How to Double Russia’s GDP

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In 2003, President of Russia Vladimir Putin set the task of doubling the GDP. However, this task is yet to be accomplished. Why has not this goal been achieved yet? What needs to be done to double Russia’s GDP? To answer these questions is exactly what this paper sets out to do. We can see that it is quite possible to double the GDP, but to do that, it takes an absolutely different perspective of the monetary policy of the Central Bank of Russia.

Key words: GDP, economic growth, money supply, monetary policy

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The Task of Doubling the GDP

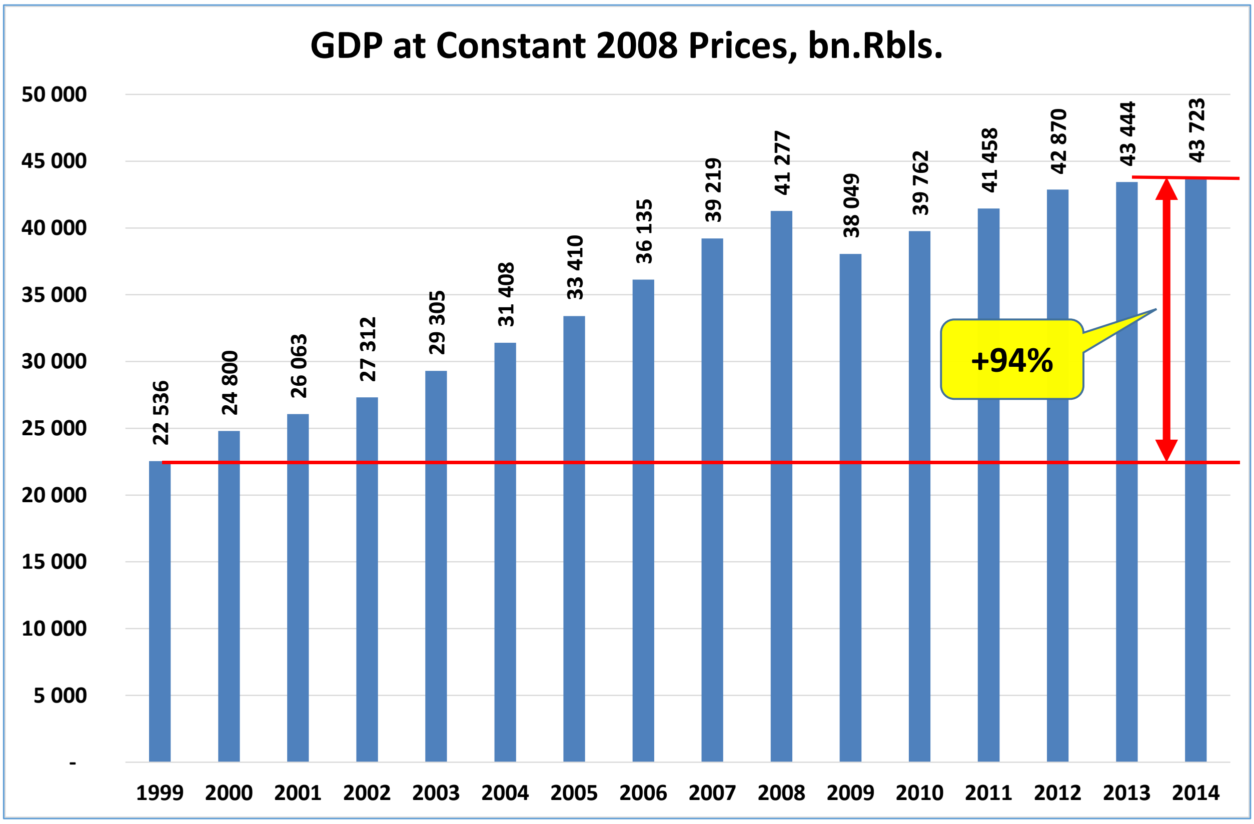
In 2003, President of Russia **Vladimir Putin** set the task of doubling the GDP in 10 years (2003-2013). Somewhat later, given the booming growth rate of the economy (as the average annual growth rates of the GDP then were at the level of 7% and higher), he updated his earlier statement and said that the GDP could be doubled by as early as 2010 (2003-2010). The idea of doubling the GDP became one of the most famous economic statements made by the President.

When, at the beginning of this year (2015), it was recalled that this year marked 15 years since Vladimir Putin was first elected President, in the same breath his idea of doubling the GDP was broached again. Unfortunately, even the people, sympathetic to the President, admitted that the doubling of the GDP had not happened to this date. Thus, **Alexey Kudrin** indicated: "Now I can give the total number - from 2000 through 2014 inclusive - we achieved approximately 94% (GDP increase)". "It is true we did that in 15 years rather than 10, but we are close to doubling the country's GDP" (TASS, 2015)

In other words, Kudrin is saying that the GDP was not doubled (GDP increased by only 94% rather than 100%). In addition, that was done during the period between 2000 and 2014, rather than in the space of 10 years (2003-2013) as the President assigned, let alone the shorter target period (2003-2010).

