

# Impact of currency regulation on public welfare and economic security

*Anna Vladimirovna Vinogradova*<sup>1</sup>, *Julia Anatolievna Grinevich*<sup>2</sup>, *Alma Rymbekovna Turganbayeva*<sup>3</sup>, *Mokhinur Bakhramovna Bakhramova*<sup>4</sup>, and *Anna Alexandrovna Troitskaya*<sup>5</sup>

<sup>1</sup>Lobachevsky State University, Department of Economic Theory and Methodology, Nizhny Novgorod, Russia

<sup>2</sup>Lobachevsky State University, Department of World Economy and Customs, Nizhny Novgorod, Russia

<sup>3</sup>Al-Farabi Kazakh National University, Department of Computer Science, Almaty, Kazakhstan

<sup>4</sup>Tashkent State University of Law, Intellectual property law Department, Tashkent, Uzbekistan

<sup>5</sup>Higher School of Economics, Department of Science and Innovation Management, Moscow, Russia

**Abstract.** The research examines the role of currency regulation in ensuring economic security, and special emphasis is placed on the analysis of this issue from the point of view of public welfare. Income growth as a source of human capital development is impossible without effective state regulation at the current stage of economic development. Regular changes in Russia’s foreign economic activity, economic and political problems at the national and international levels, and the widespread use of modern technology pose a threat to both national and economic security. All this creates the need for regular analysis of statistics on individual indicators, including the detection of violations of currency legislation. The study also analyzed the issue of legal and illegal capital outflows and their impact on the economy; it was determined that the outflow of funds due to legal transactions exceeds illegal ones by many times. This fact underscores the need to introduce measures to minimize net outflows. The factor that determines people’s standard of living has been chosen GDP (PPP) per capita, and reflected the impact of the foreign exchange market on public welfare using regression analysis. The results also explain the import substitution policy of the Central Bank.

**Keywords:** living standards, foreign exchange market, crisis, capital outflow, government regulation

## 1 Introduction

Nowadays, in the context of globalization, we can observe an intensification of capital flows between countries, which is an objective process, determines the welfare of society and the economic security of the state. The outflow of capital from the country leads to a slowdown of economic development, a decrease in the welfare of the population and a serious threat to

---

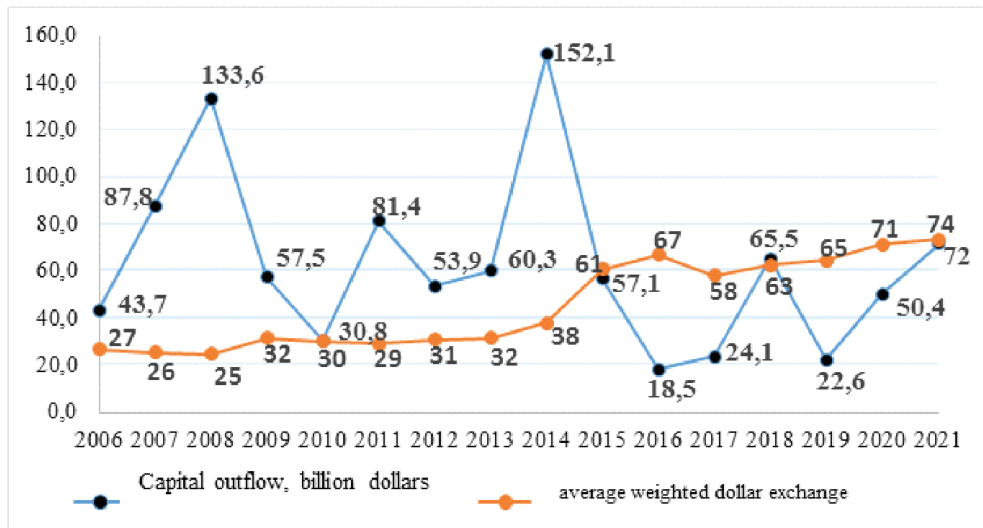
<sup>1</sup> Corresponding author: [julia-grinevich@mail.ru](mailto:julia-grinevich@mail.ru)

economic security. The currency policy of the Russian Federation uses methods of capital control [1].

