# Факторы, влияющие на курс рубля

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**Аннотация**

В статье представлены результаты проверки нескольких выдвинутых гипотез о влияние таких факторов как цена на нефть, цена на золото, инфляция, баланса платежей и уровня золотовалютного резерва Центр Банка на курс рубля. Оценки влияния факторов произведена с использованием параметров дисперсионного анализа. Результаты анализа могут быть использованы в целях стабилизации курса рубля на уровне государства и предсказания курса рубля на основании изменения вышеперечисленных факторов.

**Ключевые слова**: курс рубля, инфляция, цена на золото, цена на нефть, баланс платежей, золотовалютный резервы, дисперсионный анализ.

# Factors that affect the exchange rate of ruble

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**Abstract**

The article presents the results of testing several hypotheses of the impact of factors such as the price of oil, the price of gold, inflation, balance of payments and the level of gold and foreign exchange reserves of Center Bank on the exchange rate of ruble. The influence of factors was estimated using the ANOVA analysis. The results of the analysis can be used to stabilize the ruble

exchange rate at the state level and to predict the ruble exchange rate on the basis of changes in the mentioned above factors.

**Keywords**: ruble exchange rate, inflation, gold price, oil price, balance of payments, gold and foreign exchange reserves, ANOVA analysis.

**Introduction**

The size of the exchange rate and its change-have a very large impact on the economy of any country that is involved in international trade. The exchange rate allows us to estimate the value of our national goods in foreign money, and the prices of foreign goods to translate into the national currency. Exchange rates have a significant impact on economic development. The depreciation of the currency encourages the development of export-oriented industries, as well as facilitates the situation of import-substituting industries. Currency appreciation, on the contrary, has a negative impact on the development of export-oriented industries and on the development of enterprises facing competition from foreigners in the domestic market, as imported goods become cheaper. Consumers benefit from the latter. Exchange rates have an impact on capital movements. The depreciation of the exchange rate encourages foreign investment and discourages capital exports from the country, as foreign investors are able to acquire more value with the same amount of capital in their currency as before the depreciation, and the ability to acquire property abroad from domestic exporters is reduced accordingly. The currency appreciation works in a diametrically opposite direction-it stimulates the export of capital from the country and limits the inflow of foreign investments. That is why it is very important to understand what the exchange rate of ruble depends on and how much it effects the prices of goods and services in the country.

In 2014 Central Bank of Russia lowered foreign exchange interventions, allowing them to enter the market through the renewal of investments in foreign currency in case of threats to the financial stability of Russia.

The change in the exchange rate policy led to the fact that the ruble exchange rate will be shaped by market factors. This in turn should lead to price stability, the rapid adaptation of the Russian economy to external changes and an increase in its resistance to negative shocks.

On the figure 1 there can be seen a sharp ruble depreciation against dollar starting in December 2014. In the further work the factors that shaped such increase in exchange rate will be analyzed.

**Method of Analysis**

Firstly, it is necessary to understand what course of ruble depends on the most. The work gives an overview of the various determinants of the exchange rate movements in Russia. Out of the multiple factors affecting the exchange rate of Ruble against Dollar value; Gold Prices, Oil Prices,

Level of inflation, and balance of payments on the exchange rate has been studied using Regression analysis. The statistical data was gathered from the web portal of Central Bank of Russian Federation and the web portal of Federal State Statistics Service. All the statistical data can be seen in the table 5 – appendix 1.