Kudrin's words are fully borne out by the Rosstat data (***Fig. 1***)

Fig. 1. GDP, in 2014, was 94% up on 1999



Source: Rosstat, http://www.gks.ru/free_doc/new_site/vvp/tab2a.xls . Note: GDP is expected to drop in 2015.

Several questions arise:

- Had it been possible to accomplish the task given by the President?
- Can it be possibly accomplished now?
- What does it take to do that?

It is precisely these questions above that we shall answer below.

What Does Not the GDP Depend On

Oil prices are, more often than not, mentioned among the factors, which influence economic growth in Russia. In addition to them, credit availability, investment volumes, the rule of law and many others are also mentioned. However, for real (economic) policy, recognition of these factors as GDP drivers results in absolutely nothing.

Thus, for example, **oil prices** are established in global markets and depend on Russia's actions only to a marginal extent. Recognition of this factor as the decisive one results in an unconstructive conclusion to the effect that the economic policy of Russian authorities cannot change a thing and that one should just sit idly by and wait until «everything straightens out by its own self».

Besides, there are such periods in the economic history of Russia where oil price increases led to GDP decline rather than growth. Thus, for instance, in the three years between 1994 and 1996, oil prices increased by 70%, whereas the GDP for the same period contracted by 22.5%. There are also reverse examples when the GDP grew by 5.1% against the background of oil prices falling down by 40% (2001).

The same applies to **investments**. It does not make much sense to expect investments to grow under the conditions of decline in demand. In other words, investments do not so much drive GDP growth as are its consequence. Just imagine the owner of a plant, which (i.e. the plant) is only operating at half its capacity due to lack of demand. If you were in such owner's shoes, would you be investing in still another plant? Of course, not.

The need for investments arises when demand exceeds the capabilities (physical and/or moral ones) of the existing facilities. Certain industry leaders at the helm of enterprises make an attempt to invest, disregarding this rule, relying on growth in demand, for example, going forward. But, more often than not, such optimism has a sad ending.

For example, in September 2015, there arose huge problems with the airline "Transaero", which culminated in its takeover by Aeroflot. «The problems with the airline "Transaero" were caused by its excessive fleet of aircraft. This opinion was voiced by Prime Minister **Dmitry Medvedev**», says RBC (2015).

To paraphrase the words of the Prime Minister, because of investments many companies are beset by problems. Currently, in 2015, the situation in Russia is exactly the way it is described above. It does make sense now to invest in certain industries (for example, those where demand has increased as a result of the Ruble decline), unfortunately, they are not capable of changing the overall picture.

Credit availability does not give us the right insight, either. "Transaero" airline mentioned above used to get its aircraft on leasing basis (which could be described as a variety of credit). Therefore, the problems did not happen as a result of lack of credit, they happened as a result of the airline's inability to pay it off. Just as **availability of credit to a private depositor** is not determined by interest rate, it is determined by his ability to repay it. And this ability now, in 2015, is also reduced due to decline in the households' real income.

European Union, Japan, who have virtually zero interest rates on credit facilities, for years (and sometimes, as in Japan, for decades) have been suffering from problems in the economy. During the Great Depression in the USA (1929-1933) interest rates, almost all the time, remained at a very low level. Besides, at the same time, the economy shrank by one third.

Just the same way, the problems in the economy are not explained by «deficiencies in the judicial system», «immaturity of institutions» or similar factors. Otherwise, how are we to explain the fact that Japan has been living through already two «lost» decades, despite its institutions which have not become any worse. The same goes for the problems with the economy of the European Union which cannot be explained by bad institutions (for example, economic problems during 2011-2014), because the European Union can be cited as exemplary, in terms of courts independence or the quality of other institutions.

What Does the GDP Depend On?

