Kyiv National University of Trade and Economics

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FINAL QUALIFYING PAPER

on the topic:

"World Currency Wars in Countries with Open Economies"

(based on Ministry of Economic Development and Trade of Ukraine materials)

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INTRODUCTION

The urgency of the problem that led to the choice of research topic is that the exchange rate as an object of monetary policy plays an important role in macroeconomic regulation. Its fluctuations affect both the stability of the domestic market of the country and the development of foreign economic relations.

Hoping to accelerate the recovery of their economies, different countries of the world trying to resort to repeatedly tested weapons - the devaluation of national currencies. But all currencies can not be devalued at the same time. The states have to conduct a kind of "relaxation" race to defend their interests.

With the growing financial imbalances in Ukraine and the world, monetary policy mechanisms play an important role in ensuring financial stability of the economy. The problem, the significance of the impact on economic processes, as well as the specificity of methods and instruments of implementation, explain its separation from monetary and credit policy in emerging markets. The growing challenges of financial globalization, the spread of financial and economic crises in the world and their negative effects on the economy place emphasis on the activities of the central bank in support of the stable functioning and development of the financial system necessary for the implementation of macroeconomic goals and structural reforms in these countries. This requires the search for mechanisms for interaction of the monetary, monetary and macroprudential policy of the central bank in the context of ensuring the financial stability of the Ukrainian economy.

Changing the exchange rate of the country, regulating foreign trade, adjusting the cost indicators of the balance of payments. In order to achieve the stated goals, a number of measures can be applied by countries: artificial devaluation and revaluation, the use of tariffs and licenses, and the implementation of currency interventions. Particular attention deserves the instrument of devaluation of the national currency.

As is known from the history of the world economy, the economic growth of national economies is not eternal. A recession can be caused both by internal and external factors. The recovery of the economy is similar to the treatment of the human body - you can write an individual course of treatment for the patient, which consists of a complex of drugs, but you can buy a panacea in the nearest pharmacy. And even though stimulation of economic growth is a delicate matter, financial sector managers often count on the same magic pill for the national economy, and the name of it is to lower the real value of the national currency.

Unfortunately, virtually any panacea always has side effects. The actions of governments to reduce the value of the national currency may lead to similar actions of other countries whose export volumes have declined after the implementation of the above-mentioned financial strategy by their neighbor.

In turn, this result can lead to a general decrease in the volumes of world trade. In this situation, the strategy of devaluation is carried out at the expense of other countries - exporters, it is called a competitive devaluation, in a more sharp interpretation - "currency wars". As you know, the war is a game with zero winnings, which means it denies the principles of international economic cooperation, the main goal of which is the overall prosperity of the whole world.

Foreign economists have made a significant contribution to the study of the problems of financial and currency stability, their regulation by means of foreign exchange policy: A. Demirguc-Kunt, E. Detragiache, S. Drobyshevsky, M. Ershov, B. B. Eichengreen, M. Obstfeld, C. Reinhart, K. Rogoff, A. Rose, N. Roubini (N. Roubini), P. Trunin and others. The study of mechanisms and effectiveness of the implementation of monetary policy is devoted to many works of domestic scientists. Among them: O. Baranovsky, Y. Belinska, O. Bereslavskaya, A. Galchinsky, V. Heyets, O. Dzublyuk, F. Zhuravka, S. Korablin, V. Mischenko, O. Petryk, V. Stelmakh, T. Unkovskaya , V. Shevchuk, T. Shemet and others. Despite the existence of a substantial domestic and international research in the study of foreign exchange

policy, there is currently no comprehensive and formalized vision of the place of currency policy in the system of ensuring financial stability of the economy in the conditions of transformation of monetary regimes, the search for reliable models of forecasting, evaluation and prevention of the currency crisis.

The object of research is the process of formation monetary policy by countries for regulation exchange rate of national currency.

Subject of research is mechanism and tools of international currency wars, as one of the main methods for increasing the price competitiveness of the country's goods in foreign trade relations with other countries of the world.

The purpose of research is the analysis of the mechanism of conducting world currency wars and development of practical recommendations to avoid negative impact on national economy.

In accordance with *the purpose of research*, the following tasks were set:

- define essence and main goals of world currency wars.
- analyze retrospective of global currency wars.
- identify methodical tools for conducting currency wars.
- assess of the state GDP and trade balance of key participants in world economy.
- determine activity Central banks of USA, China, Japan and EU in the world currency manipulations.
- estimate of the influence of competitive devaluation by open economies on the state of Ukraine’s trade balance.
- explore development of institutional mechanisms for prevention of international currency wars.
- investigate areas of protection of the domestic economy from the negative impact of international currecy wars.

– research scenario approach for forecasting exchange rate and trade balance of countries with open economy in conditions of conducting international currency wars.

To achieve this purpose, the following *research methods* were used: dialectical method – to determine essence of world currency war, a comparative analysis – to justify approaches to its definition, deduction – to determine the place of currency wars in the improving trade balance and increasing growth of GDP, grouping – for aggregating the main macroeconomic indicators for final assessment and providing own recommendations, correlation-regression analysis – to determine the relationship between macroeconomic indicators.

Theoretical and information basis of the research consists of periodical and monographic editions, legislative base, fundamental provisions of economic theory, materials of international scientific conferences, statistical materials of International Monetary Fund (IMF).

Practical value – results obtained at work can be used to protection of the national economy from the negative impact of world currency wars, alignment of macroeconomic imbalances in the economy, improvement of the trade balance, stimulation of Ukrainian exports to the world market by increasing the price competitiveness of national goods.

The final qualifying paper consists of three parts. The first part covers theoretical forms of investigation of international currency wars between counties with open economy. In the second one, the analysis of international currency wars between countries with open economy. In the third, directions of counterfeiting international currency war on the global and national level.

PART 1. THEORETICAL FORMS OF INVESTIGATION OF INTERNATIONAL CURRENCY WARS BETWEEN COUNTRIES WITH OPEN ECONOMY

1.1. The Essence and Goals of International Currency Wars

Intensive development of globalization processes at the beginning of the XXI century, the growth of international trade, the change in the position of countries on the world market and the structure of their trade, the desire of the states to maintain the competitiveness of their own commodity producers and protectionist tendencies in the new forms actualize the problem of exacerbation of trade relations between the countries.

