

The international currency system: New challenges and opportunities in the context of global changes

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Abstract: The purpose of the article is to analyze the reform of the world monetary system and find mechanisms for its independent regulation, the use of competitive currencies for international transactions, especially decentralized ones such as cryptocurrency, or the creation of a super-sovereign global currency, which will be independent of the politics of certain countries. The systematization, assessment, and analysis of the main elements of the international monetary system were carried out by reviewing the literature of recent years and analyzing the open databases of the International Monetary Fund website to observe the theoretical and methodological foundations of the international monetary system, in order to determine its advantages and disadvantages, as well as to find promising directions for its reform during global changes. The unfairness and instability of the world currency during the economic crisis have caused significant losses for countries that do not own world currencies. This fact requires new approaches to regulating and reforming the currency system. One of the solutions could be the creation of an independent international currency that would preserve the monopolarity of the world currency and exclude the influence of the issuing countries on the value of the world currency. The analysis of world currency reserves revealed the prevailing share of the dollar at over 60% and the euro at about 20%. Among the possibilities, it is worth considering blockchain cryptocurrency technology, which could become the basis for the creation of an independent world currency and the development of an electronic global currency that would meet the demands of society. The international monetary system needs to be reformed; one of the promising directions should be the creation of an independent global currency with regulation in accordance with the interests of the world, ignoring the interests of the issuing countries.

Keywords: Blockchain, CBDC, Cryptocurrencies, International monetary system, Risks, Virtual assets.

1. Introduction

The international currency system as a system of monetary and credit relations at the world level plays an important role for both the global and the national economy, as it regulates trade relations between states. In the era of globalization and the exchange of goods and services between countries, this regulatory system is a reference point for ensuring the effective economic activity of states and their enterprises. However, globalization not only contributed to the circulation of goods, and therefore to the development of international economic relations, but also became the reason why global changes,

such as the SARS COVID 19 pandemic or climate change, affect economic activity at the world and state level, while local geopolitical, social and other processes influence international trade and economic activity.

2. Materials and Methods

From the beginning of trade between states, trade and economic relations needed a regulatory mechanism. Before the appearance of paper money, the world used the gold standard, when the value of goods was determined according to the value of gold [1]. The signing of the Bretton Woods Agreement in 1944 initiated the development of the classical international monetary system. Following the agreement, a fixed exchange rate of \$35 per ounce of gold was established for transactions between central banks. Also according to this agreement two international economic organizations were created — the World Bank and the International Monetary Fund [2]. Thus, after World War II, the international currency system became monopolar, as the US dollar was designated as the world currency.

In 1976, the Jamaican currency system was adopted, which differed in currency usage: only currency or special borrowing rights were used; other currencies of economically developed countries were included in the world currency system, in addition to the US dollar. Also the exchange rate was not tied to the value of gold and a floating exchange rate was introduced, states could independently choose which exchange rate to use in the domestic currency market, floating or fixed [3].

Despite the fact that the modern international currency system has expanded opportunities for conducting mutually beneficial international trade, there are still problems that require reform. Among the challenges, Sun [4] singles out unfairness in relation to the national currency and the instability of the world currency. Rahman [5], while analyzing the currency system, determined that the issuing countries are able to unilaterally influence the value of their sovereign currency, which performs the function of the global currency, and when making decisions that lead to currency depreciation, the government of these countries takes into account the interests of their country, but not the interests of the world. Another problem is the growth of global debt, as globalization and the development of digital transactions have led to a shortage of working capital in enterprises [6]. As a result enterprises and factories began to feel a lack of funds updating equipment, paying salaries and other production costs. Therefore, enterprises were forced to compensate for the lack of resources with bank loans, the interest on which often exceeded the profitability of production [7].

The global changes of recent years are connected, on the one hand, with the development of technologies, and on the other — with unpredictable medical and geopolitical changes. The development of blockchain technologies and the emergence of cryptocurrency as an independent payment system are both a challenge and a prospect for the international currency system [8]. As cryptocurrencies using blockchain technology can replace the centralized banking system, making it easier for developing countries to participate in the global digital economy, but it also increases the potential for financial crime, money laundering and tax evasion [9], [10], [11]. At the same time, cryptocurrency developers claim that cryptographic protection makes it difficult to counterfeit or double spend. Today, there are more than 1,600 active cryptocurrencies, which are decentralized networks based on blockchain technology. The most popular cryptocurrency is Bitcoin, which debuted in early 2009 after the 2008 crisis. It is a decentralized digital currency that can be sent from user to user without intermediaries, where transactions and user data are handled anonymously [12].