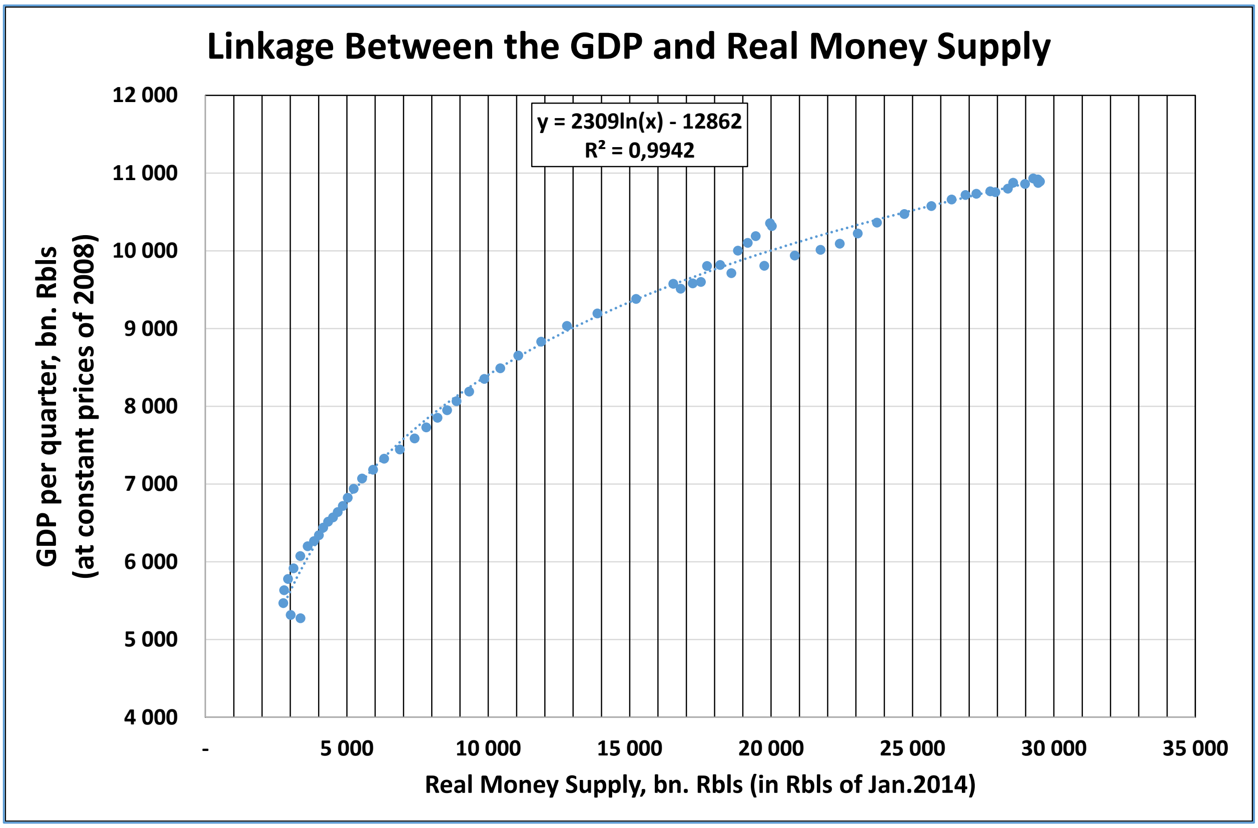
What does economic growth actually depend on? As a matter of fact, everything is rather simple. For economy to grow, the cumulative demand for goods and services has to grow. In order for demand to grow, the amount of money in the economy, money supply has to increase.

The fact that it is exactly the decline in the cumulative demand in the economy that caused the Great Depression was noted by **John Maynard Keynes** (1883-1946), the prominent British economist. A Nobel laureate **Milton Friedman,** in his works, proved later that reduction in money supply (during the Great Depression, it contracted by 38%[2]) could have been the cause responsible for this demand to decrease.

An attempt to establish direct correlation between the GDP and money supply in Russia, yields some fascinating results (***Fig. 2***).

[2] From October 1929 through March 1933

Fig. 2. The GDP in Russia is connected most intimately with the real money supply.