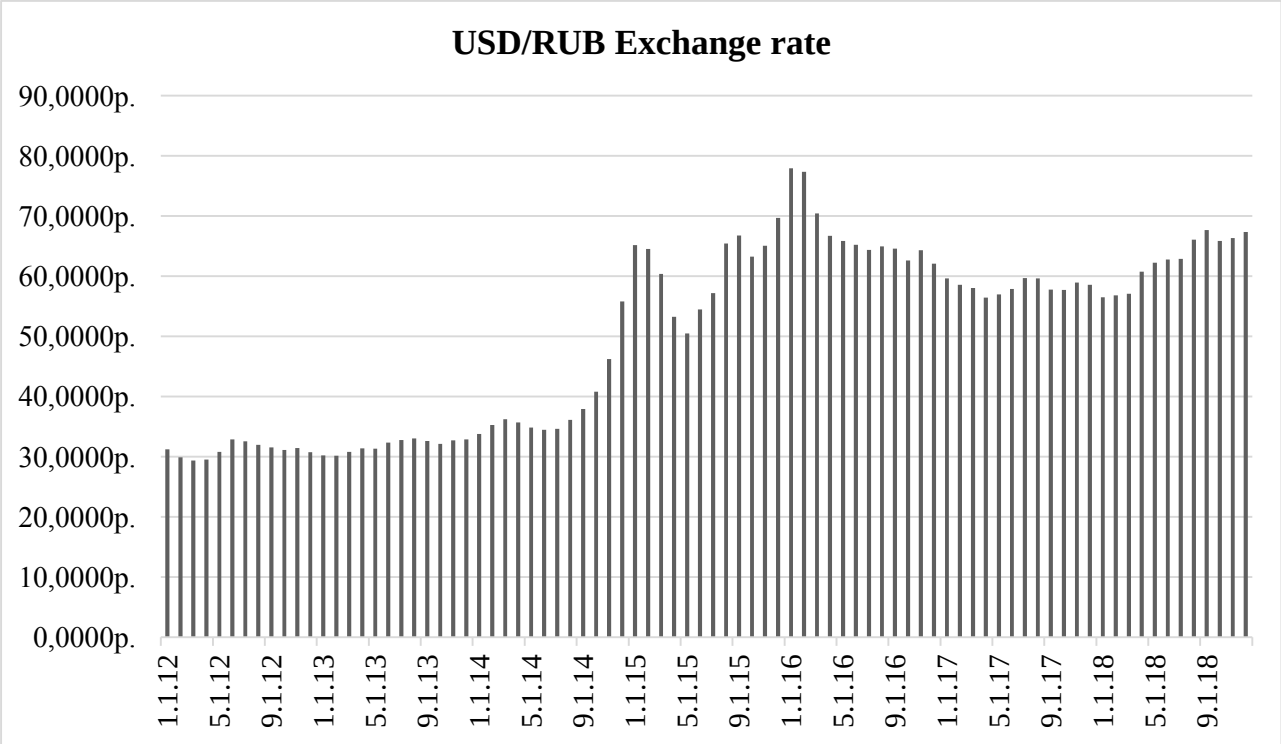


**Fig. 1. USD/RUB exchange rate [5]**

**Determinants of exchange rate**

Multiple factors impact Exchange rates. The present study aims to understand the correlation between selected macro-economic factors and exchange rate.

**Inflation**

The exchange rate of ruble as any exchange rate depends on the inflation. Russia has experienced increasing inflation thus Central Bank is using key rate to control the inflation level in the country. When Central Bank rises the key rate inflation falls and it works the other way around, by lowering the key rate inflation level grows. The result of the increase of the key rate is a change in the direction of increasing the rate on deposits and loans for individual and businesses, including mortgage loans, which are provided by banks. It consequences in purchasing power fall and the inflation dynamics slows down. If the country's economy is in a state of stagnation, production and business activity declines and because of this deflation begins, a decision is made to reduce the key rate. It reduces the cost of bank credit, which, in turn, stimulates lending to the real economy.

In 2014 at the night from 15$^{th}$ to 16$^{th}$ of December the key rate was increased by Central Bank by 70% from 10,5% to 17%. Such decision took place due to the need to limit the devaluation

and inflation risks that have significantly increased. This is the sharpest one-time increase in the key rate since 1998 [3].

On the figure 2 can be seen The Purchasing Power Parity theory suggest that the exchange rates of two currencies will be adjusted in such a way to make them at par with the purchasing power of each other. When the rate of inflation is relatively high in Russia, the competitiveness and ability to trade on global markets will reduce. This in turn will reduce the demand of Russian currency in the international markets, thus affecting the exchange rate adversely. According to this theory, lower inflation suggests a stronger exchange rate. Looking at the graph there is a clear dependence to this factor. On the graph 2 it is seen that USD/RUB exchange rate increases when inflation increases meaning that ruble depreciates to the dollar at the time of high inflation levels.

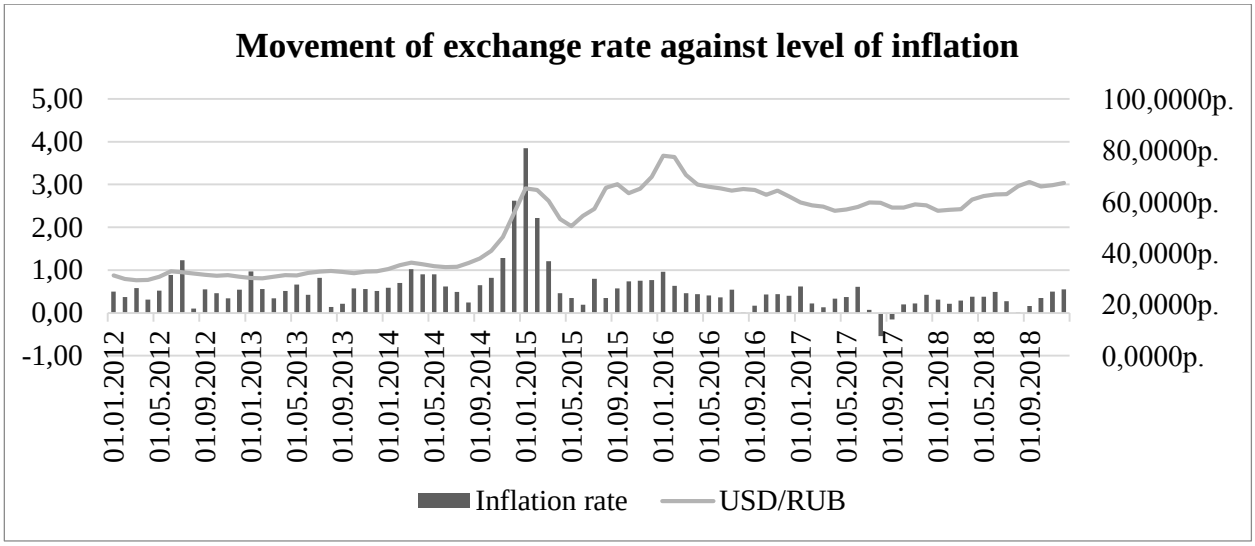


**Fig. 2. Movement of exchange rate against level of inflation [5]**

**Gross domestic product**

GDP is the final value of goods and services produced within the geographic boundaries of a country during a specified period of time, normally a year. GDP is an important indicator of the economic performance of a country. A blooming economy will have relatively high levels of consumer spending and demand. Countries with strong economic growth will be able to attract foreign investments which in turn will improve the valuation of the home currency. On the other hand, investors tend to lose confidence in the currencies of countries that witness slow economic growth. On the figure 3 there is no clear dependence between those two factors. Usually, when GDP grows the currency appreciates to dollar, but the graph 3 shows that there are some other factors that effect the exchange rate stronger.