Each counterparty of international trade is trying to secure the most favorable conditions and benefits, even while discriminating against the trading partner. The governments of the countries defend the interests of domestic producers by all means available to them. In spite of the efforts. World Trade Organization (WTO), which seeks to provide the countries parties with favorable conditions for international trade, the conflict of international trade relations remains high. International trade disputes are flaring between different countries, both WTO members and other countries.

The twenty-first century is characterized by the emergence of so-called "democratic wars" in the world, which does not inherent in the features of classical wars between states. The "democratic wars" includes: political, economic, trade, currency and other types of wars. Democratic wars – a new type of confrontation between states that arose in the replacement of classical warfare (without the use of weapons) in the 20-21st century, and is aimed at achieving a clear set of benefits [27].

Democratic wars in the world can be divided into four main levels, where the

first level will be the main and largest in its essence, will include the second level, the third level will be derived from the second level and will include the lowest and the

Table 1.1

Democratic Wars and its Main Components

Level of democratic war	*Components of democratic war*	*Description components of democratic war*
Level 1	Political war	Getting one of the parties to confront certain political preferences by inducing the other party to political concessions, obtaining or expanding political influence on the other side.
Level 2	Economic war	Economic strategy based on the use of economic measures (economic blockade, trade restrictions, etc.), aimed at weakening the economy of another state or a bloc of states.
Level 3	Trade war	Trade rivalry between two or more parties that is conducted with the aim of seizing foreign markets (offensive trade warfare) or preventing the trade "occupation" of the national economy.
Level 4	Currency war	The struggle between individual countries or their groups for the markets through the active use of exchange rate fluctuations of national currency.

Source: complied by the author based on [24]

lowest in its essence fourth level (Table 1.1). The concept of political war describes the use of one side of political means to force the opponent to act on the basis of their own, hostile intent. Forced political warfare leads to the weakening or destruction of the political, social or public will of the opponent. Political war can be combined with violence, economic pressure, subversion and diplomacy, but its main aspect is "the use of words, images and ideas".

The economic war as a component of a political war is aimed at getting one of the parties to confront certain political preferences by inducing the other party to political concessions, obtaining or expanding political influence on the other side. At

the same time, the objectives of economic confrontation are also achieved. Economic war - an economic strategy based on the use of economic measures (economic blockade, trade restrictions, etc.), aimed at weakening the economy of another state or a bloc of states. Trade war the highest degree of tension in relations between countries associated with the use of intensive prohibitive measures of trade policy, which can lead to large material losses of the country against which they were caused. To Adam Smith and the then Physiocrats, no thinker believed in freedom of trade. The economic policy of past ages was to increase its own exports and to reverse the export possibilities of the other side [41].

Currency wars are consistent intentional actions by governments and Central banks of several countries to achieve a relatively low exchange rate for their national currency. The goal is to increase exports and reduce imports. According to certain economists, currency wars are one of the most negative and undesirable phenomena in the international economy.

The uneven rates of inflation in individual countries are accompanied by a devaluation and a revaluation of national currencies. When the average price level in one of the countries grows faster than in others, there is an actual overstatement of official currency parity. It stimulates the import of goods and makes it difficult for them to export. If this situation is prolonged, it leads to the emergence (growth) of the external deficit of trade balance, the intensive outflow of capital abroad.

Given the definition of the category "world currency wars", first of all, it is necessary to consider a concept such as devaluation. It represents the official decline in the exchange rate of the national currency in relation to hard currencies. The IMF uses the following definition: devaluation is a dictated by economic policy measure, which is accompanied by a decline in the real exchange rate. The devaluation is carried out by the Central bank (or similar in function of the body, for example, in the United States of America – the Federal Reserve System) and is one of its instruments in managing the national currency [48].

Devaluation, despite all of the foregoing, can not be considered exclusively a negative phenomenon in the economy. It leads to a reduction in the purchasing power of imported goods that become more expensive in the national currency, resulting in increased demand for domestic products - thus devaluation can be considered as one of the tools of protectionist policy. It is anticipated that the indirect limitation of competition from foreign producers can accelerate economic growth in the country, reduce unemployment, and, if necessary, "restart the economy", which entered the recession. Moreover, it stimulates exports, and around which currency wars unfold on a competitive devaluation [35].

World currency wars are consecutive, deliberate actions by governments and Central banks of several countries aimed at achieving a low exchange rate for their national currency in order to increase export volumes. The increase in export volumes is due to the decrease in the national currency of the cost of production of domestic enterprises-exporters and the possibility of lowering prices for products. Improvement of export positions is carried out in this case at the expense of other countries. In response, other countries are beginning to reduce the exchange rate of their country, resulting in this process is very difficult to stop.

In each country, devaluation provides a short-term price advantage, which increases the competitiveness of domestic enterprises. Any country can maintain an advantage of this kind only until this time, while another competitor does not devalue its currency. According to David Woo, specialist of BofA, in foreign exchange markets, the depreciation of the exchange rate is a relatively painless and easy political method designed to increase the competitiveness of their goods and services on the world market. Other ways to improve the economic situation, such as structural reforms, are much harder to implement. David Wo also holds the view that "currency wars" on a global scale will not lead to a general economic growth [27].

Each currency war, to a certain extent paradoxical in its essence. It is conducted at the world level, but the reason for its occurrence lies within a separate

country. Foreign currency wars are generated in an atmosphere of insufficient internal growth, recession, recession. It should be noted that the term "currency wars" does not mean the destruction of the economy of the second country, Central banks seek a steady decline, not collapse.

This term came into circulation in 2010, when Brazilian Finance Minister said that the leading Western countries began a currency war against the Brazilian real (BRL), which in 2009-2010 strengthened by 30% in relation to the world's leading currencies. The Brazilian minister noted that this is not a result of a spontaneous market game, but a conscious policy of leading countries issuing hard currency [24].

International currency wars, competitive devaluation or the policy of "the affairs of one's neighbor" are identical phenomena, closely intertwined with trade and customs wars, and their main goals are:

1. Provide the country with its advantages in international trade at the expense of cheapening domestic goods and rising prices for imported goods.
2. Creation of favorable conditions for the development of domestic production and protection of domestic producers.
3. Reducing the debt burden of the government by redemption of its debt obligations at a lower price [17].