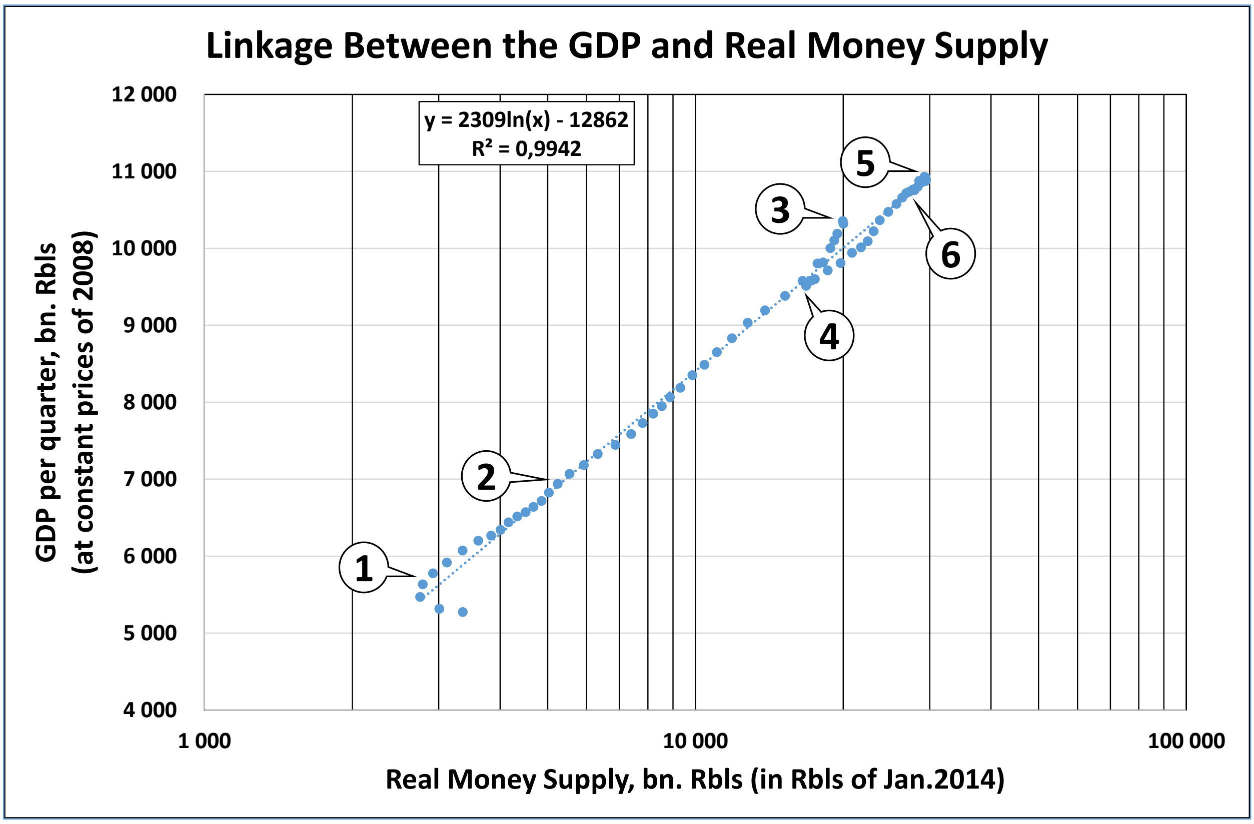


Sources: Central Bank of the RF; Rosstat; author's calculations. Notes: Data from the 1-st quarter of 1999 through the second quarter of 2015 (66 quarters). To eliminate seasonal effect, moving averages have been applied for the 4 quarters.

It is to be seen in the Fig. that each subsequent trillion Rubles' worth of GDP growth requires ever increasing growth in money supply. For example, GDP growth from 6 to 7 trln. Rbls per quarter required that money supply grow approximately by 2 trln Rbls (from 3 to 5 trillion). The next «increment» of the GDP, from 7 to 8 trln. Rbls, occurred after the money supply had grown, this time, by approximately 4 trln. Rbls (from 5 to 9 trillion)

Since the linkage of the indicators is not linear, let us construct a more illustrative graph where real money supply will be measured on the logarithmic scale (***Fig. 3***)

Fig. 3. Linear growth in real GDP is accompanied by exponential growth in real money supply.



Sources: ref. Fig. 2. Note: real money supply scale is logarithmic.

The main points designated in Fig. 3 are described in the Table (Table 1).

Table 1. Description of the key turning points in the trend development of the GDP and money supply in Fig. 3.

Point	Quarter	Real Money Supply, trln. Jan.2014 Rbls.	Real GDP, , trln. Rbls. 2008	Remarks
1	1 qt.2000	2,9	5,8	V.Putin is elected President
2	2 qt.2003	5,5	7,1	V.Putin sets the task of doubling the GDP
3	3 qt.2008	20	10,4	Pre-crisis (2008) GDP maximum
4	4 qt.2009	16,8	9,5	Post-crisis GDP and money supply minimum
5	4 qt.2014	29,3	10,9	Pre-crisis (2015) GDP maximum
6	2 qt.2015	27,9	10,7	Current reduction in the GDP and money supply

Sources: ref. Fig. 2.

The key finding to be inferred from above Fig. 3: the linkage between the real money supply and the GDP is very very close. Indicative of it is the R square, which equals 0.9942 (given in the figure); it is very close to the maximum possible value, i.e. unity.

Let us review the major periods of the economic history of Russia during 2000-2015, basing ourselves on the points designated in the Fig. 3.

From Point 1 Through Point 3. From the moment that Vladimir Putin was elected President on through the 3-rd quarter of 2008, the money supply in Russia had been increasing at a fast pace (in real terms almost 7 times). This had been happening against the background of the weakening Ruble (2000-2002), as well as against the background of its strengthening (2003-2008). The main source for the increased money supply were the open market operations by the Central Bank, i.e. the Central Bank was active in purchasing foreign exchange and the Rubles issued for this purpose found their way into the economy. Instrumental in increasing the Ruble money supply was also the accumulation of budgetary foreign exchange funds (ref., for example, Blinov, 2014). In full conformity with our hypothesis on dependence of the GDP on the real money supply, the GDP had been growing vibrantly during this time.