In general, the mechanism of currency regulation in Russia and abroad is the same, with liberalization using methods of monetary policy [2]. Modern methods of Russian currency regulation have inherited the mechanisms formed in the Soviet period [3]. Foreign exchange legislation is aimed at preventing capital flight from the country. A number of authors consider issues related to consideration of capital controls [4, 5], as well as issues related to the application of monetary policy measures in regulating capital flows [6], which determines the level of well-being of society as a whole.

Foreign exchange regulatory authorities primarily monitor the implementation of foreign exchange laws in order to improve welfare and ensure economic security [7]. The question of the influence of monetary policy on macroeconomic stability is topical [8].

To assess the impact of the system of currency regulation on economic security, it is worth mentioning such a threat as illegal movement of capital abroad [9]. A number of authors also consider issues related to the hidden movement of capital between countries [10]. Consider the indicator of net (legal) capital outflow presented in the structure of the balance of payments of the Russian Federation.



**Fig. 1.** Dynamics of the net capital outflow from the Russian Federation and the dollar exchange rate. Source: Central Bank of Russia, <https://cbr.ru>.

Over the past 10 years about \$547.8 billion has been legally exported from the country (acquisition of assets abroad, placement of export proceeds in offshore zones). The year 2014 saw the largest surge in capital outflows, which led to an increase in the exchange rate, higher inflation and a decline in the welfare of society. This dynamics is associated with the sanctions imposed by the U.S. and Western countries in response to the annexation of Crimea. There has been a sharp decline since 2015-2018 (Fig. 1). However, in 2020 the epidemiological situation had its impact and there was an increase in capital outflow.

## 2 Materials and methods

Analytical and descriptive research methods, graphical and mathematical apparatus of statistical data processing, as well as regression analysis were used in the work.

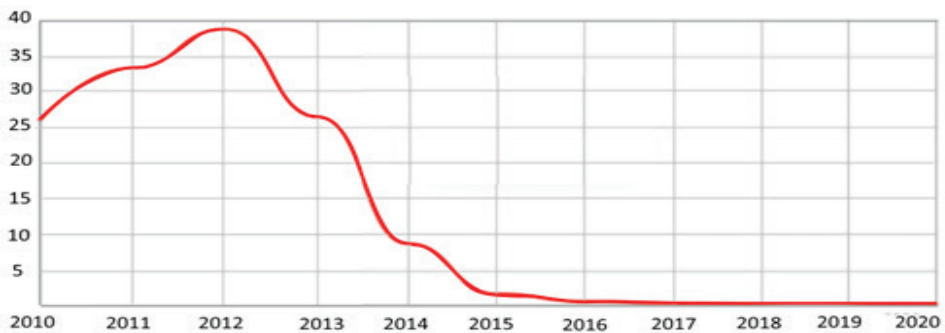
The purpose of the research is to outline the impact and role of currency regulation in improving the welfare and economic security of the country, as well as to determine the impact of currency market factors on the living standards of the population.

Research objectives: to consider the features of currency regulation in the Russian Federation; to substantiate the foreign economic aspects of economic security of the country; to characterize the role and influence on it of the system of currency regulation in order to increase public welfare.

### 3 Results

Financial risks arising from capital outflows can become a serious threat to the economic security of the country, and will be expressed in the lack of domestic investment, a negative impact on the national currency, real income, as well as on economic growth and the welfare of society as a whole.

This underlines the need for the state to introduce measures to significantly minimize the net outflow. Comparing the amounts of net outflows (Fig. 1) and illegal outflows (Fig. 2), we see that in recent years the outflow of funds due to legal transactions exceeds illegal ones many times. The minimum value for all 10 years for legal transactions is \$11 billion in 2018, and for illegal – \$1 billion, i.e., there is a difference of 1000%.



**Fig. 2.** Dynamics of the amount of illegal capital outflow from the Russian Federation (in billion \$). Source: Central Bank of Russia, <https://cbr.ru>.