**Balance of payments**

The balance of payments is a statement of all transactions made between entities in one country and the rest of the world over a defined period of time. Economic policies are often targeted at specific objectives that, in turn, impact the balance of payments. For example,

one country might adopt policies specifically designed to attract foreign investment in a particular sector, while another might attempt to keep its currency at an artificially low level in order to stimulate exports and build up its currency reserves. The impact of these policies is ultimately captured in the balance of payments data. A change in a country's balance of payments can cause fluctuations in the exchange rate between it's currency and foreign currencies. On figure 4 it can be seen that balance of payments, however, does not impact the exchange rate in a fixed-rate system because central banks adjust currency flows to offset the international exchange of funds.

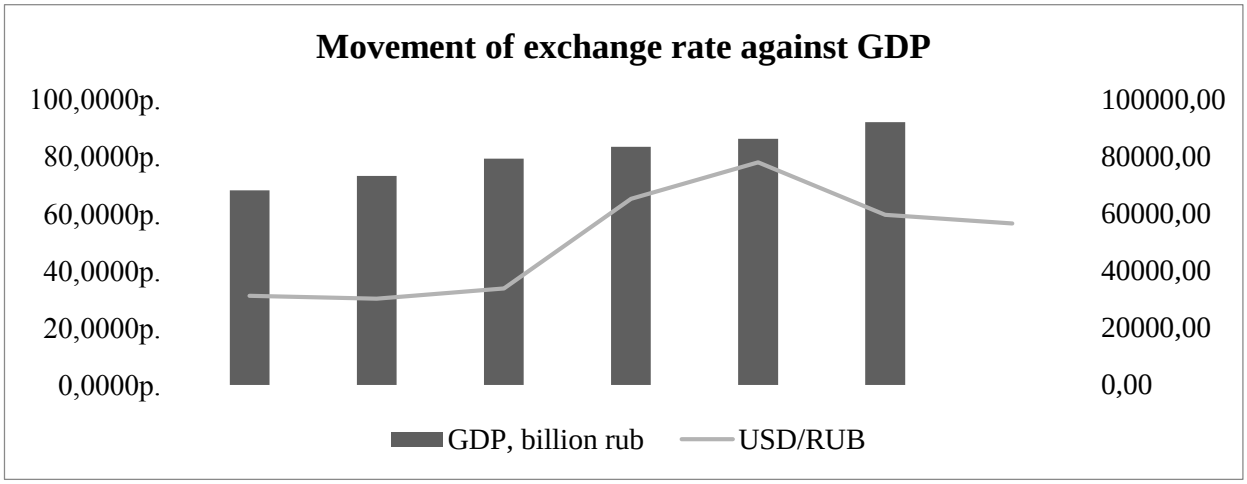


**Fig. 3. Movement of exchange rate against level of inflation [5]**

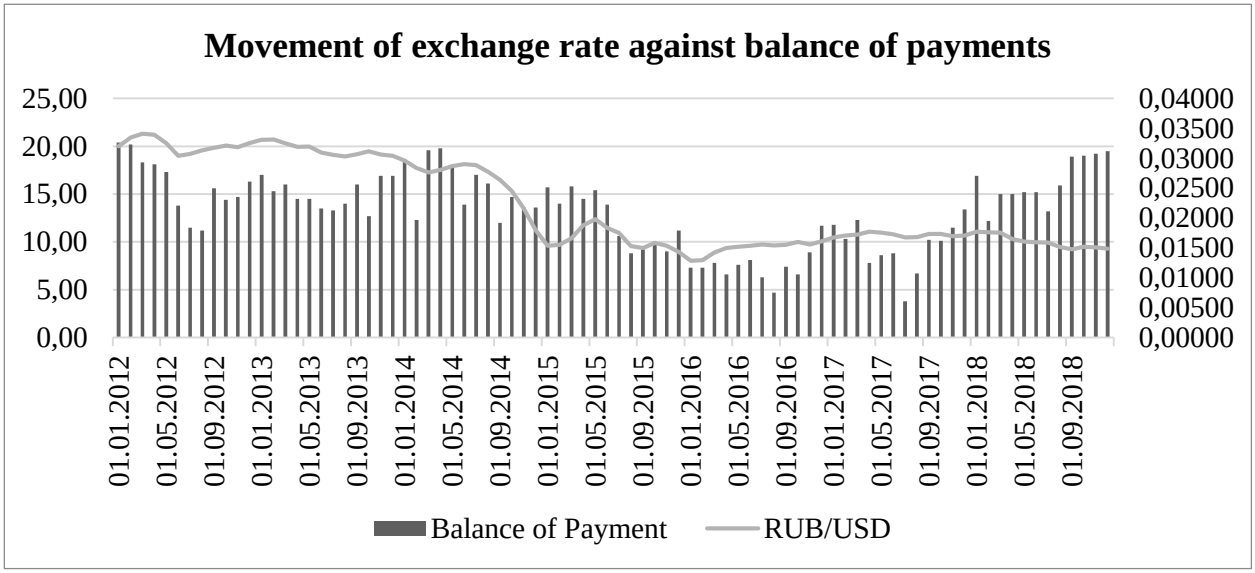


**Fig. 4. Movement of exchange rate against level of inflation [5]**

**Foreign reserve**

The term "gold and foreign exchange reserve" is usually understood as the total amount of highly liquid assets. Foreign reserve includes only gold and foreign currencies of different types, government securities and debt issued under the control of issuing States. Most often, gold and foreign exchange reserves are used for interventions. Central Bank at the expense of these reserves buys the surplus of the national currency on the market and reduces the demand for foreign

currency making the currency appreciate against others. However, if the strengthening of the national currency is undesirable the Central Bank, on the contrary, releases the national currency to the market and at the same time buys the surplus of foreign currency, increasing its own gold and foreign exchange reserves. However, it should be noted that in developed economies, the use of foreign exchange reserves is usually considered in the last case. In these countries, Central banks rarely directly affect the exchange rate. It can be seen on the figure 5 that in 2014 even though the reserve was used to support the exchange rate of ruble it still depreciated.