The cause of the economic crisis in recent years was the COVID 19 pandemic, which led to the largest increase in global debt to \$226 trillion since World War II [13], rising inflation and devaluation of national currencies [14], [15]. Although the World Health Organization did not insist on reducing cash payment as a source of the spread of the virus, it encouraged digital payment through electronic means of payment. However the advantage of cash is to preserve the anonymity of transactions and the economic freedom of agents. Proponents of going cashless say it will reduce illegal transactions and money laundering, as they believe illegal transactions are often conducted in cash or through

unregulated virtual currencies such as bitcoin [16]. The growing demand for cashless settlement has caused a discussion about the creation of a digital currency, such as the electronic euro [17].

Thus, in the era of global changes, the international currency system requires reforming to eliminate injustice in relation to national currencies, increasing the stability of the world currency, and finding mechanisms to reduce the risks associated with economic crises arising as a result of certain geopolitical, social or other processes. Globalization and technological progress create both challenges and prospects that, under the conditions of fair regulation, could reduce the disadvantages of the modern currency system.

The purpose of the research was to study the theoretical and methodological foundations of the international currency system as an important component of world trade and economic activity, to determine the advantages and disadvantages, as well as promising directions for its reform in the conditions of global changes.

The systematization, evaluation and analysis of the main elements of the international currency system was carried out by reviewing the literature for the last 5 years, analyzing the open databases of the International Monetary Fund website with further systematization and visualization of materials, and comparing them with each other using an empirical analytical method through the analysis of the frequencies of the world official currency reserve and the general government debt of individual countries with the determination of trends in dynamics.

3. Results

Analyzing the challenges of the international currency system, the disadvantages that raise questions about its reform are considered. Despite the fact that the currencies of economically developed countries, such as the euro, pound sterling, Japanese yen and others, were included by the International Monetary Fund among world currencies, their widespread use in international trade has not gained relevance. Thus, the question of whether the system is still monopolar is debatable. Benney and Cohen [18] believe that today, despite the presence of other currencies, the US dollar remains the main reference point, and conclusions about multipolarity are premature, despite the tendency to increase the competitiveness of “smaller” currencies.

According to [19], the share of use of the US dollar for international transactions is more than 60 %, the euro — more than 20 %, the remaining 20 % includes Japanese yen, Chinese renminbi, British pound sterling, Australian and Canadian dollars, Swiss francs and other currencies. The percentage distribution of foreign exchange reserves in the world of the 3rd quarter of 2023 is presented in Figure 1.

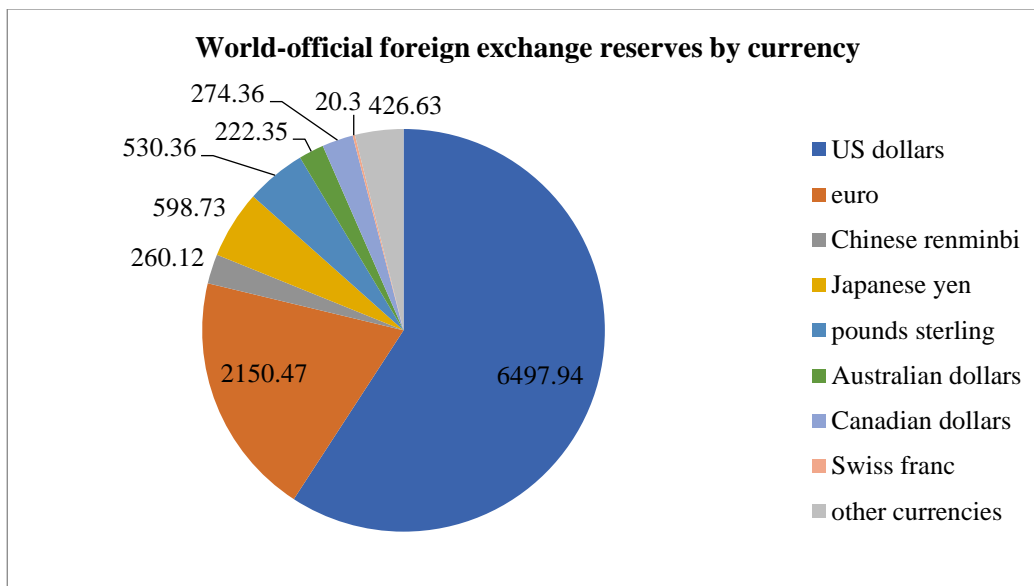


Figure 1.