There are several main reasons that have led to the current state of the currency market. And, strangely enough, it's not just that governments use inflation and devaluation instruments to make direct exchange rate changes. The world of currency wars is much more complicated. The main factors that influence the processes of modern currency conflicts between states, is in book James Ricardz:

- High degree of state intervention and monopoly of large financial institutions. Moreover, the problem is that even such large and influential structures may be mistaken as we have seen in the 2008 crisis.

- Sophisticated systems of international finance and foreign exchange operations. At the moment, global financial and foreign exchange markets have reached such a scale that they have lost much of the inherent stability of the simple systems, becoming very confusing and risky. The more complex the system becomes, the faster the risk increases and the more disastrous the system changes.
- A non-optimal risk assessment system. A significant number of financiers assess the risks from the point of view of their normal distribution and the concept of cost at risk. But modern risks are less predictable and depend on a much larger number of factors than are usually taken into account.
- Colossal volumes of artificial financial instruments. As an example, the author cites derivatives, that is, derivative financial instruments, such as credit default swaps, which at one time led to an aggravation of the mortgage crisis in the United States of America in 2008. Among artificial financial instruments, the author also allocates special drawing rights (SDRs) as one of the reasons for the lack of transparency of markets and ineffective interference with the global economic processes of such an over-structure as the International Monetary Fund.

Devaluation, with its adverse consequences, has historically rarely been a preferred strategy. According to economist Richard N. Cooper, writing in 1971, a substantial devaluation is one of the most "traumatic" policies a government can adopt – it almost always resulted in cries of outrage and calls for the government to be replaced. Devaluation can lead to a reduction in citizens' standard of living as their purchasing power is reduced both when they buy imports and when they travel abroad. It also can add to inflationary pressure. Devaluation can make interest payments on international debt more expensive if those debts are denominated in a foreign currency, and it can discourage foreign investors. At least until the 21st

century, a strong currency was commonly seen as a mark of prestige, while devaluation was associated with weak governments [33].

However, when a country is suffering from high unemployment or wishes to pursue a policy of export-led growth, a lower exchange rate can be seen as advantageous. From the early 1980s the International Monetary Fund (IMF) has proposed devaluation as a potential solution for developing nations that are consistently spending more on imports than they earn on exports. A lower value for the home currency will raise the price for imports while making exports cheaper [].

This tends to encourage more domestic production, which raises employment and gross domestic product (GDP). Such a positive impact is not guaranteed however, due for example to effects from the Marshall–Lerner condition. Devaluation can be seen as an attractive solution to unemployment when other options, like increased public spending, are ruled out due to high public debt, or when a country has a balance of payments deficit which a devaluation would help correct. A reason for preferring devaluation common among emerging economies is that maintaining a relatively low exchange rate helps them build up foreign exchange reserves, which can protect against future financial crises [27].

Currency wars are actions of the country's financial authorities aimed at lowering the rate of their currency relative to others, which are important for the international trade of this state. In response to such actions, other countries are beginning to lower the exchange rate of their currency, as a result of which this process becomes difficult to stop.

Using competitive devaluation, a country can take a leading position in export. The meaning of a deliberate depreciation of the own currency (devaluation) is to improve the position of our own industry (primarily export) and worsen the conditions for the import of goods and services. It is assumed that indirect restriction of competition from foreign producers can accelerate economic growth in the country, reduce unemployment, and, if necessary, “restart” an economy that is in a state of

crisis or depression. Sometimes a competitive devaluation is intentionally carried out in order to revive and restart the economy. A currency war within a country can lead to a decrease in the cost of goods produced.

Currency war is the struggle of individual countries, which is in the interests of large firms for foreign markets through various foreign exchange measures, mainly by changing the official exchange rate of its currency, this is primarily an economic rivalry between the states, the essence of which is to establish such the rate of the national currency relative to the monetary unit of the rival country, which would allow it to dominate it.

Power structures, with the help of currency regulation tools, stimulate an increase in exports and reduce imports, that is, they implement a policy of protecting a national producer, the consequences of which should be the economic stability of the state. Leader countries use the currency valuation tool as a means to create economically favorable conditions for both exporting entrepreneurs and government of countries that want to redeem their debt obligations at a lower [41].

The currency war is a struggle between individual countries or their groups for the markets through the active use of exchange rate fluctuations. These fluctuations reflect, on the one hand, the changes, first of all, in the economic situation of the country on the world market, on the other hand - create the preconditions for these changes. They are closely connected primarily with the state of foreign trade activity. Therefore, the currency war takes place against the backdrop of wars - trade and customs. They are based on the efforts of the states to realize their national economic interests in the sphere of foreign economic activity in the most possible way [39].

International currency contradictions in the world cause total inflationary processes, which in turn can lead to trade wars. It is well known and everyone understands that the exchange rates of any national currency relative to others are formed on the basis of entirely market-based mechanisms. There are those who want

to buy a currency; there are those who want to sell the currency. There is a Central bank that is planning the dynamics of the national currency and smoothes fluctuations by buying and selling currency in case of local changes in the rate caused by current changes.

If the state starts a currency war, it cripples the value of its national currency. But in relation to a particular currency or relative to all at once - it depends on the objectives of the special operation. The rate collapses simply: the market is thrown free (cheap) money and in fact there is a devaluation of the national currency (by the way, another name of currency wars – is a competitive devaluation).

In view of this, the detection of problems of currency regulation and the search for solutions to them becomes urgent, as the danger to economic progress during the period of aggravation of crisis phenomena increases and influences both the development of each state and the world economy as a whole [48].

Therefore, the competitive devaluation is being conducted in order to strengthen the position of domestic producers, to increase the country's export performance, or to occupy a better place in the global economy. Consistent deliberate actions by governments and Central banks of several countries to achieve a relatively low exchange rate for their national currency, in order to increase their own exports. The increase in export volumes occurs due to a decrease in the local cost of production of domestic exporting enterprises and the opportunity to reduce prices for exporters.

