

COVID-19 Pandemic Impact on the Russian Stock Market

Rasumovskaya E.A.* Rybina E.

Ural State University of Economics, Yekaterinburg 620144, Russia

*Corresponding author. Email: rasumovskaya.pochta@gmail.com

ABSTRACT

This study reflects the authors' assessment of the degree of impact of the coronavirus pandemic on the Russian economy and the stock market. The practical significance of the study is due to the identification of possible scenarios of events based on the analysis results within the framework of the "Elliott Wave Principle" theory. Research hypothesis: the possibility of assessing the consequences of the COVID-19 pandemic on the Russian economy based on the theoretical apparatus of R.N. Elliot.

The novelty of the research: the application of the "Elliott Wave Principle" theory to the analysis of the stock market of the Russian economy during the coronavirus pandemic.

The "Elliott Wave Principle" theory was chosen as a scientifically grounded method for studying the stock market and the degree of influence of COVID-19 on the Russian economy.

Research results: 1) based on statistical and analytical data, the existence of a direct impact of the COVID-19 pandemic on the state of the Russian financial market and the national economy of the Russian Federation was substantiated. 2) an assessment of the state of the Russian stock market was carried out and a variant of a negative scenario of its dynamics was presented. The significance of the research: the results of the research can be used as a basis for predictive estimates based on the theory of R.N. Elliott in relation to the Russian financial system and the national economy.

Keywords: COVID-19 pandemic, stock market, financial market, economics, market indicators, R.N. Elliot

1. INTRODUCTION

The shock from the pandemic of the new coronavirus infection (hereinafter referred to as COVID-19) around the world has become more serious in its negative consequences, even compared to the 2008 financial crisis. International financial organizations in their forecasts proceed from the most pessimistic scenarios of the impact of COVID-19 on the entire global economy. Restrictions caused by the pandemic had a huge impact on the global financial market, and the Russian Federation was no exception. The Russian national economy has undergone colossal stress in a short period of time from decrease in the real incomes of the population and economic entities, increase in unemployment, increase in the credit burden on businesses and the population, which was reflected in the fall in key macroeconomic indicators, and, first of all, in reduction of gross domestic product (GDP) in a short time.

2. PURPOSE OF THE RESEARCH

The research is conducted to study the possibility of assessing the degree of impact of the shock caused by the COVID-19 pandemic on the Russian financial market from March to September of 2020 based on the theory of R.N. Elliot.

3. MAIN PART

The World Health Organization (WHO) declared the coronavirus (COVID-19) eruption a global pandemic on March 11, 2020. The pandemic status instantly affected the economic activities of all countries, including Russia. Consequences of the impact of pandemic restrictions have not yet been fully determined, since new cases of disease continue to be recorded in Russia every day as of mid-September 2020, the dynamics of which may be superimposed on the episode in seasonal diseases and cause new restrictions.

The pandemic has had a significant impact on the labor market, consumer behavior, production processes. So, when the COVID-19 pandemic was just gaining momentum in March of 2020, financial markets have already reacted negatively: the stock markets of the United States, Europe, and Asia, the main index of Great Britain, fell by more than 10% on March 12, 2020, the Japanese stock market fell by 20%. Consider the main indicators of the Russian stock market at the time of the initial spread of COVID-19 in the Russian Federation.

1. The main indicator of the Russian stock market – the RTS Index lost 11% and reached the minimum over the past 5 years, amounting to 832 points. (fig. 1).

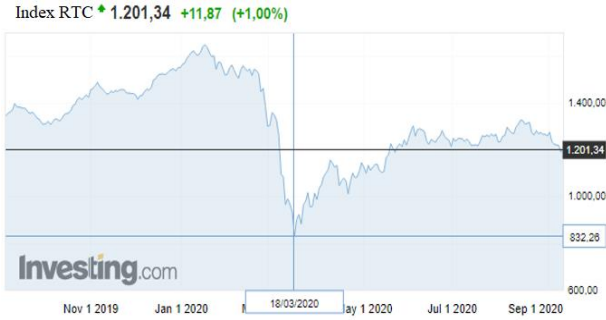


Figure 1: RTS Index as of March 18, 2020

2 The MICEX Index, which includes the most traded shares of Russian companies, fell by 10% and reached the minimum in the last 5 years, fixing at 2,112.24 points. (Figure 2).

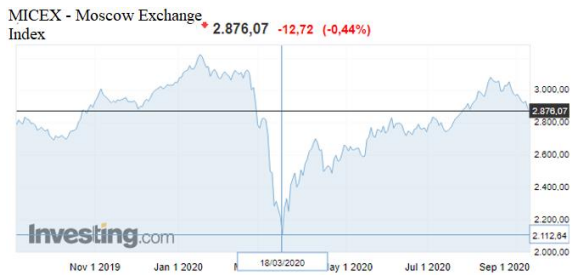


Figure 2: MICEX Index as of March 18, 2020

3. The USD/RUB rate of exchange has reached a historical high and amounted to 80.86 rubles. The EUR/RUB rate of exchange also reached a historic high and amounted to 88.23 rubles.