World-official foreign exchange reserves by currency.

Source: Created by the author based on the open database of the International Monetary Fund [19].

Thus, the US dollar dominates the foreign exchange market, which, although it does not confirm the monopolarity of the international currency system, nevertheless indicates the importance of the USA in determining the trends of the world monetary system. The predominant share of the US dollar in the world market brings the system closer to a monopolar model than to a multipolar one and causes injustice in relation to the sovereign currencies. The injustice is determined by the fact that the world currency is the currency of a sovereign issuing state (for example, the USA), which receives a huge amount of international seigniorage. On the other hand, other countries that use the world currency for international trade depend on the economic policy of the issuing country and bear risks associated with changes in the value of the world currency, which cause losses that these countries cannot influence [4].

Instability is associated with the purchase and sale of goods in the time equivalent. Choosing the method of payment for the goods by advance, credit funds or full subscription, the buyer and the seller are exposed to the risk of losses associated with changes in the value of the currency depending on the method of payment [20]. Depreciation of the dollar is beneficial to debtors and not beneficial to creditors. As the most indebted nation to many countries, the USA stands to gain the most from a weak dollar, while creditor nations suffer losses, including China [4].

Although the multipolar international currency system is theoretically capable of reducing the risk of world currency issuance by the issuing country, which should eliminate injustice and instability, as a phenomenon inherent in the unipolar system, the multipolar system creates a constant conflict between world currencies. In the presence of two world currencies, when applying a fixed exchange rate based on the ratio of the prices of these currencies, the ratio of their market prices will be contradictory. When using a floating exchange rate, the ratio of the price of the two currencies will be adjusted by the buying or selling of the currency by the issuing country in the foreign exchange market. This ratio will tend to deviate from the actual market price ratio, which in turn will cause an even greater level of instability than with a monopolar system.

To eliminate these disadvantages, the creation of an international reserve currency, separated from independent countries, is proposed, which is considered as a promising reform of the international monetary system. The main task would be to create a world central bank independent of countries, this function could be performed by the International Monetary Fund [4], [21]. However, the creation of a super-sovereign currency is a long-term process that requires solving problems that may arise, such as

security vulnerabilities from hackers, fraudsters and speculators, national political disputes and possible gaps in the regulatory system [22].

The global Internet as a tool of the international system of payments and settlements could be used as the basis for the development of an efficient and inexpensive global sovereign currency. The creation of global central banks, the issuance and management of super-sovereign currencies can maintain the fundamental stability of the global monetary system [23].

The development of decentralized cryptocurrencies based on blockchain technology has created greater competition and indicated prospects for reforming the international currency system. These virtual currencies are intangible real assets whose value does not depend on political decisions because they are not regulated by a government or controlled by a central bank. [24] say that for Bitcoin the supply is set at 21 million units, so it is expected to be an asset that does not lose value in the long term (a deflationary asset), even though it is very unstable at the moment. The instability of bitcoin is an important reason why countries still choose the classic world currency for conducting trade and economic activities. Another disadvantage of cryptocurrencies is the high cost of mining energy [25]. Instead, [26] suggest using new energy sources that can help achieve sustainability in cryptocurrency mining.

The modern international currency system, in addition to currency relations, regulates and stimulates the development of lending. The rapid development of technologies, as well as globalization, led to a shortage of working capital, and as a result, for the development of the country's economic activity, crediting began to be widely used. According to the IMF, in mid-2021, the total foreign currency in circulation in the world reached 11.7 trillion US dollars equivalent. This amount represents the value of real resources that are consumed for free by countries issuing world currencies, mainly the United States. This means that the world is giving free resources or loans equivalent to \$11.7 trillion that do not have to be paid back to the countries that hold the world currency [5]. In this way, the issuing countries accumulate assets whose value is constantly decreasing. This phenomenon is the basis of inflation. Under normal conditions, international currencies depreciate by an average of 2 % per year. This is the accepted inflation rate of 2 % [27].