1.2. Retrospective Analysis of International Currency Wars

Until the beginning of the twentieth century the decline of the national currency as a manifestation of selfish economic policy was observed occasionally, since under the mono- and bimetallic standard of the VIII-XIX centuries, the

countries tried to maintain the high value of their national currencies. Instead, since the 20's of the twentieth century, currency wars as a form of financial protectionism were observed both during periods of economic crises, and in times of global stagnation and recovery. It is therefore agreed to divide the process of the world currency war into two periods of "old period" until 1920 and "new period" from 1920 to the present. The main events of the world currency wars and their characteristics in the old period of time are reflected in Table 1.2.

Table 1.2

Retrospective of Competitive Devaluations of National Currencies in the Old Period

Period	*Countries*	*Characteristics of actions and consequences*
VII century B.C.	The Kingdom of Lydia	Worsening the composition of the alloy of their city coins, paying tribute to the king, saved a lot of money.
IV-II century. B.C.	Ancient Greece, Rome	Mining of fake coins, reduction of gold content of coins for military purposes. Issue on the market of a large number of subarate dinars has led to inflation.
XIII-XIV centuries	France	The coinage of fake coins was carried out, the golden content of coins was reduced through monetary reforms to finance military campaigns.
XVII century	Prusiya, Bavariya, Saksoniya	
XVIII-XIX centuries	Rzecz Pospolita	Separate attempts to replace monetary metals (gold, silver) with nonmonetary (iron, copper); reduction of the statutory content of precious metal or the weight of the Polish currency. There was both legal and illegal falsification of coins.

Source: complied by the author based on [48]

During the First World War, countries departed from the gold standard in order to earmark funds for financing military expenditures. After its end before the countries the question arose whether to return to the gold standard. Germany, which was in a deep crisis due to military defeat and the need to pay reparations to the winning countries, decided to continue issuing the national currency. Such measures have led not only to soften the USA and the Great Britain's demands for reparations in accordance with the Versailles Peace Treaty, but even to economic growth - in 1924-1929, the growth rate of industrial production in the country was higher than the USA figures.

Other European countries have tried to return to the modified gold standard - gold bullion. By aligning the exchange rate of its own currency to gold, France until 1923 also carried out the inflation of the franc (FRF) and its devaluation, as a result of which she managed to improve its trading position, as well as to accumulate gold and currency stocks that flowed to the country. At the same time, U. Churchill decided to return the prewar rate of GBP to gold, which had a detrimental effect on the UK economy - the unemployment rate had sharply increased, and production levels had fallen (Table 1.3).

Table 1.3

Countries	*Monetary action*	*Impact on the economy*
USA	Stabilization of exchange rate	Increasing
France	To 1923 – devaluation From 1923 - stabilization	Increasing
UK	Revaluation	Decreasing
Germany	1921-1923 - Hyperinflation and, as a consequence, devaluation.	Increasing

	From 1924 - stabilization	

Monetary Actions of Large Countries in «New Period» of International Currency Wars (1921-1929)

Source: complied by the author based on [41]

Obviously, in the post-war period, the devaluation of its own currency helped Germany and France to stabilize their economies and compete the benefits to the world market, while the British government's decision to devalue its own currency has led to a deep crisis. The United States of America has been able to achieve growth without introducing a devaluation, given that only they and Japan during the war have increased their national wealth. The share of the United States of America in the world centralized gold reserve for 1913-1924 pp. increased from 31.7 to 46%, while the share of European countries fell from 49.3 to 34%.

The World Financial Center has essentially moved from Western Europe to the United States of America. In September 1931, Great Britain left the gold exchange regime and lowered GBP against gold, and, accordingly, to other currencies that continued to be tied to it. Soon, Norway and Sweden, as well as Denmark, joined. The countries that kept their gold currencies tried to reduce their production costs by cutting costs, reducing wages, and lowering prices, which in turn led to deflation and mass unemployment [51].

This led to the loss of competitiveness of the USA economies and others countries whose currency remained tied to gold. The USA conducted a steady devaluation of the USD on gold, which, together with the coercion of citizens to exchange gold coins and ingots they owned, for paper money, as well as a ban on the export of gold abroad, had little positive effect on the stabilization of the financial system. In general, USD in 1934 depreciated by 70%: the price of ounces of gold increased from 20.67 to 35 USD.

The devaluation of national currencies for the economies of Great Britain and

the USA has had a positive effect - prices have ceased to fall, money supply has increased, production has begun to expand, employment has increased. In 1936, the first round of competitive devaluation was completed – between the USA, France and the United Kingdom signed a trilateral agreement in order to ensure the restoration of international economic relations, too France was allowed to devaluation of the FRF, fixed new rates of national currencies for gold and restored the movement of gold between countries. Switzerland, Belgium and the Netherlands also joined the agreement (Table 1.4) [24,41].

The second round of "currency wars," or competitive devaluation, took place in the period 1967-1987. By this time, the attachment of USD to gold and the ability to exchange other currencies for USD made the USA actually a dictator of the world monetary system.

Table 1.4

Monetary Actions of Large Countries in «New Period» of International Currency Wars (1929-1936)

Countries	*Monetary action*	*Impact on the economy*
USA	1929-1934 – fixation exchange rate; From 1934 – devaluation	Increasing
UK	Devaluation	Increasing
Germany	1929-1934 – revaluation; From 1934 – devaluation	Stabilization

Source: complied by the author based on [41]

President L. Johnson believed that the USA could be provided at the same time economic growth of the country and to wage war in Vietnam. Tax cuts the economy grew, the GDP growth rate was 5% in 1963 and an average of 4.8% in the years following the presidency of L. Johnson, but the inflation rate also increased - from 1.9% in 1965 to 3.5% of the next year [34].

The British government in 1967 held the first after the Bretton Woods Conference, the devaluation of GBP. This instability was caused both by short-term trade imbalances and by the global imbalance between the world's reserve holdings in other countries and the UK's gold reserves - in the mid-1960's, the first exceeded the second almost by four times. This made the country vulnerable to the actions of the owners of GBP for their sale or purchase. In addition, the reasons for the devaluation were the need to reduce the value of the British currency for joining the European Economic Community and inflation, through which the country was struggling to reduce unemployment. In 1967 the value of the GBP against the USD decreased by 14.3% and dropped from 2.8 USD/GBP to 2.4 USD/GBP.