From Point 3 Through Point 4. From the 4-th quarter of 2008 through the 4-th quarter of 2009, the money supply in Russia dramatically contracted. The principal cause responsible for this monetary contraction (by 16%) was again the operations carried out by the Central Bank, only this time they involved sale of foreign exchange rather than purchase thereof. To protect the Ruble exchange rate, the Central Bank, within a space of 5 months, spent more than 200 bn. US dollars, having reduced the Ruble money supply as a result of these operations by 5.5 trln. Rbls. This was the main driving force behind the reduction in the money supply. Milton Friedman was the one who said that reductions in money supply of such a scale would lead to crises. This is exactly what happened in Russia, the GDP for this period diminished.

From Point 4 Through Point 5. During 2010-2014, the real money supply was growing again however its growth rate, beginning from 2011, had been diminishing invariably. The whole economy was behaving in the same fashion: the GDP had been growing, but its growth rates had been slowing down, making up only 0.6% based on the 2014 results. At first, the growth rate of the money supply was on the decline due to changes in the budget policy of the Finance Ministry (ref. Blinov, 2015 b), then the operations carried out by the Central Bank in the open market played their role as it had already happened back in 2008.

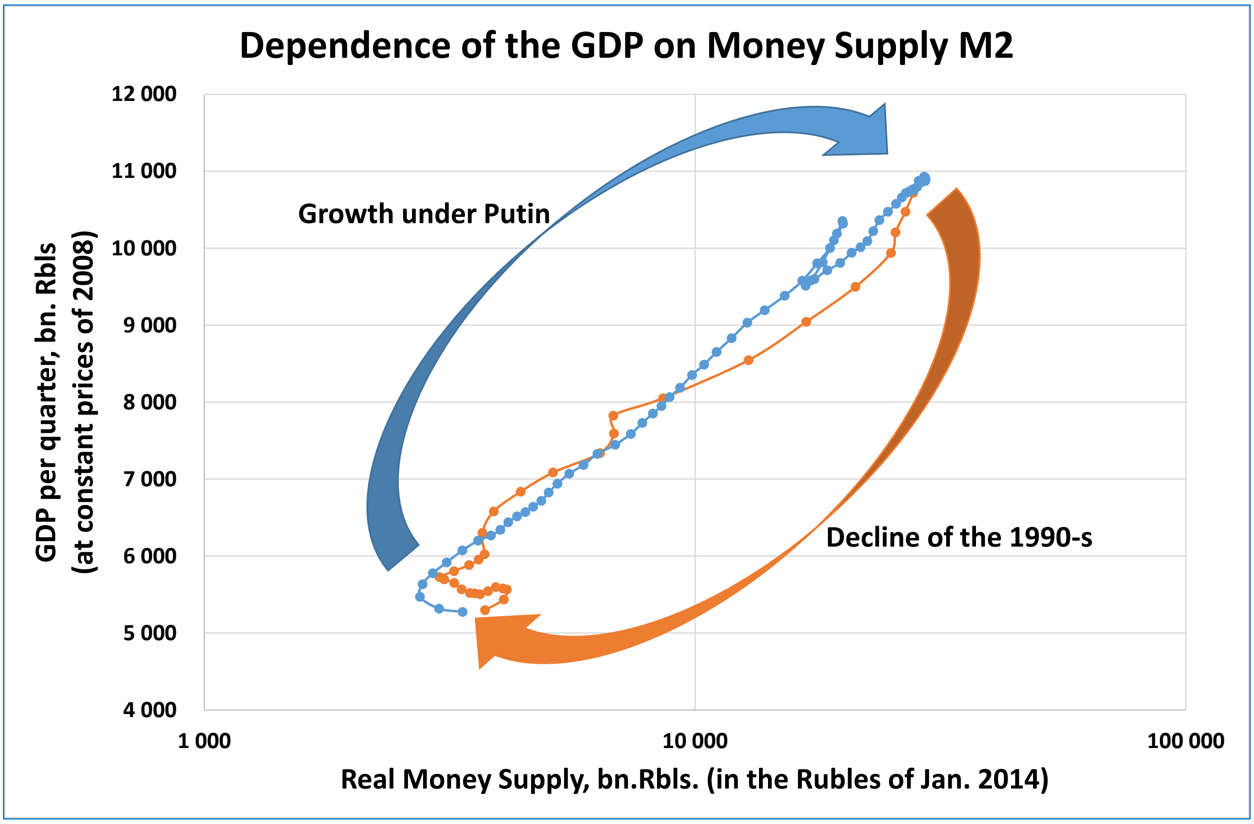
From Point 5 Through Point 6. In 2015, the real money supply started to shrink again (the first signs of its shrinkage appeared as early as June 2014). And, in full conformity with the dependence that we have established, based on the 2015 results, decline in the GDP is to be expected.

