisis.

Out of the steps that could be described as correct ones[6], it would be appropriate to mention the following ones: guarantee for the general public's deposits in the amount of 700 thnd. Rubles (this alleviated the threat of «runs on the banks»); depositing the funds of the Finance Ministry on the accounts of commercial banks (it helped the banks to stand up to the «storm»); loosening the reserve requirements applied to the banks.

The result, despite this «carrot», was still woeful, i.e. there was a very precipitous tumble of the money supply in Russia which culminated in the crisis.

[6] Some of them were initiated by the Government rather than the Central Bank.

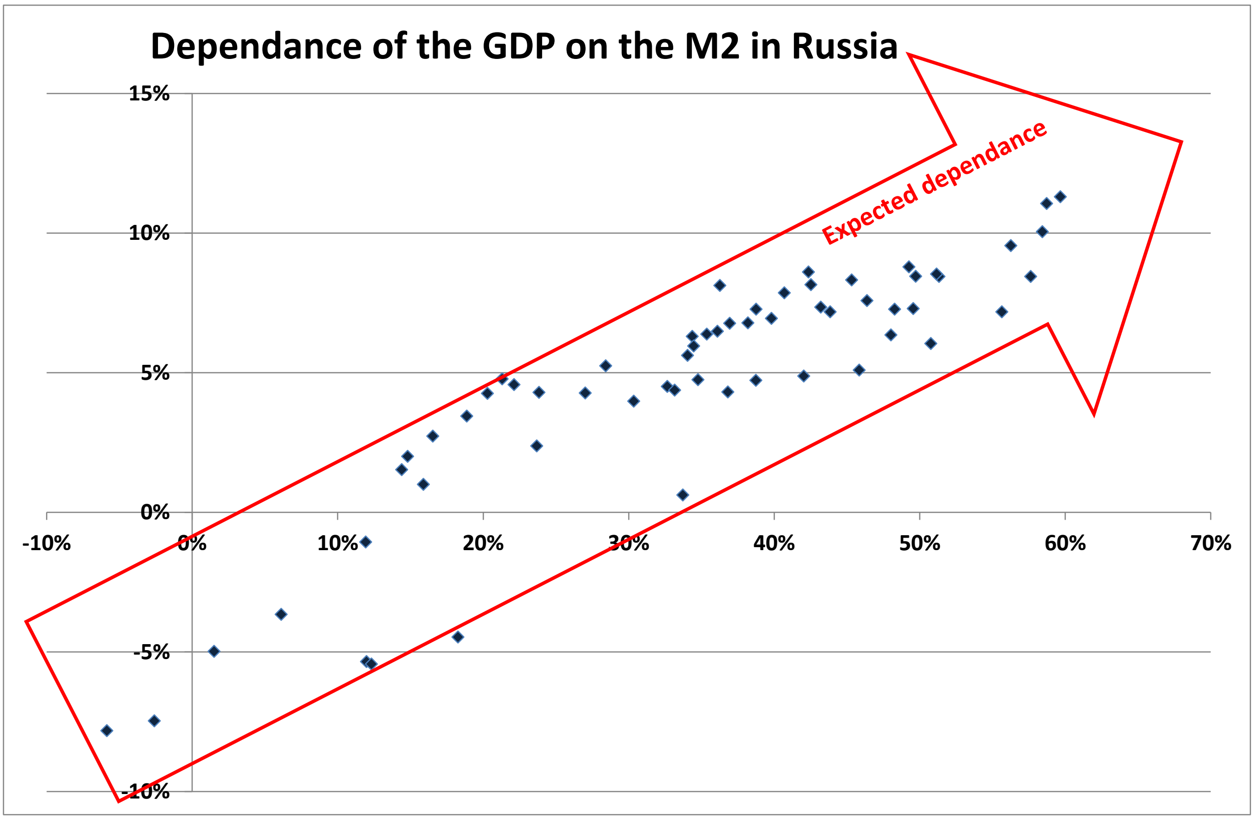
Part 2. Slow-Down of the Economic Growth During 2012-2013 in Russia.

Is it worth reverting to the analysis of the 2008 events? Yes, it is as this will help avoid similar mistakes going forward.