Since 1913, the value of the US dollar has fallen by 96.4 %. The value of the dollar today is 3.6 % of 1913. The euro lost a third of its value in 20 years [27]. The reason for the fall in the value of the world currency is that its value is attached to the state budget. The government makes deficit of the budget in order to stimulate economic growth [5]. A deficit budget is formed by an increase in expenses that exceed income, which in turn leads to covering the deficit with debts and money printing [7]. As a result, the money supply increases, and the value of money falls. So the value of the money the public has is decreasing as the government takes it away by printing new money. Depreciation of money or inflation is an indirect tax that the government levies on the population. Moreover, issuing countries receive this "tax" from all countries of the world.

The impact of global changes on the international currency system can be assessed by analyzing the impact of the COVID 19 pandemic, which caused a large-scale economic crisis [14]. The pandemic caused a crisis in the health care system and causes economic crisis, as the shutdown stopped a lot of activities especially in the field of services and logistics. Thus, there was a simultaneous reduction in demand and supply. As a result, the share prices of many companies fell on the financial markets, the purchase of securities increased, the currency depreciated and inflation increased, the level of global debt increased significantly, which during the pandemic reached a record value since the Second World War and is 226 trillion dollars [13]. Such changes are associated with uncertainty, a simultaneous reduction in supply and demand, an increase in the money supply, and the devaluation of national currencies

Both the world debt and general governmental debt has increased. On the one hand, globalization and the development of digital technologies led to a shortage of real money, which in turn provoked a shortage of money for the development of production and salary, which stimulated enterprises to use credit funds, as a result of which the world debt began to grow. The graph in Figure 2 shows trends in

the general government debt of the United States, China, Germany, France, and Italy in 2008, 2020, and 2022.

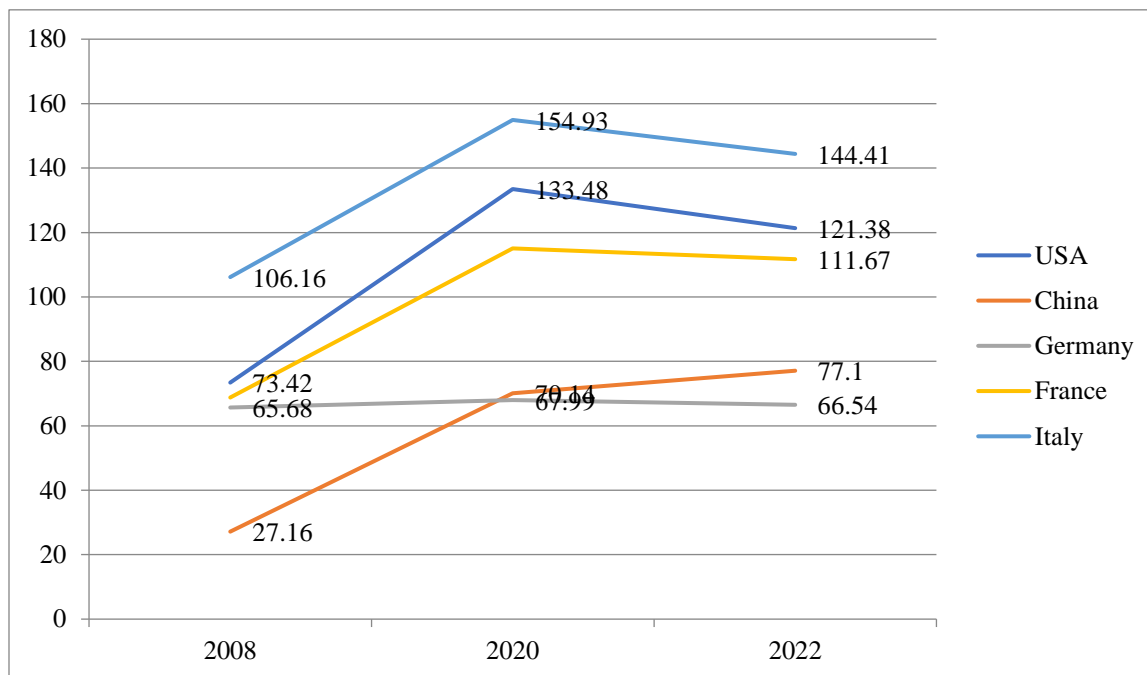


Figure 2.

General government debt in 2008, 2020, 2022.

Source: Created by the author on the basis of [28].

The graph shows that the highest level of government debt were found in 2020 during the COVID 19 pandemic, which were higher compared to the 2008 crisis. In 2022, there is a tendency to decrease government debt in all countries except China.