In 2010-2020, due to dubious transactions, the capital outflow was \$135.5 billion. In 2018-2020, the withdrawal of about \$ 1 billion per year was considered dubious, while in 2010-2012 about \$ 20-30 billion. The damage to the budget from such operations is about 30%, which leads to a decrease in the real incomes of the population and the welfare of society. Illegal transactions are made in the course of export and import of goods as follows:

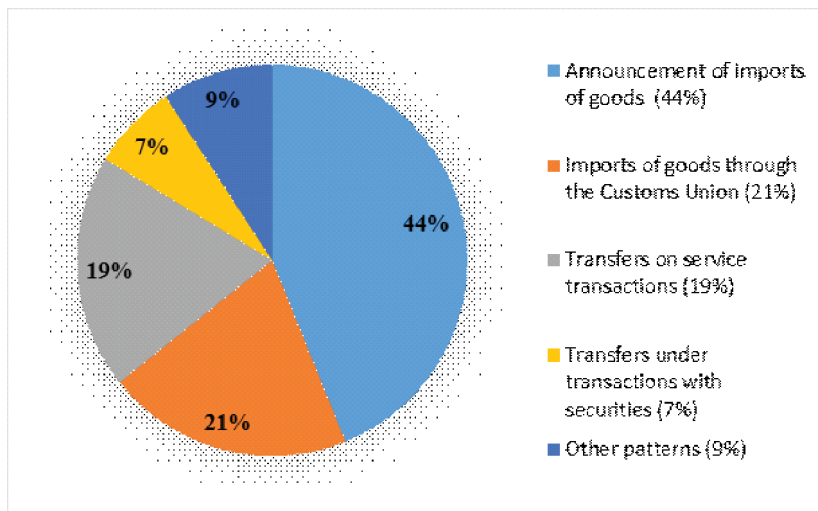
1. A number of companies provide inaccurate information when declaring export earnings. This situation is most common in the fuel and energy sector. Crude oil and petroleum products occupy more than 50% of the entire commodity structure of Russian exports and there is an obvious correlation with the growth of world energy prices and the increase in the value of illegal exports of capital from the country.

2. In some cases, importers inflate the amount of payments for imported products, using fictitious contracts (they occupy more than 30% of the share of the country's imports).

3. Importers can charge fictitious prepayment in transactions.

There is a concept of "fly-by-night" companies, which are created for the execution of an import contract and to which an advance payment is transferred from abroad, after which the company is liquidated.

As a result of the above, the Russian economy loses money and this leads to a decrease in general welfare. The above mentioned is also confirmed by the statistics of the Central Bank; according to its data, more illegal transactions take place through imports: 44% – due to advance payment for imported goods, 21% – in case of import of goods through the Customs Union countries (Fig. 3).



**Fig. 3.** Structure of doubtful transactions for withdrawal of funds abroad in 2020. Source: Central Bank of Russia, <https://cbr.ru>.

In 2012-2020, there was a sharp decline in the illegal outflow of capital, mainly due to the effective work of the currency regulation authorities. Money remains on the territory of the Russian Federation and increases the welfare of society. It is important to keep in mind that criminal liability for non-repatriation of currency begins with exceeding the amount of the crime of 100 million rubles. However, the amounts of damage during the 2020 pandemic were the highest for the entire period (Table 1).

**Table 1.** Numbers of possible damage associated with different types of violations of currency legislation, 2014-2020

Amount of possible damage (billion rubles)	Year						
	2014	2015	2016	2017	2018	2019	2020
Non-repatriation of currency	40	33.6	39	33.6	29.6	26.7	49.3
Growth rate (%)	-	-16	16.07	-13.85	-11.9	-9.8	84.64
Transfer of funds using false documents	8.7	19.4	23.9	20.8	17.9	31	14
Growth rate (%)	-	122.98	23.19	-12.97	-13.94	73.18	-54.84
Smuggling of cash	0.228	0.244	0.222	0.223	0.2242	0.1858	3

Growth rate (%)	-	7.01	-9.01	0.45	0.54	-17.13	1514.6 4
-----------------	---	------	-------	------	------	--------	-------------

Source: authors' calculation based on the Federal Customs Service of the Russian Federation, <https://customs.gov.ru>.