To sum up, all declines in the GDP, throughout the above mentioned period, have taken place (one of them is underway now) against the backdrop of reduction in real money supply. And, vice versa, when money supply built up, that always ended in GDP growth.

Checking the Hypothesis Using the 1990-s Data

If we were to agree with the hypothesis that the GDP depends on real money supply, that would then have to be corroborated by previous history, i.e. during the notorious 1990-s. And this assumption is fully confirmed (***Fig. 4***).

Fig. 4. Reduction in real money supply during 1991-1998 (the orange line) caused the GDP to contract.



Sources: Rosstat, Central Bank, Author's calculations. Orange line (top-bottom) – 1991-1998, Blue line (bottom-up) – 1999-2015.

One can see in the graph that (in generalized terms) all the post-Soviet economic history looks like 2 periods: «decline of the 1990-s» and «growth under Putin».

The 1999-2015 period is shown with the blue line just as in the previous Fig. 3, while the 1991-1998 period is shown with the orange line. Direction of the movement is shown with arrows of the corresponding color. And though the orange line does not have such a strict, almost linear shape as the blue one, the linkage between the decline in the GDP and the decline in money supply is fully confirmed during 1991-1998 as well (R-square=0.955).

The main reason for reduction in real money supply was inflation. Thus, in 1992, due to 26-fold price increases, real money supply decreased by 72%, though in nominal terms it increased approximately 7 times. In its turn, the pivotal reason for inflation during that year was incorrect policy with respect to the general public's savings made during the Soviet times (ref. Blinov, 2015)

Money is the Key Factor of the GDP Growth

The dependence identified by us above allows the questions posed at the very beginning of the article to be answered. Namely:

- Why was not the doubling of the GDP achieved?
- What does it take to achieve this goal?

Let us begin with the answer to the question as to why the doubling of the GDP did not come off which had been designated as the target in 2003 by President Putin. The dependence established by us whereby the GDP is a function of money supply allows us to answer the question as follows: **the GDP did not double because the real money supply had not reached the values necessary for that.** And responsible for it was (and still is) the monetary and credit policy which resulted in contraction of the real money supply during 2008-2009 (we mentioned above the Central Bank's withdrawal of 5.5 trln. Rubles during interventions) and which causes it to contract at the present time (the time that these lines are being written is September 2015).

Now let us try (basing ourselves on specific numbers) to address the second question: what does it take for the GDP to double.

The formula set out in Fig. 3[3] will help us with this. Use of this formula yields the following results.

1. **The Doubling of the GDP in 2000.** If we are to assume as initial reference point the quarterly GDP of *6 trln. Rbls.* (as was the case in the year of Vladimir Putin's election as President), then in order to double that (that is for the Gross Domestic Product to reach the quarterly value of *12 trln. Rubles*) it would be required that the money supply be equal to ***50 trln. Rubles***. In that case, the GDP of Russia will approximately reach that of Germany (in terms of PPP).
2. **The Doubling of the GDP in 2003.** If the initial reference point is assumed to be the average quarterly GDP of *7 trln. Rbls.* (this was during the year when