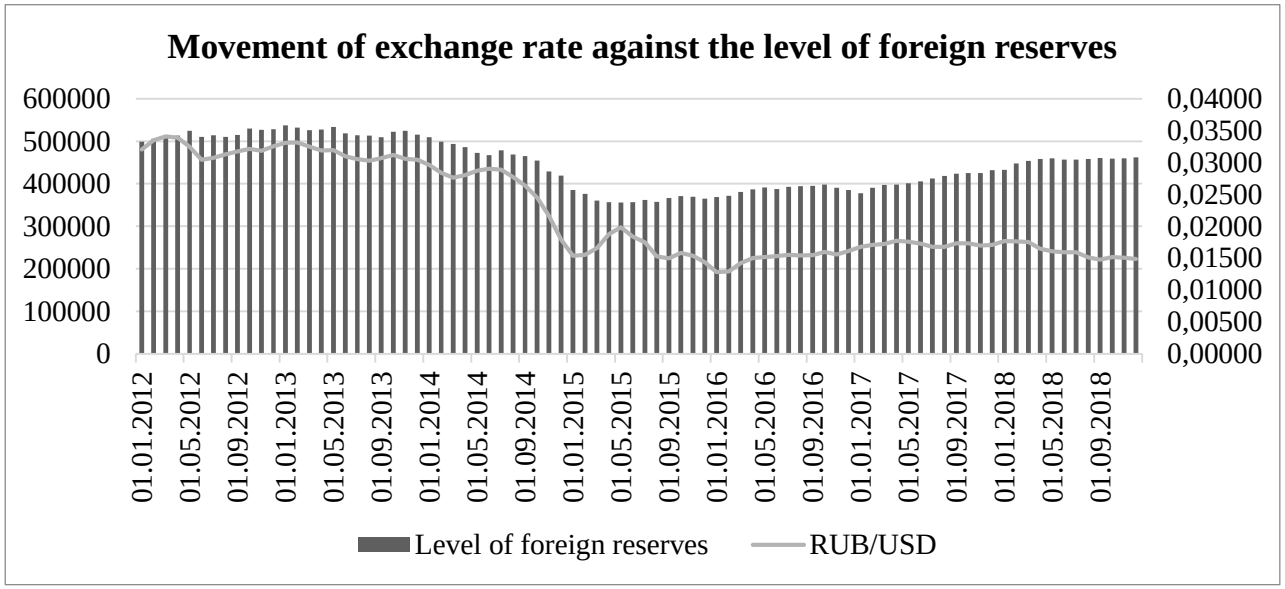


**Fig. 5. Movement of exchange rate against level of inflation [5]**

**Commodity prices**

Imports of oil, processed oil products, gold, and silver and other metals for more than 70% of Russia's total exports. Russia is a leading country in the export of oil. High oil prices, gold prices other metals increase Russia's GDP and make a country more investment oriented. The higher oil and metals prices causes appreciation of the ruble against the dollar. Thus higher prices of exported goods and commodities are favourable for the ruble.

**Gold Prices**

On figure 6 it can be seen that that ruble depreciates when the price of gold falls.

**Oil Prices**

On the graph of movement of exchange rate against oil prices (figure 7) there can be see a clear correlation and dependency especially till the 2016. Such tendency is understandable since the export of oil is 60% of Russia's export. From 2016 ruble does not correspond so clearly to the oil prices. It means that there is some other factors that affect ruble.