The most frequent cases involve currency transactions involving the transfer of funds using false documents. The highest damage amounts in this case were observed in 2019, and the lowest in 2014 (Table 1). The amounts of damage associated with cash smuggling are the most minimal in contrast to other. Many unscrupulous participants in Foreign Economic Activities took advantage of the difficult epidemiological situation in 2020, and the amount of possible damage amounted to 3 billion rubles (increase of 1,514.64%) (Table 1). Illegal movement of cash by individuals is one of the possible channels for money laundering, which reduces the well-being of society as a whole.

Since 2013, the country has intensified its effective fight against money laundering. While in 2007-2014 about \$16 billion was exported, in recent years this figure is much lower. Consequently, the effectiveness of customs inspections in the movement of currency has a positive result; there is an increase in budget revenues, opportunities for financing various activities, the growth of real income and wealth, and overall economic security of the country.

For further analysis, we will use statistical data and a two-factor linear model:

$$Y = ab_1X_1 + b_2X_2 + \epsilon, \quad (1)$$

where  $X_1$  – Capital outflow, billion \$;

$X_2$  – Weighted average dollar rate;

$Y$  – GDP (PPP) per capita, thousand \$.

As a factor determining people's standard of living, let us choose GDP (PPP) per capita, and try to reflect the impact of the foreign exchange market on social welfare.

**Table 2.** Summary data

Russia	
$b_1$	0.9837***
$b_2$	3,269***
Number of observations	27
$R^2$	0.89
DW	1.62

$$Y = 0.98X_1 + 3.27X_2 + 15.12 \quad (2)$$

The results showed (Table 2) that if capital outflows occur at 1 percentage point, GDP (PPP) per capita is reduced by 2 percentage point. At the same time, the fall in the exchange rate of the national monetary unit (the growth of the dollar) stimulates import substitution and leads to an increase in GDP per capita by 3.27 times. This is a very significant indicator and emphasizes the importance of currency regulation in increasing public welfare. The results also explain the actions of the Central Bank in Russia over the past two years,

namely the lack of currency intervention to curb the dollar, in favor of stimulating import substitution, welfare and economic security.

## 4 Discussion

The problem of legal and illegal outflow of capital has long existed and is relevant for most countries of the world. Studies to assess the damage to public welfare and the threat to the economic security of the state have a specific country-oriented nature. In general, the high volatility of exchange rates on capital flows is reflected in most academic papers [11, 12], but the factors determining the dynamics are clearly country-specific. A qualitative assessment of the effects of capital outflows is possible through a clear gradation of supply and demand variables and appropriate two-way analysis [13]. The authors also emphasize the importance of currency regulation [14], with oil prices, export earnings, investor risk appetite, and the sanctions intensity index chosen as priority indicators. Our results are partially consistent with these findings. Previous studies have prioritized domestic factors, such as consumer prices, external debt payments, and the amount of portfolio investment [15]. At present, the research conducted before 2014 can only be used to analyze the economy of that period. In the current market conditions, external factors are at the forefront of the analysis of capital outflows in the conditions of modern currency regulation. Studies in this area are based on multifactorial regression models of time series, which confirms the reliability of the obtained results.

## 5 Conclusion

Currency regulation plays an important role in the growth of prosperity and economic security, since the activities of the currency regulatory authorities contribute to the conduct of effective monetary policy.

Russia is increasingly pursuing a policy of liberalizing currency relations. In spite of this, absolutely all operations are subject to supervision in order to avoid such threats as significant reduction of the gold and currency reserve, instability of the country's balance of payments.

Having analyzed the indicators of capital outflow, it was found that it also has a negative impact on the economy, namely, contributes to the emergence of financial risks: the lack of domestic investment, the negative impact on the exchange rate of the national currency reduction in real income and welfare.