The devaluation of the GBP became the first obvious prerequisite for the collapse of the Bretton Woods monetary system. L. Johnson's policy, inflation and trade deficits clearly demonstrated that the USA is also stepping up from this scenario. This led to speculative expectations about the rapid rise in the price of gold.

In the mid-1960's, other countries were criticized for ruling USD among reserve currencies and, in general, the USA position in the global economic system. So, in 1965, France exchanged 150 million USD from its reserves. USD on gold and announced its intention to exchange the same amount soon. Spain reiterated France's example and exchanged 60 million USD. Such actions have devastated USA gold reserves [33].

Under pressure from trade deficits and inflation in 1971, USA President R. Nixon announced the introduction of a new economic policy in the country, which anticipated the country's exit from the system of gold standard, having untied the USD against gold. In addition, Nixon also introduced an additional one income tax on imports of 10%, which has become a real shock to USA trading partners.

The answer to the USA withdrawal from the gold standard was Japan's decision to move to the JPY's floating regime. By the end of August 1971, the JPY

has risen in price relative to the USD by 7%, which has hit Japan's exports to the USA, especially in the automotive and metallurgical sectors [33].

In December 1971, a G10 meeting was held in Rome, where it was decided to raise the value of gold by 9% against the USD and increase the rate of other currencies for gold by 3-8%. Great Britain and France did not revalue their currency against the USD, but their currency is all one has become more expensive relative to the USD. The JPY suffered the most - it has risen in price by 17% against the USD [34].

However, even this decision did not have positive consequences for the USA or other countries. Already in 1973, the USA was in a deep recession with high levels of unemployment and inflation, and the stock market began to fall. Despite the arrangements of the end of 1971, for six months, the British government released a GBP in swimming, whose course has fallen by as much as 10% by the end of the year. In June 1972, Germany introduced control over capital. In July of the same year, Canada and Switzerland also let their currencies go swimming. In 1973, the IMF officially announced the end of the gold standard.

Despite the devaluation of the USD and the hope that it will lead to a drop in unemployment and GDP growth, from 1973 to 1981, the USA has experienced three recessions. For the period 1977-1981, the purchasing power of the USD fell by half. The price of gold has risen from 40.80 USD per ounce in 1971 to 612 USD per ounce in 1980.

Economic processes in the USA were characterized by stagflation. In order to overcome this problem, a policy of expensive money was introduced and the federal funds rate, which peaked at 20% in June 1981, was substantially raised. The level of inflation has fallen from 12.5% in 1980 to 1.1% in 1986. The cost of gold also increased - from 612.56 USD per ounce in 1980 to 317.26 USD per ounce in 1985. The USD strengthened, which weakened USA’s exporters and attracted an influx of imports, in particular German and Japanese [27].

As a result of the dissatisfaction and pressure of USA industrialists, an agreement was signed in 1985 between finance ministers and heads of national banks of France, Germany, Japan, the United Kingdom and USA, so-called "Plaza Accord", which resulted in a devaluation of the USD in 1985-1988. The USD fell by 40% against the FRF, by 50% against the JPY and by 20% against the USD.

Despite the positive impact that such actions had on international trade, positive domestic results for the USA economy did not devalue - the unemployment rate did not decrease, while inflation grew. In 1987, another meeting was held in Paris, during which was signed the Louvre Accord, which stabilized the USD at this lower level, which is considered the completion of the Second international currency war (Table 1.5).

As far as China is concerned, by the end of the 1960s, the JPY was overvalued. By the beginning of the 1980s, the CNY exchange rate against the USD was fixed at

Table 1.5

Countries	*Monetary action*	*Impact on the economy*
USA	1967-1971 – keeping 1971-1980 – devaluation to gold 1980-1985 – revaluation to gold 1985-1988 – devaluation to other currency	Increasing Decreasing Increasing Decreasing
Japan	1971 – revaluation	Decreasing
UK	1967 – devaluation 1971-1972 – keeping 1972 – devaluation 1985 – revaluation to USD	Stabilization Decreasing Increasing Stabiblization

Germany	1971-1985 – keeping 1985 – revaluation to USD	Stabilization Stabilization

Monetary Actions of Large Countries in «New Period» of International Currency Wars (1967-1987)

Source: complied by the author based on [41]

1.86-2 CNY/USD. Since the beginning of the 1980s, the country began to slowly devalue its own currency, which lasted until 1994. As a result, the CNY in relation to the USD fell 5.75 times - from 1.5 CNY/USD in 1980 to 8.62 CNY/USD in 1994. In 1994-1998, there was a slight revaluation of the CNY – from 8.62 CNY/USD to 8.27 in 1998; in 1998-2005, the CNY to the USD was fixed at 8.27 CNY/USD, and since 2005 the CNY under pressure from the USA and other trading partners has been slowly increasing [41].

During this time, the country managed to achieve a surplus of trade balance, as of January 2006 – at the level of 9.65 billion USD. The GDP growth rate in 2005 was 17.7%. The volume of gold and foreign exchange reserves in China in January 2006 amounted to 820 billion USD. The modern Third world currency war began in 2010 as a result of the global financial crisis of 2007-2008. Monetary policy aimed at overcoming the consequences of the global crisis in the USA consisted of lower interest rates and quantitative easing.

Therefore UK, which, before the First World War, was the leader of the world financial system, has almost completely lost its position, in the currency war and postwar period, when the USA increased wealth and increased the share of gold in its reserves by 50%, UK was in a crisis condition, triggered by the government's return of the GBP to the prewar period equal. So, it is obvious that devaluation of national currencies was an effective tool almost a century ago, this helped devalue countries to accumulate large gold reserves and make them richer in relation to non-devalued countries. Thus, the devaluation stimulated the post-war economic growth of Germany and France, the Great Depression in these countries did not have such

devastating consequences as in the UK, which in the 1920s conducted its currency revaluation to the prewar level.

1.3. Methodical Tools for Conducting Currency Wars

Researchers G. Corsetti, P. Pesenti, N. Roubini, and C. Tille proposed a model of multivariate choice for policy analysis and empirical research of competitive devaluation. To do this, scientists have developed a model of general equilibrium under conditions of monopolistic competition and investigated the impact of the devaluation of one country on its trading partners. In contrast to the traditional views, according to the authors, the decline in production and the current account deficit of the neighboring countries does not necessarily mean that the devaluation has a negative effect and leads to their ruin.