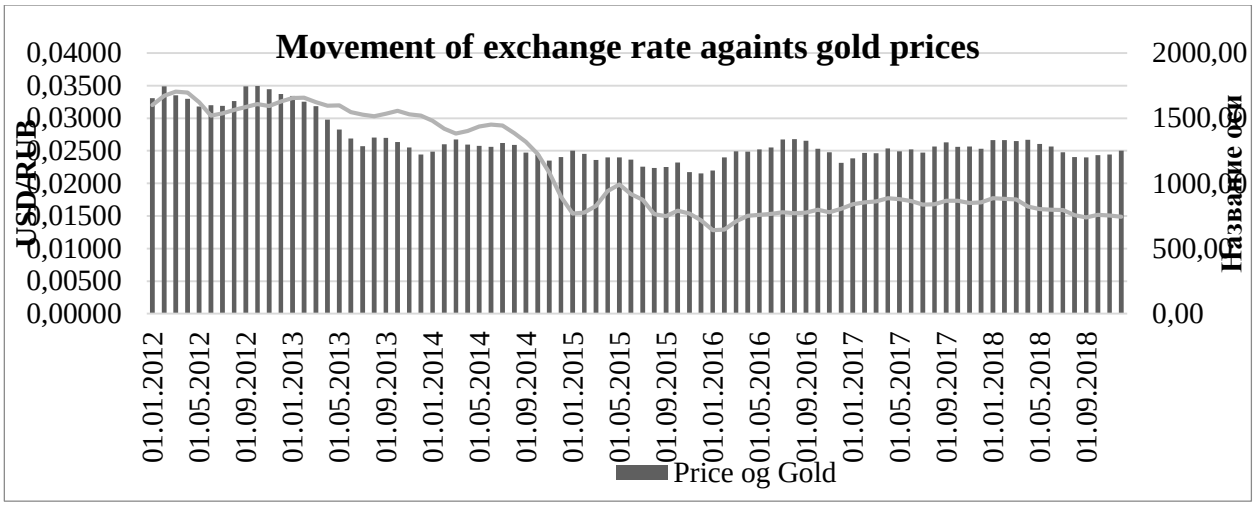


**Fig. 6. Movement of exchange rate against level of inflation [5]**

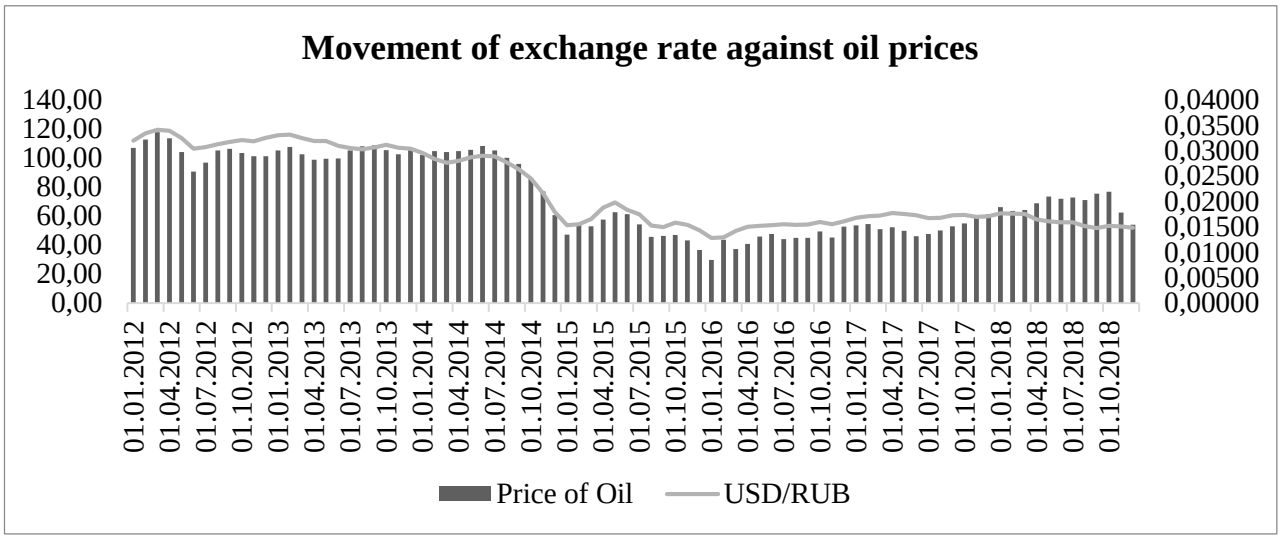


**Fig. 7. Movement of exchange rate against oil prices [5]**

**Data analysis**

Multiple stakeholders including exporters, importers, companies, government bodies and individual investors amongst others with huge foreign currency exposures face the threat of adverse currency movements, and consequently the possibility of losses on their investments. The foreign investments might have performed well in operational terms but simply because of the exchange rate fluctuations, the investment might depreciate in value. This not only affects individual businesses but in fact tends to have a negative impact on the entire economy. Thus it becomes necessary to study the factors that impact the exchange rate fluctuations. An understanding of the factors impacting the exchange rate, can help the businessmen dealing in transactions involving foreign currency, to take better economic decisions and curtail losses arising out of adverse currency movements, to the extent possible.

**Objectives of study**

The objective of the study is to make an overview of the chosen factors and to see how they affect exchange rate. Another objective is to statistically test the impact of chosen factors. And

to then test the significance of the impact of selected factors on exchange rate in the period of time from January 2012 to December 2018. The test was run in Microsoft Excel.

**Collection of data**

For the collection of data were used the official sources of web portal of Central Bank of Russian Federation and the web portal of Federal State Statistics Service. The period chosen for the study to show how the exchange rate of ruble were formed before it was set relatively free by central bank of Russian Federation.

**Sample**

Out of the various factors impacting the exchange rate, the following factors were selected for the statistical testing in the research study:

- Price of Gold, USD per troy ounce (31,1g)
- Price of Oil (Average of Brent, Dubai and West Texas), USD per barrel
- Inflation, % per month
- Balance of payments, USD billion
- Level of foreign reserves, USD million

The key rate is not suitable for such an analysis because it's value is not changing with the needed frequency.

Before using the sample, the data was normalized by subtracting the average value and dividing by dispersion.

**Fisher Criterion**

Fisher criterion is a parametric criterion and used to compare variances of the two variational series. By consideration of two populations that include respectively m and n random values X and Y, and have normal distribution

$H_0$: The equation is statistically insignificant.

$H_1$: The equation is statistically significant.

Null hypothesis will be the following:

$1H_0$: Gold price does not have any significant impact on the ruble to dollar exchange rate.

$2H_0$: Oil price does not have any significant impact on the ruble dollar exchange rate.

$3H_0$: Inflation level does not have any significant impact on the ruble to dollar exchange rate.

$4H_0$: Balance of payment does not have any significant impact on the ruble dollar exchange rate.

$5H_0$: Level of foreign reserves does not have any significant impact on the ruble dollar exchange rate.

And the alternative hypothesis will be the following:

$1H_1$: Gold price has a significant impact on the ruble to dollar exchange rate.

$2H_1$: Oil price has a significant impact on the ruble dollar exchange rate.

$3H_1$: Inflation level has a significant impact on the ruble to dollar exchange rate.

$4H_1$: Balance of payment price has a significant impact on the ruble dollar exchange rate.

$5H_1$: Level of foreign reserve has a significant impact on the ruble dollar exchange rate.

**Findings of Regression Analysis**

To check the statistical significance of equation of regression the ANOVA should be used (Table 1). The null hypothesis is rejected because F-significance level is relatively low meaning that there is a very low chance to make a mistake. F observed is hugher than any table value in case if the degree of freedom is more than 2. It means that the equation is statistically significant.