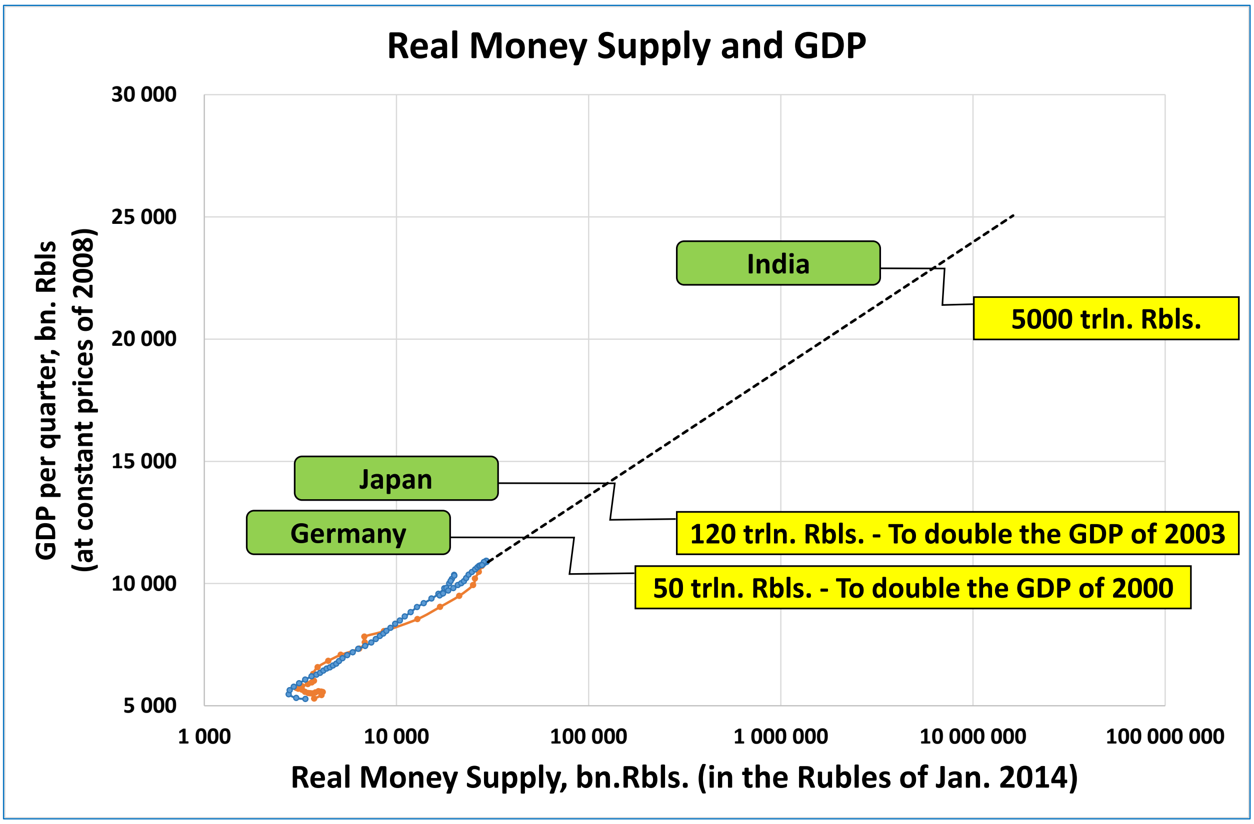
[3] Y=2309ln(X)-12862, where Y – quarterly GDP at 2008 constant prices (bn.Rbls.), while X is the real money supply required to achieve that GDP (in the Rubles of January 2010, bn. Rbls.)

the task to double the GDP was declared), then in order to double this value (i.e. for the quarterly GDP to achieve the value of *14 trln. Rubles*) the monetary supply needs to be raised to as much as ***120 trln. Rubles***. In this case, the GDP of Russia would approximately equal that of Japan (in terms of PPP).

For these numbers to be properly perceived, one has to know the current values of real money supply. After the maximum of 31.4 trln. Rubles, reached in January 2014, by August 2015, real money supply had declined to 26.8 trln.Rbls.[4] (by 15%! – this is the cause of the GDP decline). This is precisely what our reference point is.

What happens is that for the GDP of 2000 to double, the real money supply has to be built up *1.87 times* (50 trln./26.8 trln). For the GDP of 2003 to double, the real money supply has to be built up *4.5 times* (120 trln./26.8 trln.). These values are given in ***Fig. 5***.

Fig. 5. To double the GDP of 2003, the real money supply is to be built up 4.5 times