On the contrary, they argue that according to the law of a single price (when there is a complete transfer of costs through the exchange rate), neighboring countries can benefit from improving their terms of trade. Moreover, the devaluation of the response is not the best strategy for neighboring countries, since the resulting deterioration in terms of trade may be large enough to dampen the benefits of protecting their share in the export market. In the event that the law of a single price is not satisfied (there is no transfer of costs through the exchange rate), the devaluation of one country has a clearly negative effect on trading partners, based on the decline of their export earnings and profits, and lowering efficiency with increasing productivity for any level of consumption.

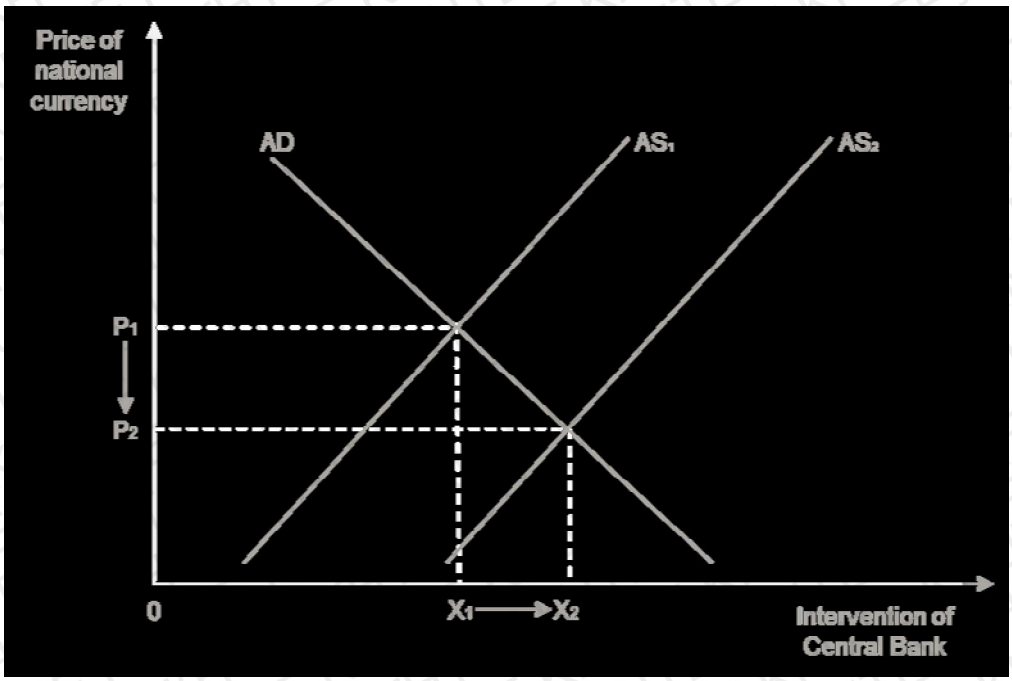
In the modern world, there are several key methods by which countries implement a competitive devaluation strategy in order to stimulate economic growth, increase exports, reduce imports and unemployment. To do this, they can use different tools to achieve their goals, with some using a combination of several at the same time [51].

Mechanisms of currency warfare by the country depends on a set of factors,

first of all such as: is the rate of national currency fixed or floating, from the general macroeconomic situation in the country, and so on. There are several classifications of methods of conducting competitive devaluation of the country. They can be divided into: 1) direct and indirect 2) single and complex; 3) traditional and new. Today, latest classification is a key (Table 1.6).

Table 1.6

The Main Methods of Devaluation of the National Currency



Traditional methods	Currency intervention
	Level of discount rate
	Rhetoric
	Currency restrictions
New methods	Quantitative easing policy
	Tax rates

Source: complied by the author based on [34]

The easiest and most used method is currency intervention in the foreign exchange market. Currency intervention, also known as foreign exchange market intervention or currency manipulation is a monetary policy operation. It occurs when

a government or Central bank buys or sells foreign currency in exchange for their own domestic currency, generally with the intention of influencing the exchange rate and trade policy (Figure 1.1).

Figure 1.1. Influence of Currency Interventions by the Central Bank on the Price of the National Currency

Source: complied by the author based on [33]

There could be many reasons why a country's monetary and/or fiscal authority may want to intervene in the foreign exchange market. Central banks generally agree that the primary objective of foreign exchange market intervention is to manage the volatility and/or influence the level of the exchange rate. For the most part, currency interventions are designed to keep the value of a domestic currency lower relative to foreign currencies.

Higher currency valuations cause exports to be less competitive since the price of products is then higher when purchased in a foreign currency. As a result, a lower currency valuation can help improve exports and drive economic growth. Currency interventions are generally characterized as either sterilized or non-sterilized transactions, depending on whether it changes the monetary base. Both methods

involve buying and selling foreign currencies - or bonds denominated in those currencies - to either increase or decrease the value of their currency in the global foreign exchange market [33].

Sterilized transactions are designed to influence exchange rates without changing the monetary base by buying or selling foreign currency denominated bonds while simultaneously buying and selling domestic currency bonds to offset the amount. Non-sterilized transactions involve simply buying or selling foreign currency bonds with domestic currency without the offsetting transaction.

Central banks can also opt to directly intervene in the currency markets through spot and forward market transactions. These transactions involve directly purchasing foreign currency with domestic currency or vice versa, with delivery times of a few days to several weeks. The goal in these transactions is to affect currency values in the very near-term.

Today, forex market intervention is largely used by the Central banks of developing countries, and less so by developed countries. There are a few reasons why most developed countries no longer actively intervene:

- Research and experience suggest that the instrument is only effective (at least beyond the very short term) if seen as foreshadowing interest rate or other policy adjustments. Without a durable and independent impact on the nominal exchange rate, intervention is seen as having no lasting power to influence the real exchange rate and thus competitive conditions for the tradeable sector.
- Large-scale intervention can undermine the stance of monetary policy.

Developing countries, on the other hand, do sometimes intervene, presumably because they believe the instrument to be an effective tool in the circumstances and for the situations they face. Objectives include: to control inflation, to achieve

external balance or enhance competitiveness to boost growth, or to prevent currency crises, such as large depreciation/appreciation swings [34].

