

## Troubled Prospects of the Russian Economy Development: Forecast Using the Dynamic Input-Output Model

Topic: Dynamic Systems

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Forecasting results for Russian economy development in 2015 – 2017 are analyzed in the paper. Econometric macro models and dynamic input – output model have been used in the projection calculations. Three main variants of Russian economy development are analyzed in the paper – basic, optimistic and pessimistic.

Main assumptions of the basic variant

1. In 2015, the average price of Urals oil is 57 \$US per barrel. Starting from the second quarter of 2015 will begin a smooth increase in oil prices: averaged value of oil prices in the second quarter will be 54 \$US per barrel, in the third quarter - 58 \$US per barrel and in the fourth quarter - 67 \$US per barrel. In 2016 -2017 will continue smooth increase in oil prices: in 2016 - up to 80 \$US per barrel in the fourth quarter of 2016 and in 2017 – up to 88 \$US per barrel in the fourth quarter of 2017.

2. The Central Bank of Russia since 2015, conducts more adequate monetary policy, contributing to the reduction of interest rates in the economy and stimulate economic growth. Monetary aggregate M2 in real terms in 2015 increased by approximately 10%. In 2016 and in 2017 the growth rate of real M2 is equal to 21.6% and 25%, respectively.

3. Will not occur growth of the real exchange rate of the US dollar against the ruble in 2015-2017. In other words, the average nominal exchange rate increases by about the same rate as the GDP deflator.

GDP growth rate for basic version is 95,5 % in 2015, 98,3 % in 2016 and 102,6 in 2017. Growth rate for the total period 2015-2017 is 96,3 %.

Main assumptions of the pessimistic variant

1. The price of oil on world markets continued to decline in the first quarter of 2015. As a result, the average price of Urals crude oil per barrel in the first half of 2015 is 40 \$US per barrel, while in the second half of 45 \$US per barrel. The next two years will be an insignificant growth in oil prices: an average of 10% per year (the average quarterly price of the fourth quarter to average quarterly price of the fourth quarter of the previous year). The average price of Urals crude oil in 2016 will be 48 \$US per barrel and in 2017 53 \$US per barrel.

2. The Central Bank of Russia continue to maintain a tight monetary policy and the real money supply M2 in 2015 does not increase, that is the nominal money supply growth rate approximately equal to the value of the GDP deflator. In 2016-2017 real money supply M2 increased by about 10% annually.

3. The Government of Russia, due to budget constraints holds a passive fiscal policy and not implements large-scale infrastructure projects or suspend their execution.

For three years the GDP of Russia's economy may be reduced by 25%.

It is an interesting pessimistic variant of the forecast in which the Central Bank uses an active monetary policy to stimulate economic growth by substantially increasing the real money supply (by 25% annually in 2015 - 2017). In this case, in the same oil prices fall in GDP over three years will amount to only 9%.

Main assumptions of the optimistic variant

1. In the first quarter of 2015, oil prices are on the average level of average prices in January this year - about 49 \$US per barrel. Starting from the second quarter of 2015 the average quarterly price of Urals oil will be 65 \$US per barrel, which corresponds to the forecast of the International Energy

Agency at the end of 2015. Since 2016 the price of Urals oil begin to grow at the same rate as that of the basic variant: in 2016 by 19% and in 2017 by 10%. As a result, the average price of a barrel of Urals in 2016 will cost 73 \$US per barrel and in 2017 - 82 \$US per barrel. According to the dynamics of oil prices optimistic scenario differs from the basic due to faster growth in oil prices in 2015. As a result, the average oil price in 2015 in basic variant will be 56 \$US per barrel and in the optimistic scenario - 61 \$US per barrel.

2. The Central Bank of Russia moving away from inflation targeting and, following the example of the US Federal Reserve, as one of the main goals declares increase employment and hence economic growth. Real money supply grows at a faster rate compared to the base variant: in 2015 2017 by 25% annually.

3. The Russian government has consistently pursued an active fiscal policy, implementing large-scale infrastructure projects at the expense of the Reserve Fund and National Welfare Fund and a moderate increase in public debt. It has a stimulating effect on economic growth.

GDP growth rate for optimistic version is 95,8 % in 2015, 98,9 % in 2016 and 103,7 in 2017. Growth rate for the total period 2015-2017 is 98,3 %.

For each variant for the period 2015 - 2017 years forecast calculations were carried out using a dynamic input-output model of the Russian economy and analyzed the results, which will be presented in the full version of the paper.