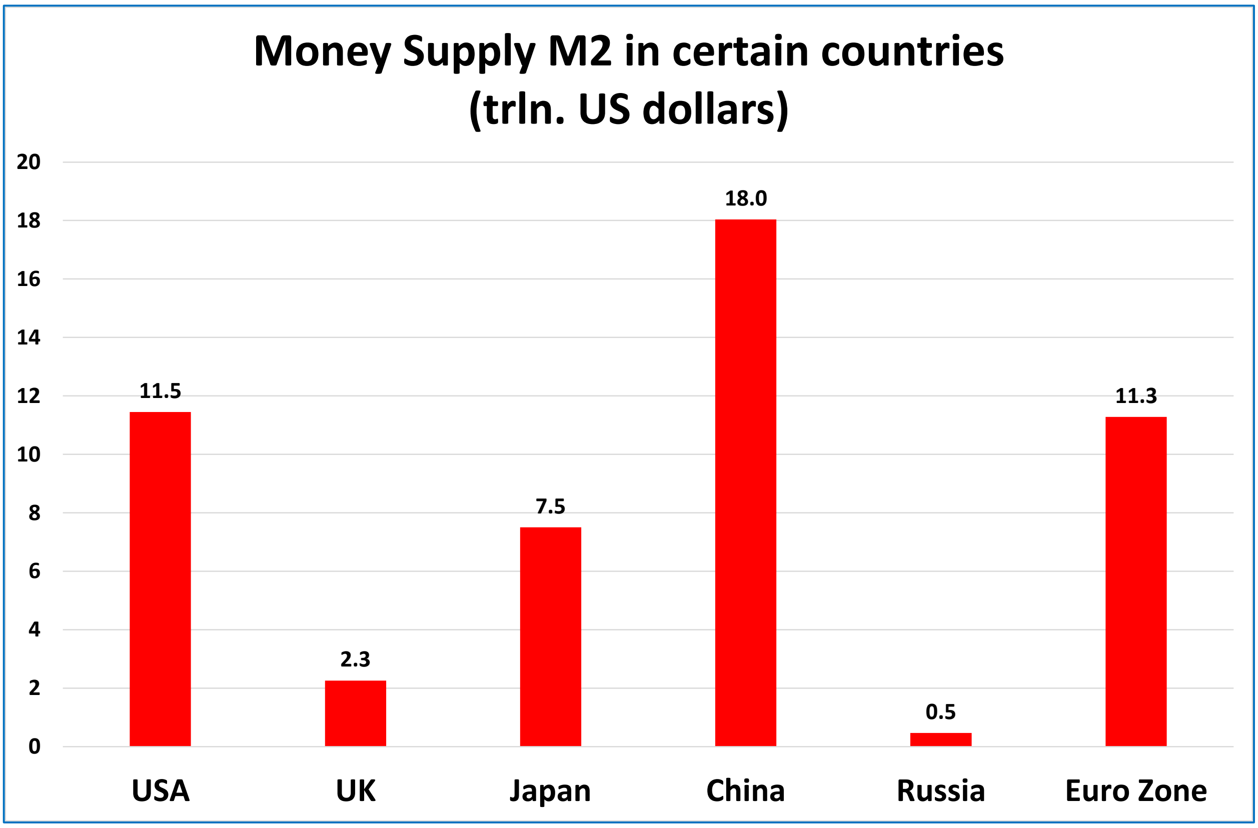
Sources: this is based on Fig. 4 data, but in a different scale. Note: Black dotted line stands for the values calculated per the formula ***Y=2309ln(X)-12862***, where Y is quarterly GDP at constant 2008 prices (bn.Rbls.), while X is real money supply necessary for this GDP to be reached (in the Rubles of Jan.2014, bn. Rbls.)

4 Nominally, the money supply increased up to 32.7 trln. Rbls. While the real value (in the Rubles of January 2014) is lower as it includes inflation.

Such growth of money supply seems to be a figment of imagination. However, there have already been periods of rapid money supply growth. Thus, if the 1-st quarter of 2000 is assumed as the reference point (money supply is 2.9 bn. Rbls.), then its doubling had been achieved by the 3-rd quarter of 2003. A 4.5 fold increase took place in 2006. As can be seen from Table 1, the real money supply increased 10 times[5] during the period between the 1-st quarter of 2000 and the 4-th quarter of 2014 (please note that the GDP, during this period, did not even double). In other words, given Russia's experience, real money supply increasing 4.5 times does not look unrealistic at all.

There is one more reason due to which growth of money supply multiple times does not look like a fantasy. If we look at the Russian money supply compared to the money supplies of other countries (***Fig. 6***), it strikes one's eye immediately that the money supplies of the other countries dwarf that of Russia.

Fig. 6. The money supply in Russia is dwarfed by that of other countries.



Source: data of Central Banks, author's calculations at IMF special borrowing rights rates.

It is obvious that to accomplish the other task aimed at turning Moscow into an international financial center, it is also necessary to increase the money supply in Russia.

[5] Nominal money supply, in the meantime, increased 46 times, from 0.7 trln. Rbls in January 2000 up to 32 trln. Rubles in December 2014.

Conclusions

The GDP of 2003 can be doubled and, in this case, Russia will approximate Japan in terms of the GDP indicator (PPP).

For such a doubling, the real money supply in Russia must go up 4.5 times (from 26.8 up to 120 trln. constant Rubles of January 2014).

The ability of the Bank of Russia to step up the real (i.e. without inflation) money supply becomes the key factor of Russia's economic competitiveness.

The range of tools used by the Central Bank have to be assessed from the point of view of their influence on the trend development of the money supply. Thus, for example, foreign exchange interventions with a view to combating the weakening of the Ruble have to be eliminated from the Central Bank's arsenal of tools as they cause the money supply to be reduced. And, on the contrary, Ruble interventions in the foreign exchange market (to fight off «strengthening waves» of the Ruble) at the same time will both stabilize the foreign exchange market and increase the money supply.

A number of ideas regarding methods of stepping up the real money supply are contained in the author's articles: «Causes of Decline and Growth Opportunities» (Blinov, 2013), «Monetary Policy of Quantitative Easing at the Central Bank's High Interest Rates» (Blinov, 2014 b), «Economic Barometer for the President» (Blinov, 2015 c) as well as the article already mentioned above «Current Crisis, Its Causes and Necessary Measures».

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