After running the ANOVA test, inflation level did not prove to be impacting the exchange rate significantly, the variable was dropped out and regression analysis was run again to obtain a better estimate of the model.

As it can be seen in table 3 and in table 4 the adjusted R Square changed only by 0,001880566.

After excluding the inflation factor out of a model. It means that inflation as a factor was very insignificant for the exchange rate compared with other factors that were taken into consideration.

According to the model including only the independent variables that had significant impact on the exchange rate – i.e. Price of Gold, USD per troy ounce (31,1g), Price of Oil ( Average of Brent, Dubai and West Texas), USD per barrel, Balance of payments, USD billion, Level of foreign reserves, USD million the R square is 91.73%. This means that the exchange rate is 91.73% dependent on the 4 independent variables mentioned above and 8.27% dependent on other factors. In case of Russia such factors are external political.

**Table 1.** ANOVA analysis

| | df | SS | MS | F | Significance F |
|---|---|---|---|---|---|
| Regression | 5 | 76,37600418 | 15,27520084 | 179,8711378 | 2,57252E-41 |
| Residual | 78 | 6,623995823 | 0,084923023 | | |
| Total | 83 | 83 | | | |

**Table 2.** Findings of regression analysis of an independent variable on the independent variables for the period of January 2012 to December 2018[1]

| | Null hypothesis, $H_0$ | Alternative hypothesis, $H_1$ | P-value. Level of significance is taken to be 0.05 | Decision | Conclusion |
|---|---|---|---|---|---|
| 1 | Gold price does not have any significant impact on the ruble to dollar exchange rate. | Gold price has a significant impact on the ruble to dollar exchange rate. | 0,003013578 | The null hypothesis is rejected. | As per the sample taken, gold prices impact the exchange rate, at 5% level of significance. |
| 2 | Oil price does not have any significant impact on the ruble dollar exchange rate | Oil price has a significant impact on the ruble dollar exchange rate. | 6,8467841967605 3E^-22 | The null hypothesis is rejected. | As per the sample taken, oil prices impact the exchange rate, at 5% level of significance. |
| 3 | Inflation level does not have any significant impact on the ruble to dollar exchange rate. | Inflation level has a significant impact on the ruble to dollar exchange rate. | 0,1013 | Fail to reject the null hypothesis. | As per the sample taken, inflation rate does not impact the exchange rate, at 5% level of significance. |
| 4 | Balance of payment does not have any significant impact on the ruble dollar exchange rate. | Balance of payment price has a significant impact on the ruble dollar exchange rate. | 0,0000173 | The null hypothesis is rejected. | As per the sample taken, balance of payments impacts the exchange rate, at 5% level of significance. |
| 5 | Level of foreign reserves does not have any significant impact on the ruble dollar exchange rate. | Level of foreign reserve has a significant impact on the ruble dollar exchange rate. | 0,033560942 | The null hypothesis is rejected. | As per the sample taken, level of foreign reserves the exchange rate, at 5% level of significance. |

[1] Источник: составлено автором

**Table 3.** Regression statistics of 5 factors model[2]

| | |
|---|---|
| Multiple R | 0,95926681 |
| R Square | 0,92019282 |
| **Adjusted R Square** | **0,91507698** |
| Standard Error | 0,29141555 |
| Number of observations | 84 |

**Table 4.** Regression Statistics of 4 factors model[3]

| | |
|---|---|
| Multiple R | 0,95779941 |
| R Square | 0,91737972 |
| **Adjusted R Square** | **0,91319641** |
| Standard Error | 0,29462449 |
| Number of observations | 84 |

**Conclusion**

It can be concluded that there are 4 main factors that affect the exchange level of ruble. These factors are price of oil, price of gold, level of foreign reserves and balance of payments. Another big factor is external political factor that affects ruble exchange rate. For Russia depreciation of ruble to other currencies is perceptibly because of a high share of GDP that depends on oil and metals. The stronger is the national currency the lower the profit of selling oil and metals. That means that today with the weak position of ruble oil companies, for example, are making higher profits by selling oil. Since the price of oil is not set directly by Russian federation receiving dollars for barrels if oil is relatively profitable. Unfortunately, companies need to buy technologies outside the country and that means that the profit that is made by weakness of ruble is spent on the difference of exchange rates when buying imported goods. This means that if Russia had strong manufacturing inside the country it would be extremely profitable for as to export oil and metals by the price of depreciated ruble. It is clear that the price of imported goods and services are coming at a higher cost when national currency depreciates. The prices of imported goods such as different technologies, computers, cars that are made outside the country and sold in a foreign currency will have a direct dependence on the exchange rate of ruble. That is another reason why the exchange rate of ruble affects the prices inside the country for residents of Russia.

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[2] Источник: составлено автором
[3] Источник: составлено автором