Making the Same Mistakes.

The subject of the money supply is topical today and has a direct bearing on the economic slow-down in Russia which has been unfolding since the end of 2012 and has been continuing to this day.

Fig. 6 Dependence of the GDP on the money supply. Each point corresponds to the quarter of the year. On the horizontal axis is the money supply increment M2 during this particular quarter, on the vertical axis is the GDP growth during this quarter.



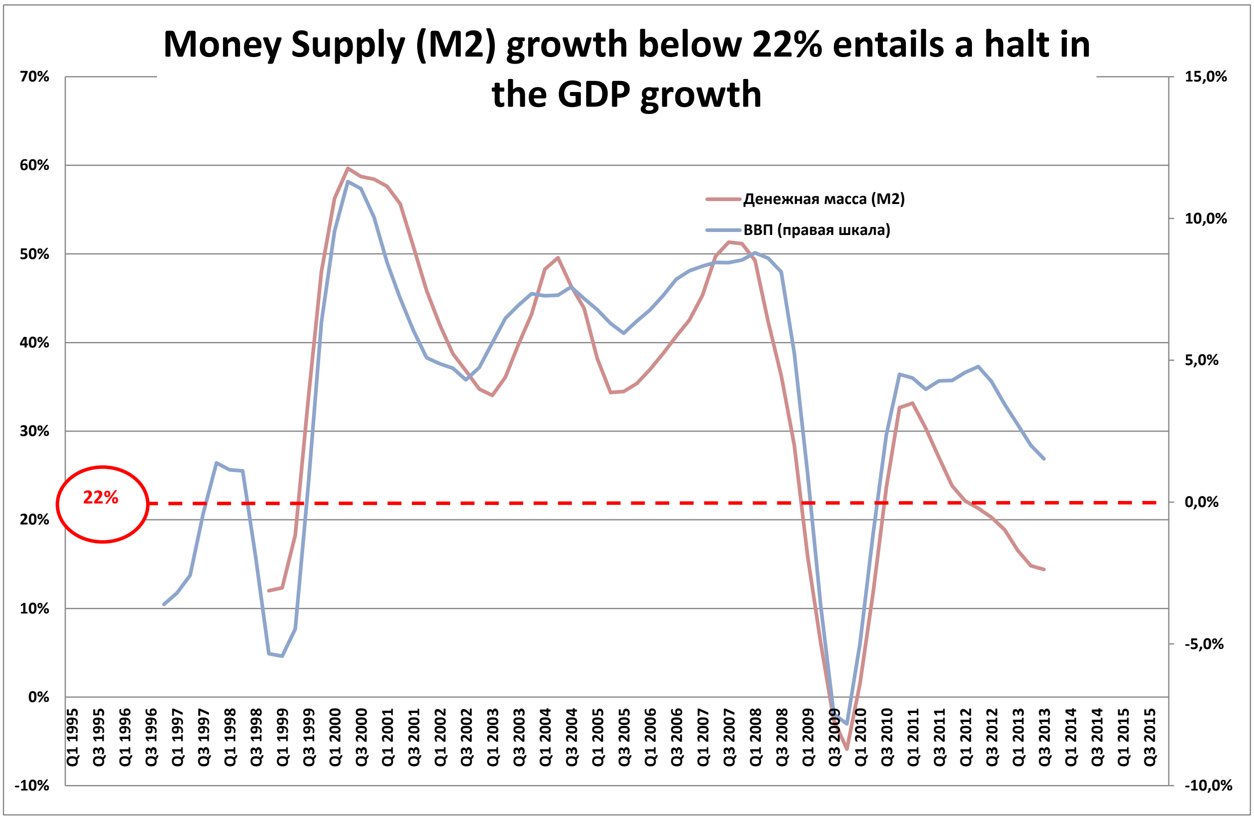
Source: GDP – www.gks.ru , Money Supply - www.cbr.ru, the author's calculations[7].

To understand the dependence of the GDP growth rates on the growth rates of the money supply, it would suffice just to look at the diagram given in **fig.6.**: it shows that throughout the whole history of data since 1997, (the data on the money supply for the earlier period are not available on the web-site of the Central bank), there has been observed a crystal clear inter-dependence of the money supply growth rates on the GDP. If there are any doubts as to which of them is the cause and which is the effect, I advise you to re-read the data given above about the Great Depression and the steps taken by the FRS during the current crisis.