A comparison of the amounts of illegal and net outflows of funds showed that in recent years, the outflow of funds due to legal transactions exceeds illegal ones many times over. This fact underscores the need to introduce measures to minimize the net outflow.

The illegal outflow of money abroad is the main threat to the country's economic security. Unscrupulous participants in FEA seek to avoid not only investment risks and inflation, but also to multiply and legalize illegally obtained income.

The results of the study reflect the impact of currency regulation on the welfare of society, namely on the dynamics of GDP per capita. The foreign exchange policy of modern Russia is aimed at stimulating import substitution, improving living standards and welfare, including with the help of the Central Bank's instruments. Despite all the difficulties, Russia maintains a fairly high level of economic sovereignty and economic security.

The study was carried out within the framework of the basic part of the state assignment of the Ministry of Education and Science of the Russian Federation, project 0729-2020-0056 "Modern

methods and models for diagnosing, monitoring, preventing and overcoming crisis phenomena in the economy in the context of digitalization as a way to ensure the economic security of the Russian Federation”.

## References

1. G.V. Stankevich, O.N. Amvrosova, G.Y. Atayan, E.V. Kasevich, T.G. Slyusareva, Lect. Notes Networks Syst., **198**, 2179-2186 (2021).  
[https://doi.org/10.1007/978-3-030-69415-9\\_239](https://doi.org/10.1007/978-3-030-69415-9_239)
2. T. Dahlhaus, G. Vasishta, J. Int. Money Fin., **114** (2021). <https://doi.org/10240310.1016/j.jimonfin.2021.102403>
3. A.D. Levashenko, A.A. Koval, Fin.: Theory Pract., **22(4)**, 76-87 (2018).  
<https://doi.org/10.26794/2587-5671-2018-22-4-76-87>
4. N. Osina, J. Bank. Regul., **22(1)**, 52-72 (2021).  
<https://doi.org/10.1057/s41261-020-00128-y>
5. M. Rua, N. Zeolla, Probl. del Desarrollo, **49(194)**, 5 (2018).  
<https://doi.org/10.22201/iiec.20078951e.2018.194.61588>
6. G.K. Pasricha, J. Int. Money Fin., **122**, 102593 (2022).  
<https://doi.org/10.1016/j.jimonfin.2021.102593>
7. M.A. Rylskaya, A.Y. Kozhankov, O.G. Bobrova, Fin.: Theory Pract., **22(4)**, 88-103 (2018). <https://doi.org/10.26794/2587-5671-2018-22-4-88-103>
8. E.M. Sandoyan, A.G. Galstyan, Fin.: Theory Pract., **24(2)**, 92 (2020).  
<https://doi.org/10.26794/2587-5671-2020-24-2-92-103>
9. H. Zafarullah, H. Haque, J. Money Laund. Cont., in press (2021).  
<https://doi.org/10.1108/JMLC-10-2021-0109>
10. A.K. Biswas, J. von Hagen, S. Sarkar, J. Int. Money Fin., **120** (2022).  
<https://doi.org/10.1016/j.jimonfin.2021.102534>
11. V. Corbo, P. Di Casola, J. Int. Money Fin., **122** (2022).  
<https://doi.org/10.1016/j.jimonfin.2021.102553>
12. V. Mau, Rus. J. Econ., **4**, 87-107 (2018). <https://doi.org/10.3897/j.ruje.4.27743>
13. I.V. Prilepsky, Econ. Policy, **14(6)**, 8-35 (2019).  
<https://doi.org/10.18288/1994-5124-2019-6-8-35>
14. S. Ono, Econ. Syst., **45(3)** (2021). <https://doi.org/10.1016/j.ecosys.2021.100904>
15. S. Drobyshevsky, P. Trunin, Vzaimosvyaz potokov kapitala i klyuchevykh makroekonomicheskikh pokazatelei v Rossiiskoi Federatsii [Interaction of Capital Flows and Key Macroeconomic Indicators in the Russian Federation] (IEPP, Moscow, 2017)