Significant changes took place in all sectors of the Russian economy, but the most significant decline was in the oil and gas, raw materials, financial sectors and in the real estate sector. The sharpest and most significant decline occurred in the tourism industry and air travel. At the same time, there was a significant surge in those segments that became more in demand during the quarantine period – IT communications sector, medicine and pharmaceuticals, e-commerce, and shopping delivery.

The representatives of the Russian Federation could not come to a consensus with the partners of the OPEC countries on March 6, 2020, on further coordination of their actions on the volumes of hydrocarbon production, which led to a sharp drop in oil prices (Fig. 3) in addition to decline in main indicators of the stock market and the general financial and economic downturn in all sectors of the economy, in addition to the spread of COVID-19. Prices for WTI crude oil fell to 12.01, which is the lowest value in the last 5 years.



Figure 3: WTI Crude Oil Futures

At present, the export of hydrocarbons still accounts for predominant share in Russian exports, therefore, the foreign exchange revenues of the Russian budget have undergone a decline, which can be overcome only by resorting to the ruble devaluation. Commenting on the current situation, the Minister of Finance of the Russian Federation A.G. Siluanov noted that the National Welfare Fund (NWF) is able to finance the state budget when oil prices are less than 40 points no more than 6-10 years, while it is expected to receive a stable income from other sectors of the economy. All of the above factors prompted the Government of the Russian Federation to activate tools to ensure economic sovereignty by devaluing the ruble, activating strategy to reduce interest rates by the Central Bank of the Russian Federation, supporting business and population of the country through a wide range of social benefits and easing some tax requirements for businesses and self-employed category of citizens. Nevertheless, the decline in the Russian GDP in the second quarter is estimated at 9.6%. Generalization of tools used by the Government of the Russian Federation to overcome the impact of COVID-19 on the national economy allows to highlight the following areas:

- ensuring financial stability by ensuring the necessary ruble and foreign exchange liquidity and decline of the interest rate of the Bank of Russia;
 - maintaining the financial stability of industries and sectors of the economy through additional financing of the most vulnerable sectors of the economy: tax holidays, easing tax requirements for enterprises, providing affordable credit programs;
 - measures to support population and regional budgets: payment of benefits to families with children, medical workers; provision of benefits for rent, loans, services of state organizations, increase in unemployment benefits.
- Business activity in the Russian economy began to slowly recover in the third quarter of 2020. And the partial deduction of restrictive measures, combined with budgetary measures to support households and corporate sector, as well as deferred demand contributed to the growth of consumer activity, and recovery in investment demand was outlined. At the same time, unfavorable trends persist in the labor market. Decline in incomes and the persistence of some restrictions on the operation of service enterprises, as well as weak export demand continue to restrain the recovery in activity and income. The volume of GDP in 2020, according to the Central Bank of the Russian

Federation, will decrease by 4.5-5.5%. The impact of aggregate demand on the growth rate of consumer prices will remain disinflationary.

The industrial production indicator, reflecting the change in the total production of Russian factories and industrial enterprises, has not recovered and is (- 8%) at the beginning of the 3rd quarter of 2020, which will negatively affect the overall recovery of the Russian economy over a long time horizon. The unemployment rate in the Russian Federation relative to European countries remains at an acceptable level (6.3%), but this indicator shows insufficient measures to stimulate the labor market by the state for the domestic economy. The volume of retail trade also continues to remain in the range of negative values and amounts to (-2.6%), which is largely due to the unrecovered income of the population.

Presented dynamics of macroeconomic and financial indicators characterizes the insufficient recovery of the Russian economy and the Russian stock market after the COVID-19 pandemic. At the same time, the unstable situation in the real sector causes the stock market to revive on positive expectations and the results of short-term favorable forecasts, although industrial economic indicators are in the area of negative values.

The authors consider it expedient to consider the current state of the Russian economy and the world financial market using the theory of R.N. Elliott, called the "wave principle". This theory describes fundamental models of the wave theory of economic development, suggesting that price dynamics in any financial market can be represented as eight wave (or eight vertex) model. The model makes it possible to predict further price dynamics in financial markets with a greater degree of probability based on retrospective view (Fig. 4).

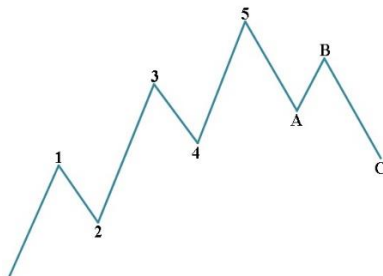


Figure 4: Elliott Wave Theory

The wave principle of R.N. Elliott describes the communication of impulse and corrective waves. Impulse waves are made of five sub-waves that increase upward trend, while corrective waves are made of combination of three sub-waves that move "cleanly" in the opposite direction to the next trend. The purpose of the Elliott flow, like of all motivational waves, is in the market movement to downward trend.

The main theoretical message of R.N. Elliott model is that the motion waves, having reached the peak of upward trend at point 5, in a relatively short period of time, in relation to the long period of the rise of impulsive waves, descend to the level of the corrective wave at point A. Further, there is a doubtful growth to point B, in an equally short period of

time, after which the wave collapses with greater force in a long time interval to point C.