[7] Four-quarterly moving averages are used.

This dependence is such that there has not been a single quarter with a positive growth of the GDP when the money supply was growing at a rate of less than 15%. To ensure there is GDP growth at the level of 5%, the money supply needs to grow at the rate of 35-40%. In figure 7, one can see that the money supply began to slow down in Russia much earlier than the «hot phase» of the crisis. Peaks of the money supply growth rate were reached as early as the 2-nd half of 2007, after which they kept on going down and as at the beginning of the 2-nd half of 2008, it had come down to 31%, which had not happened for 9 years prior to that. See also the red line in figure 4.

Fig.7. Reduced growth rates of the money supply, since the 1-st quarter of 2011, has led to the current slow-down of the Russian economy.



Sources: GDP – www.gks.ru , Money supply - www.cbr.ru, the author's calculations[8].

It can also be surmised that the faster the money supply decline (or the greater the slow-down of its growth) is, the more quickly it responds to the GDP. The GDP responds more slowly to slow decline in the money supply. In figure 7, one can see that beginning from the 1-st quarter of 2011, the Central Bank has been compressing the money supply. This, with a certain lag, is exactly what has been slowing down the GDP growth in Russia.

I will not go into the details about the usefulness of contracting money supply for «curbing» inflation. I will only share two thoughts with you:

[8] Four-quarterly moving averages are used.

1. High growth rates of the GDP, between 1999 and 2008, were accompanied by fairly high level of inflation. That is, inflation does not contradict growth. And if we are to choose between inflation and growth, definitely growth is the preferred choice.
2. Contraction of the money supply during the crisis did not help in any way to reduce inflation.

It can be pointed out, too, that in the USA, with the interest rate of the FRS at 0-0.25%, the target level of inflation is 2%. And the level of inflation which is ***less than*** 2% is perceived to impede the normal development of the economy. *«The Committee recognizes that inflation persistently below its 2 percent objective could pose risks to economic performance, and it is monitoring inflation developments carefully for evidence that inflation will move back toward its objective over the medium term»*[9]. That is, excessively low inflation approximating the refinancing rate is perceived to exercise **a negative influence**.

Recommendations

Make Sure that the Money Supply Has Sufficient Growth Rate.

The recommendations are generally simple. It is necessary that steady growth of the money supply is ensured at the rates no lower than 22% compared to the same period of the previous year (Four quarterly moving average). This will be conducive to the GDP growth (i.e. it will rule out the possibility of the GDP falling down). Growth of the money supply at the level of 35-40% makes sure that the GDP grows at the level of 5%.

What tools will be used for that purpose by the Central Bank - reduction of interest rates or open market operations or some other tools - depends on situation.

Reduce the Multiplier.

Scholars are arguing what exactly happened that resulted in the domination of Europe over the rest of world beginning from 1500. Did it not coincide with the discovery of the sea route to India by the Portuguese and generally with the epoch of geographical discoveries. This undermined the many century prosperity of the Middle East due to transit trade and promoted Europe's growth.

But there is one more theory or hypothesis which can claim to explain this phenomenon. This, as you will have guessed, has something to do with money.

Firstly, there occurred the «quantitative easing» thanks to the inflow of gold and silver from the Spanish colonies in America. This inflow was so great that even brought about inflation (the so-called «price revolution»).

The second factor was the invention of credit money, i.e. in essence the multiplier was invented. It is common knowledge that it was precisely the «invention» of the multiplier that served as the basis for establishing the Bank of England. After the flow of American gold had been depleted, while the developing economy demanded more and more

[9] Source: http://www.federalreserve.gov/newsevents/press/monetary/20131218a.htm

money, the invention of the method of «multiplying» money without increasing their metallic back-up came in very useful. That is, the banks devised a way of extending loans worth 500 coins while having in their coffers only 100 coins.