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## Appendix

**Table 5. Dependent and independent variables used for data analysis period January 2012 to December 2018[4]**

| Date | Price of Gold, USD per troy ounce (31,1g) | Price of Oil (Brent, Dubai, WestTexas), USD per barrel | Inflation, % | Balance of payments, USD billion | Level of foreign reserves, USD mln | Exchange rate, USD/RUB | Exchange rate, RUB/USD |
|---|---|---|---|---|---|---|---|
| 01.01.2012 | 1654,05 | 107,07 | 0,50 | 20,40 | 498649 | 31,2383р. | 0,03201 |
| 01.02.2012 | 1744,82 | 112,69 | 0,37 | 20,20 | 505391 | 29,8855р. | 0,03346 |
| 01.03.2012 | 1675,95 | 117,79 | 0,58 | 18,30 | 513978 | 29,3319р. | 0,03409 |
| 01.04.2012 | 1649,20 | 113,67 | 0,31 | 18,10 | 513491 | 29,4909р. | 0,03391 |
| 01.05.2012 | 1589,04 | 104,09 | 0,52 | 17,30 | 524370 | 30,8044р. | 0,03246 |
| 01.06.2012 | 1598,76 | 90,73 | 0,89 | 13,80 | 510432 | 32,8784р. | 0,03042 |
| 01.07.2012 | 1594,29 | 96,75 | 1,23 | 11,50 | 514317 | 32,5251р. | 0,03075 |
| 01.08.2012 | 1630,31 | 105,27 | 0,10 | 11,20 | 510543 | 31,9568р. | 0,03129 |
| 01.09.2012 | 1744,81 | 106,28 | 0,55 | 15,60 | 514593 | 31,5177р. | 0,03173 |
| 01.10.2012 | 1746,58 | 103,41 | 0,46 | 14,40 | 529893 | 31,1157р. | 0,03214 |
| 01.11.2012 | 1721,64 | 101,17 | 0,34 | 14,70 | 526766 | 31,3988р. | 0,03185 |
| 01.12.2012 | 1684,76 | 101,19 | 0,54 | 16,30 | 528236 | 30,7373р. | 0,03253 |
| 01.01.2013 | 1671,85 | 105,10 | 0,97 | 17,00 | 537618 | 30,2271р. | 0,03308 |
| 01.02.2013 | 1627,57 | 107,64 | 0,56 | 15,30 | 532155 | 30,1631р. | 0,03315 |
| 01.03.2013 | 1593,09 | 102,52 | 0,34 | 16,00 | 526172 | 30,8003р. | 0,03247 |
| 01.04.2013 | 1487,86 | 98,85 | 0,51 | 14,50 | 527708 | 31,3502р. | 0,03190 |
| 01.05.2013 | 1414,03 | 99,37 | 0,66 | 14,50 | 533218 | 31,3059р. | 0,03194 |
| 01.06.2013 | 1343,35 | 99,74 | 0,42 | 13,50 | 518431 | 32,3068р. | 0,03095 |
| 01.07.2013 | 1285,52 | 105,26 | 0,82 | 13,30 | 513772 | 32,7408р. | 0,03054 |
| 01.08.2013 | 1351,74 | 108,16 | 0,14 | 14,00 | 512834 | 33,0249р. | 0,03028 |
| 01.09.2013 | 1348,60 | 108,76 | 0,21 | 16,00 | 509674 | 32,6017р. | 0,03067 |
| 01.10.2013 | 1316,58 | 105,43 | 0,57 | 12,70 | 522580 | 32,0992р. | 0,03115 |
| 01.11.2013 | 1275,86 | 102,63 | 0,56 | 16,90 | 524284 | 32,6940р. | 0,03059 |
| 01.12.2013 | 1221,51 | 105,48 | 0,51 | 16,90 | 515590 | 32,8807р. | 0,03041 |
| 01.01.2014 | 1244,27 | 102,10 | 0,59 | 18,60 | 509595 | 33,7844р. | 0,02960 |
| 01.02.2014 | 1299,58 | 104,83 | 0,70 | 12,30 | 498926 | 35,2440р. | 0,02837 |
| 01.03.2014 | 1336,08 | 104,04 | 1,02 | 19,60 | 493326 | 36,1986р. | 0,02763 |
| 01.04.2014 | 1298,45 | 104,87 | 0,90 | 19,80 | 486131 | 35,6677р. | 0,02804 |
| 01.05.2014 | 1288,74 | 105,71 | 0,90 | 17,80 | 472278 | 34,8337р. | 0,02871 |
| 01.06.2014 | 1279,10 | 108,37 | 0,62 | 13,90 | 467227 | 34,4495р. | 0,02903 |
| 01.07.2014 | 1310,59 | 105,23 | 0,49 | 17,00 | 478250 | 34,6354р. | 0,02887 |
| 01.08.2014 | 1295,13 | 100,05 | 0,24 | 16,10 | 468762 | 36,0984р. | 0,02770 |
| 01.09.2014 | 1236,55 | 95,85 | 0,65 | 12,00 | 465228 | 37,9018р. | 0,02638 |