In the conditions of COVID 19, the issue of digitalization of currency has arisen [29]. The most popular proposal is the creation of centralized virtual currencies issued by the respective central banks [17]. In response to the reduction in the use of cash, the introduction of digital currency would be promising. To meet the needs of users, a digital currency must meet the following criteria: be cheap, secure and easy to use. However, digital money has disadvantages in crisis situation, as during a crisis depositors do not trust the banking sector and they can very quickly transfer liquid assets from commercial bank deposits to digital currency. This could increase the likelihood of currency outflows from banks, weakening financial stability [30].

4. Discussion

The main shortcomings of the international monetary system are determined by unfairness and instability. Injustice is determined by the fact that the US and Europe develop monetary policy for their own countries through the defense of regional interests, not global ones. The policies they pursue are also based on the conditions of the governments of these countries, and not on conditions that would be favorable to the world economy. Countries that do not own the world currency are forced to adapt and take for granted the losses associated with the devaluation of the world currency. Rahman [5] characterizes countries holding international currencies as acting in accordance with their domestic interests rather than taking into account the interests of the world. Therefore, he claims that the international currency system is the largest empire of modern times. Similar conclusions are drawn by [31], who claims that poor countries contribute to the development of rich countries, since the budget

of the issuing countries annually received about 800 billion US dollars between 2010 and 2019, which is 3.3 % of the GDP of all developing countries in the world. Mayer describes this phenomenon as a “free lunch” for residents of issuing countries, flowing from depreciating currencies from developing countries to the richest countries that own international currencies. The instability of the global currency is explained by the difference in the method of payment for goods and services in conditions of devaluation of the world currency. For example, in the event of a full payment for the goods under conditions of devaluation of the world currency, the buyer loses and the seller receives excess profit, another trend is observed when goods are buying on credit, when the buyer-debtor receives a benefit from the depreciation of the currency, while the creditor receives losses [4].

Despite the fact that, in addition to the dollar, currencies of other countries are involved in international economic relations, the share of the dollar is predominant and indicates a tendency towards the monopolarity of the world currency. [32] analyzed the international currency usage index of the US dollar and the euro in 2021, and concluded that the usage index of the dollar is 66.6 % and that of the euro is 24.3 %. [33] analyzed currency invoicing patterns in global trade and found that the US dollar still dominates, followed by the euro. All this evidence suggests that the US dollar with a small additional euro is the de facto international monetary system, and that US and European monetary policy is global monetary policy [34]. Monopolization of the world currency system determines the factors of injustice and instability, which stimulates the search for an international independent currency that would be regulated outside the borders of a sovereign country, and therefore in the interests of the world [36].

After the international financial crisis of 2008, a new digital asset based on blockchain technology emerged. It was Bitcoin, a private decentralized cryptocurrency. Many such cryptocurrencies have appeared over the years (Ripple, Ethereum, Litecoin, etc.), however, the instability of their value, distrust of security technologies and risks associated with the anonymity of transactions have become an obstacle to their global use for international economic transactions [24].

The COVID 19 pandemic has caused an economic crisis, currency devaluation, rising inflation, rising global debt, and contributed to raising the issue of the prospects for the development of a global independent currency and digital currency [14]. [5] argued that the COVID-19 pandemic has accelerated the process of cryptocurrency emerging from marginal status and thrusting it firmly into the center of consciousness of far more people than ever before. Because, in his opinion, the world needs a fast, inexpensive payment tool without unnecessary intermediaries.

The currency system is now at a critical stage, because the world economy, which was already stagnant before the pandemic, has entered a phase of deep crisis. The increase in public debt is financed by expansionary monetary policy, which is understandable in the short term due to the impact of the pandemic, but which, if sustained, could exacerbate macroeconomic imbalances in countries. Against this background, it is possible to foresee serious changes in the currency system [14].

5. Conclusion

The imperfection of the international currency system, which is associated with unfairness, instability and a tendency towards monopolarity, requires the search for promising directions for its reform, which may be connected with the creation of an independent global currency, the regulation of which would be carried out in the interests of the world, and not of the issuing countries. At the same time, the development of blockchain technology can be borrowed to create a new sovereign global currency. The problems of the international currency system became even more acute under the conditions of the pandemic COVID 19, especially the level of world debt and currency depreciation, which became the basis for a discussion on the creation of an electronic currency and a review of the mechanisms of influence on the international currency system in crisis conditions.

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