But even in such a system, money would run out as the time went by. Either new gold mines were required («gold rushes»), or it was necessary that the multiplier be increased. The financial systems which could make more money out of the same amount of gold, were becoming more beneficial for development of countries. That is, if some of them were capable of «increasing money» only 3 times, and others as much as 9 times, the latter gained an advantage. The only trouble was the «depositors' runs on the banks» and the fears of the banks themselves would periodically destroy the multiplier and that would cause crises. And the greater the multiplier was, the tougher the time was after the crisis.

However, the economy grew and gold was short again. The constraint was the «gold standard»

«The adoption of the gold standard became «a matter of honor» … There were few people who understood how vulnerable the system was which rested on such a foundation. The total amount of gold produced in the whole world since times immemorial would barely be enough to fill up a modest two-storey house. The replenishment of this stock was unstable and unpredictable, and it is only by accidental coincidence that the quantity of gold produced could prove to be enough to satisfy the world economy's needs. Therefore, when the mining of new gold was scanty, for example, during the period from the middle until the end of the XIX-th century, when the gold rush in California and Australia was a thing of the past, and gold deposits in South Africa had not been discovered yet, the prices for goods were falling down all over the world» (Ahamed, 2009, back translation from Russian)

One would think that, after the linkage with gold was cancelled during the 1970-s, nothing seemed to be in the USA's way for it to develop a more stable system. But even in the graphs above one can see that the multiplier (and this is exactly what, during each crisis, collapses, and during each boom, it blows up) amounted to approximately 9 in 2008. That is, for each 100 dollars issued by the FRS, the banking system in the USA «generated» 900 dollars as credits.

One of the ideas is to reduce the multiplier and make it absolutely insignificant, such that it could not drastically change the situation in the money market – ***appears to be very correct*** and timely. That would be a sort of «medicine» for financial bubbles.

That would enable the economy to be less dependent on the mood of the financial sector. But the role of the Central Bank, in the meantime, multiplies many times. It is exactly the central bank, by increasing the money base (rather than the private banking sector by increasing the multiplier and, consequently, the risks) that would have to provide a sufficient amount of money for the growing economy. Take a look at figure 3 – the FRS is already following this path.

Create Tools for Regulatory Actions by the Central Bank of the Russian Federation

How can the Russian Central Bank now carry out open market operations? It is the author's belief that there are not enough tools for this. There is, of course, always the foreign exchange market. That is, to increase the money supply, the Central Bank can issue to the market the necessary quantity of rubles while buying up dollars and euros. But as it happens, there are virtually no other assets for such actions by the Central Bank.

Therefore, it appears to be very important to create the government obligations market (similar to U.S. government obligations), which could act as some kind of a buffer in such situations.

Let us make a simple calculation. The U.S. government debt[10] of about 17 trillion. dollars allows the FRS to perform open market operations aimed at ramping up the money base from 0.8 trillion. up to 3.3 trillion., i.e. by 2.5 trillion. dollars. Let us calculate: 2.5 trillion. is approximately 15% of the 17 trillion.

During the 2008 crisis, we were able see that the Central Bank needed to perform open market operations in the amount of approximately 5.5 trillion. Rbls. If we assume this amount to account for 15%, then the necessary market of the Ruble denominated government debt of the Russian Federation should be to the tune of 37 trillion. Rubles.

In case such a market is in existence, the foreign exchange operations (if they are at all necessary) aimed at withdrawing Rubles from the market could be compensated for by buying out a certain amount of the Russian government's debt obligations and returning Rubles to the economy which is so desperate for them.

In the event of this idea being implemented, it is required that some of the government's debt obligations be on the balance sheet of the Central Bank. That would allow it not only «to inject» Rubles into the economy, by buying these obligations, but also, in the case of need, to reduce the Ruble supply, by selling the debt obligations in the market for Rubles, and thus withdrawing these Rubles from the money base.

Conclusion.

This work shows that contraction of the money supply results in the depression of the GDP while insufficiently fast growth rates of the money supply cause the economy to slow down. Proposals are put forward with regard to the possible steps to be taken by the Central bank of the Russian Federation, including the maintenance of the required growth rates of the money supply, reducing the influence of the money multiplier as well as creation of additional tools to carry out the open market operations by the Central Bank.

[10] U.S. debt obligations are not the only but the most important tool for such operations.

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