[4] Источник: составлено автором

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 01.10.2014 | 1222,49 | 86,08 | 0,82 | 14,70 | 454240 | 40,7987р. | 0,02451 |
| 01.11.2014 | 1175,33 | 76,99 | 1,28 | 13,60 | 428590 | 46,2175р. | 0,02164 |
| 01.12.2014 | 1200,62 | 60,70 | 2,62 | 13,60 | 418880 | 55,7704р. | 0,01793 |
| 01.01.2015 | 1250,75 | 47,11 | 3,85 | 15,70 | 385460 | 65,1531р. | 0,01535 |
| 01.02.2015 | 1227,08 | 54,79 | 2,22 | 14,00 | 376208 | 64,5182р. | 0,01550 |
| 01.03.2015 | 1178,63 | 52,83 | 1,21 | 15,80 | 360221 | 60,3631р. | 0,01657 |
| 01.04.2015 | 1198,93 | 57,54 | 0,46 | 14,50 | 356365 | 53,2387р. | 0,01878 |
| 01.05.2015 | 1198,63 | 62,51 | 0,35 | 15,40 | 356005 | 50,4680р. | 0,01981 |
| 01.06.2015 | 1181,50 | 61,31 | 0,19 | 13,90 | 356770 | 54,4490р. | 0,01837 |
| 01.07.2015 | 1128,31 | 54,34 | 0,80 | 10,60 | 361571 | 57,1797р. | 0,01749 |
| 01.08.2015 | 1117,93 | 45,69 | 0,35 | 8,80 | 357626 | 65,4230р. | 0,01529 |
| 01.09.2015 | 1124,77 | 46,28 | 0,57 | 9,50 | 366343 | 66,7829р. | 0,01497 |
| 01.10.2015 | 1159,25 | 46,96 | 0,74 | 10,00 | 371267 | 63,2456р. | 0,01581 |
| 01.11.2015 | 1086,44 | 43,11 | 0,75 | 9,00 | 369640 | 65,0296р. | 0,01538 |
| 01.12.2015 | 1075,74 | 36,57 | 0,77 | 11,20 | 364708 | 69,7048р. | 0,01435 |
| 01.01.2016 | 1097,91 | 29,78 | 0,96 | 7,30 | 368399 | 77,9344р. | 0,01283 |
| 01.02.2016 | 1199,50 | 43,56 | 0,63 | 7,30 | 371559 | 77,3285р. | 0,01293 |
| 01.03.2016 | 1245,14 | 37,34 | 0,46 | 7,80 | 380544 | 70,4183р. | 0,01420 |
| 01.04.2016 | 1242,26 | 40,75 | 0,44 | 6,60 | 387008 | 66,6826р. | 0,01500 |
| 01.05.2016 | 1260,95 | 45,94 | 0,41 | 7,60 | 391521 | 65,8387р. | 0,01519 |
| 01.06.2016 | 1276,40 | 47,69 | 0,36 | 8,10 | 387716 | 65,2193р. | 0,01533 |
| 01.07.2016 | 1336,66 | 44,13 | 0,54 | 6,30 | 392756 | 64,3380р. | 0,01554 |
| 01.08.2016 | 1340,17 | 44,88 | 0,01 | 4,70 | 393912 | 64,9365р. | 0,01540 |
| 01.09.2016 | 1326,61 | 45,04 | 0,17 | 7,40 | 395198 | 64,5572р. | 0,01549 |
| 01.10.2016 | 1266,55 | 49,29 | 0,43 | 6,60 | 397743 | 62,6200р. | 0,01597 |
| 01.11.2016 | 1238,35 | 45,26 | 0,44 | 8,90 | 390741 | 64,3137р. | 0,01555 |
| 01.12.2016 | 1157,36 | 52,62 | 0,40 | 11,70 | 385288 | 62,0913р. | 0,01611 |
| 01.01.2017 | 1192,10 | 53,59 | 0,62 | 11,80 | 377741 | 59,6299р. | 0,01677 |
| 01.02.2017 | 1234,20 | 54,35 | 0,22 | 10,30 | 390585 | 58,5394р. | 0,01708 |
| 01.03.2017 | 1231,42 | 50,90 | 0,13 | 12,30 | 397334 | 58,0066р. | 0,01724 |
| 01.04.2017 | 1266,88 | 52,16 | 0,33 | 7,80 | 397907 | 56,4356р. | 0,01772 |
| 01.05.2017 | 1246,04 | 49,89 | 0,37 | 8,60 | 400998 | 56,9501р. | 0,01756 |
| 01.06.2017 | 1260,26 | 46,17 | 0,61 | 8,80 | 405721 | 57,8932р. | 0,01727 |
| 01.07.2017 | 1236,84 | 47,66 | 0,07 | 3,80 | 412239 | 59,6927р. | 0,01675 |
| 01.08.2017 | 1283,04 | 49,94 | -0,54 | 6,70 | 418447 | 59,6127р. | 0,01677 |
| 01.09.2017 | 1314,07 | 52,95 | -0,15 | 10,20 | 423978 | 57,7447р. | 0,01732 |
| 01.10.2017 | 1279,51 | 54,92 | 0,20 | 10,10 | 424766 | 57,6981р. | 0,01733 |
| 01.11.2017 | 1281,90 | 59,93 | 0,22 | 11,50 | 424857 | 58,9266р. | 0,01697 |
| 01.12.2017 | 1264,45 | 61,19 | 0,42 | 13,40 | 431636 | 58,5739р. | 0,01707 |
| 01.01.2018 | 1331,30 | 66,23 | 0,31 | 16,90 | 432742 | 56,4981р. | 0,01770 |
| 01.02.2018 | 1330,73 | 63,46 | 0,21 | 12,20 | 447735 | 56,8067р. | 0,01760 |
| 01.03.2018 | 1324,66 | 64,17 | 0,29 | 15,00 | 453644 | 57,0636р. | 0,01752 |
| 01.04.2018 | 1334,76 | 68,79 | 0,38 | 15,00 | 457995 | 60,7699р. | 0,01646 |
| 01.05.2018 | 1303,45 | 73,43 | 0,38 | 15,20 | 459884 | 62,2309р. | 0,01607 |

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|---|---|---|---|---|---|---|---|
| 01.06.2018 | 1281,57 | 71,98 | 0,49 | 15,20 | 456640 | 62,7685р. | 0,01593 |
| 01.07.2018 | 1237,71 | 72,67 | 0,27 | 13,20 | 456749 | 62,8619р. | 0,01591 |
| 01.08.2018 | 1201,71 | 71,08 | 0,01 | 15,90 | 458032 | 66,0764р. | 0,01513 |
| 01.09.2018 | 1198,39 | 75,36 | 0,16 | 18,90 | 460615 | 67,6661р. | 0,01478 |
| 01.10.2018 | 1215,39 | 76,73 | 0,35 | 19,00 | 459163 | 65,8545р. | 0,01518 |
| 01.11.2018 | 1220,65 | 62,32 | 0,50 | 19,20 | 459563 | 66,3557р. | 0,01507 |
| 01.12.2018 | 1250,40 | 53,96 | 0,55 | 19,50 | 462104 | 67,3353р. | 0,01485 |