In a Bank for International Settlements (BIS) paper published in 2015, the authors describe the common reasons Central banks intervene. Based on a BIS survey, in foreign exchange markets "emerging market Central banks" use the strategy of "leaning against the wind" "to limit exchange rate volatility and smooth the trend path of the exchange rate" []. In their 2005 meeting on foreign exchange market intervention, Central bank governors had noted that, "Many Central banks would argue that their main aim is to limit exchange rate volatility rather than to meet a specific target for the level of the exchange rate". Other reasons cited (that do not target the exchange rate) were to "slow the rate of change of the exchange rate", "dampen exchange rate volatility", "supply liquidity to the forex market", or "influence the level of foreign reserves". The second traditional method of reducing the value of the national currency is the reduction of the discount rate by the Central bank of the country (Figure 1.2).

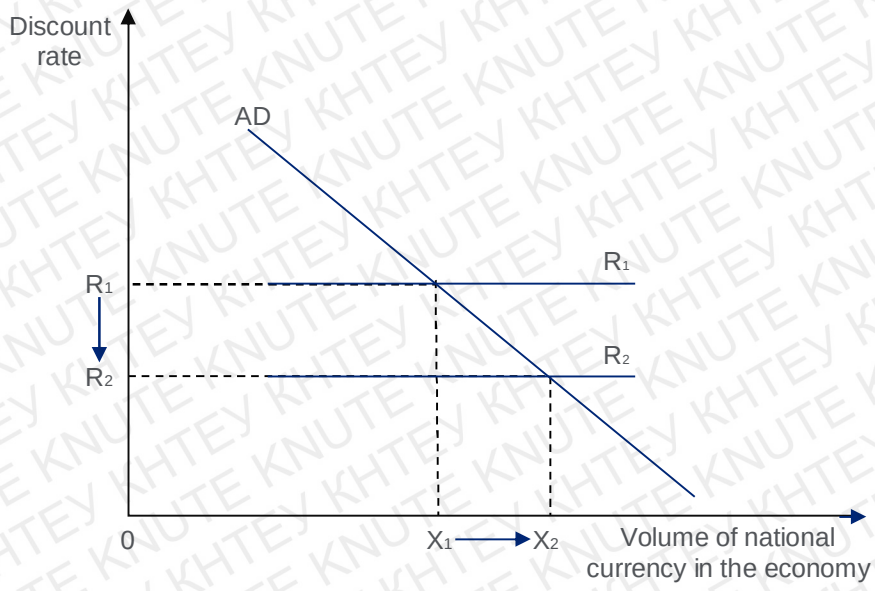


Figure 1.2. Effect of Changing the Discount Rate of the Central Bank to the Value of the National Currency

Source: complied by the author based on [33]

The discount rate is an important instrument of monetary policy, the essence of which is the change in interest on loans that their Central bank provides to commercial banks. The mechanism for adjusting the discount rate and its effect on the value of the national currency looks like this. With the implementation of stimulating monetary policy, the Central bank strives to expand commercial banks' ability to refinance and, for this, reduces the discount rate. This contributes to the growth of lending operations of commercial banks, revitalizes business activity and stimulates economic growth.

The policy of the discount rate is primarily aimed at changing the demand for money due to the impact on the market interest rate, which serves the price of money. Another channel of influence of the policy of the Central bank discount rate is the change of individual economic decisions of market entities. Thus, for example, raising the discount rate, on the one hand, leads to an increase in interest rates on loans, which limits the ability of enterprises to finance investment projects, and on the other hand, it raises interest rates, which in turn leads to a reduction in consumer spending on households. Both tend to reduce the main macroeconomic indicator - the gross domestic product (GDP) [24].

The third traditional method of reducing the value of the national currency is liberalization of currency restrictions within the country. Currency restrictions are an element of the currency regulation of the Central bank. As one of the forms of currency policy periodically used currency restrictions - legislative or administrative prohibition, limitation or regulation of transactions of residents and non-residents with currency and other currency values.

Currency restrictions as a kind of currency policy pursue the following goals:

- Balance of payments regulation.
- Exchange rate regulation.
- Concentration of currency values in the hands of the state to solve current and strategic tasks.

Currency restrictions are discriminatory because they promote the redistribution of currency values in favor of the state and large enterprises at the expense of small and medium-sized entrepreneurs, making them more difficult to access foreign currency. Currency restrictions are predominantly part of a policy of protectionism and discrimination of trading partners. Of great significance in their implementation are political motives.

To reduce the value of the national currency, the Central bank may withdraw part or all of the currency restrictions. Thus, business entities will be able to buy and withdraw from the country a larger amount of foreign currency. Reducing the supply of foreign currency at a steady national currency will stimulate a decrease in the value of the latter [33].

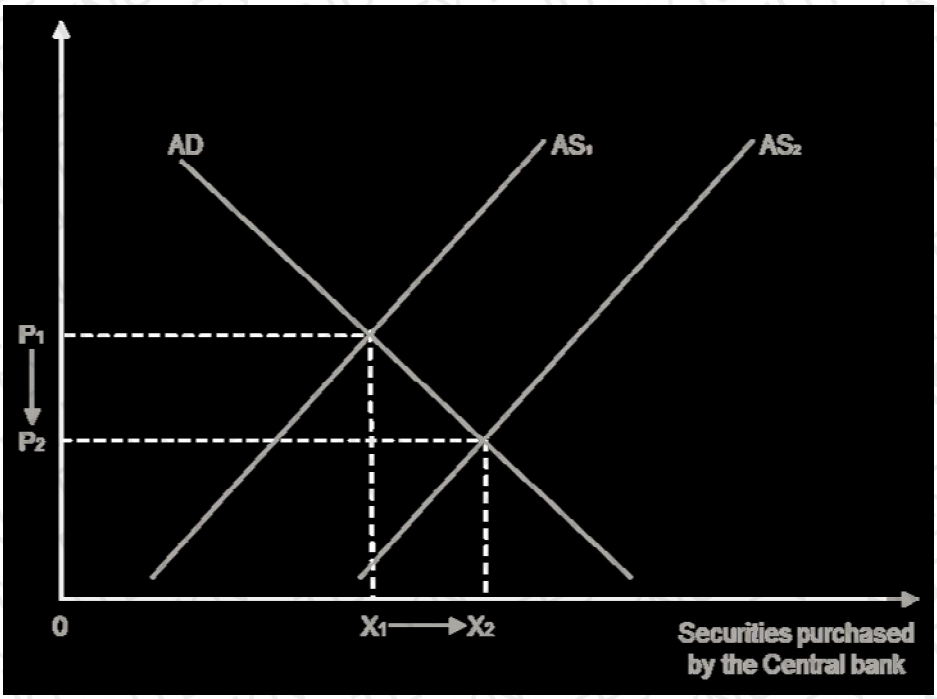
The last and most specific traditional method of manipulating the value of the national currency is rhetoric. The principle of its action is that high officials, heads of the Central Bank and other persons involved in the management of the state make certain public statements regarding the further development of events, including in terms of monetary policy of the country. Thus, they can "force" speculators to stop or start to play a boost or a decrease in the rate of the national currency. Basically, this indirect method is short-term in nature, different from all others.