Based on the wave dynamics of R.N. Elliott theory, it can be assumed that the COVID-19 pandemic should be viewed as the beginning of downward trend for stock markets, both for global and Russian ones. Consider the MICEX index in the light of the theory of Elliott waves to verify this assumption (Fig. 5).



Figure 5: MICEX Index over the Period from 2016 to 2020

The dynamics of MICEX Index over the period from 2016 to 2020 illustrates the stage of steady rise – that is, it grew under the influence of five impulsive sub-waves. Further, there was a sharp decline in a relatively short period of time at the beginning of the COVID-19 pandemic – this decline can be described as corrective wave at point A. Equally sharp rise is observed in the stock market, interpreted by the authors as a stage of corrective wave at point B, due to positive financial expectations at the end of the third quarter of 2020. It is also worth noting the beginning reversal of the trend line to corrective point C, this situation can be confirmed by a decline of oil prices at 11.09.2020 up to 37.2 dollars/bal. (Fig. 3), the previously considered MICEX Index (Fig. 5) and analysis of the indicators of the Russian economy.

Thus, the authors make an assumption about the stage in which the Russian national economy and the stock market are currently located based on the theory of wave principle of R.N. Elliott – this is a short-term rise of a temporary nature, after which an even sharper decline in financial markets is likely, up to the level of the beginning of the spread of COVID- 19. In this case, the authors consider the COVID-19 pandemic as a factor that initiated another cyclical recession on a global scale in financial markets and in the national economies of all countries.

4. CONCLUSION

In conclusion, we note several factors that make the pandemic economic downward turn different from the previously passed financial and economic crises. Firstly, past financial and economic crises were accompanied by a large-scale transformation of the labor market and other resources between sectors of the economy. During this crisis, on the contrary, unemployed or laid-off workers due to the pandemic are likely to return to their previous jobs.

In other words, the old model of economic activity can be resumed, while the usual declines and their consequences entail a change in the structure of economic activity.

Secondly, economic crises are often protracted due to the lack of confidence from investors, firms, and consumers. Currently, there is renewed confidence in the markets as soon as the pandemic began to recede based on the analysis of market indicators.

The authors' assumption regarding the negative scenario of situation development in line with the wave theory of R.N. Elliott, allows to predict a significant decline in the foreseeable future since a temporary rise is a stage of the model, after which a decline is more than likely.

Thus, at any of the presented variants of events, negative or positive, the Government of the Russian Federation needs to develop a plan for the recovery of the Russian economy, which includes measures to support all sectors of the national economy, stabilize the labor market and increase the income of the population.

REFERENCES

- [1] D. Zhang, M. Hu, Q. Ji, Financial markets under the global pandemic of COVID-19, *Financ Res Lett.* 36 (2020) 101528.
- [2] M.Topcua, O. S. Gulalb, The impact of COVID-19 on emerging stock markets, *Financ Res Lett.* 36 (2020) 101691.
- [3] D. Ilalan, Elliott wave principle and the corresponding fractional Brownian motion in stock markets: Evidence from Nikkei 225 index, *Chaos Solitons Fractals* 92 (2016) 137–141.
- [4] G.S. Atsalakis, E.M..Dimitrakakis, C.D. Zopounidis, Elliott Wave Theory and neuro-fuzzy systems, in stock market prediction: The WASP system, *Expert Systems with Applications* 38(8) (2011) 9196-9206.
- [5] A. Thakkar, K. Chaudhari, Fusion in stock market prediction: A decade survey on the necessity, recent developments, and potential future directions, *Information Fusion* 65 (2021) 95-107.
- [6] L. Bai, Yu Wei, G.Wei, X. Li, S. Zhang, Infectious disease pandemic and permanent volatility of international stock markets: A long-term perspective, *Finance Research Letters* (2020) 101709.
- [7] Kh. Mokni, A dynamic quantile regression model for the relationship between oil price and stock markets in oil-importing and oil-exporting countries, *Energy* 213(15) (2020)118639
- [8] D. Iheke, O. B. Lin, Stock markets and the COVID-19 fractal contagion effects, *Finance Research Letters* (2020) 101640
- [9] D. C. Broadstock, D. Zhang, Social Media and Intraday Stock Returns: The Price Power of Sentiment, *Finance. Res. Lett.* 30 (2019) 116-123.
- [10] C. Chen, A. Filardo, D. He, F. Zhu, Financial Crisis, Unconventional US Monetary Policy and International Spillovers, *J. Int. Money-Finance* 67 (2016) 62–81.
- [11] Investment portal Investing.com.
<https://ru.investing.com>.
- [12] The Central Bank of the Russian Federation report “On measures to ensure the sustainability of economic development.”
https://www.cbr.ru/press/PR/?file=17032020_090000dkp2020-03-17T08_57_06.htm
- [13] Information and analytical report of the Central Bank of the Russian Federation.
https://cbr.ru/collection/collection/file/29098/ec_2020-06.pdf
- [14] Information portal RBC.RU.
<https://www.rbc.ru/economics>.
- [15] Information portal TASS.
<https://tass.ru/ekonomika>