The greatest influence of the rhetoric of the authorities on future political and economic directions of development is in developed countries of the world. The value of the national currency relative to foreign currencies changes almost immediately after the news from the authorities. Using this tool can put pressure on the value of the national currency in the short term almost at any time, this tool is the least predictable by market.

The new methods of manipulating the value of the national currency are following two: policy of quantitative easing and tax rates. These methods are considered new because they were first used during the Third World Currency War (modern currency warfare), which, according to many experts, has not yet completed

and, with a certain periodicity, goes into the active phases of confrontation between different countries of the world (as one of the tools World Trade War) [27].

A quantitative easing policy is more ambitious and popular in developed countries. The



mechanism of action of this method is shown in Figure 1.3.

Figure 1.3. Impact of The Policy of Quantitative Easing by Central Bank on the Value of the National Currency

Source: complied by the author based on [33]

Quantitative easing is an unconventional monetary policy in which a Central bank purchases government securities or other securities from the market in order to lower interest rates and increase the money supply. Quantitative easing increases the money supply by flooding financial institutions with capital in an effort to promote increased lending and liquidity. Quantitative easing is considered when short-term interest rates are at or approaching zero, and does not involve the printing of new banknotes.

In quantitative easing, central banks target the supply of money by buying or selling government bonds. When the economy stalls and the central bank wants to encourage economic growth, it buys government bonds. This lowers short-term interest rates and increases the money supply. This strategy loses effectiveness when interest rates approach zero, at which point banks have to implement other strategies to kick start the economy. Another strategy they can use is to target commercial bank and private sector assets in an attempt to spur economic growth by encouraging banks to lend money. Note that quantitative easing is often referred to as "QE".

Consequence is that quantitative easing generally causes a depreciation in the value of the home country's currency. Depending on the country, this can be a negative. It is good for a country's exports, but bad for imports, and can result in the country's residents having to pay more money for imported goods. With regard to the new method in the mechanism of currency wars, there is tax rate. A country whose national currency is rapidly strengthening establishes a tax on foreign investment or other financial transactions, there by reducing the inflow of foreign currency to a country that impedes the revaluation of the national currency.

Basically, this method is used by developing countries. This highly effective weapon in currency wars has already been tested by Brazil, having set a tax on foreign

investment at the rate of 2% in 2010, thus stopping further revaluation of the national currency. Now the impact on the value of the national currency may have not only the Central bank but other government representatives who are able to influence and regulate administrative means foreign investment flows into the country. An additional advantage of this instrument will be an increase in payments to the state budget of the country from the payment of taxes on foreign investment.

According to the classical approach, there are two main groups of methods by which countries can devalue their national currencies relative to others: traditional and new. The traditional methods include: currency interventions, changes in the discount rate, liberalization of currency restrictions and rhetoric. The new methods (which began to be used for the first time during the Third world currency war) include: a policy of quantitative easing and tax rates regulation. Central banks of the countries can use one or both of these methods, depending on the set goal.

CONCLUSIONS TO PART 1

Currency wars are purposeful actions of one or several countries to reduce the rate of the national currency in relation to other world currencies. Currency wars are also called competitive devaluation. When waging a currency war, one or a few countries specifically reduce the rate of national currency. Firms can either keep prices for their products in national currency and reduce them in foreign currency, or raise prices in national currency and use the increase in income to improve the quality of their products. Any country can maintain an advantage of this kind only until another competitor devalues its currency. By lowering the exchange rate of the national currency, the country can reach competitive positions in exports.

The main reasons for the beginning of world currency wars are the attempt by many countries to equalize the internal imbalance of economic and social indicators without carrying out protracted reforms, which will produce results only after a

certain period of time, and because of the devaluation of their own national currency, the result of which is almost instantaneous and does not require any expectations. The first attempts at a purposeful devaluation of the national currency were fixed even before our era, due to the decrease in the amount of precious metal in coins. A retrospective analysis showed that the global history of devaluation can be divided into two periods: old one (which lasted until 1921) and new one (from 1921 to the present). The use of this instrument has helped many countries to escape financial crises or overcome the negative effects of the economy in the postwar period.

The classic methods used to reduce the value of the national currency that are used by different countries are: currency interventions, changes in the discount rate, liberalization of currency restrictions, rhetoric, policy of quantitative easing and tax rates regulation. Countries can apply as one of them and a set of several, most methods managed by the Central bank of countries (except regulation of tax rates).

PART 2. ANALYSIS OF INTERNATIONAL CURRENCY WARNING BETWEEN COUNTRIES WITH OPEN ECONOMY

2.1. Assesment of the State of GDP and Trade Balance of Key Participants in World Economy

Annual Meeting of the IMF and the World Bank takes place on October 8-14 in Bali. Eve October 1 – IMF chairman Christine Lagarde said that trade and tariff wars begin to greatly complicate the prospects for world economic growth. "In July, we forecasted a global growth of 3.9% for 2018-2019. Since then, the prospects have become less iridescent, as you will see, having read our updated forecast next week," Lagarde said, not disclosing new figures yet. It is obvious that a new, less optimistic forecast for the development of the world economy will be presented on October 10 at the annual autumn meetings of the IMF and the World Bank.

For many experts 2017 is considered to be a success for the international economy - global GDP has grown by 3.8%. This is the best result since 2011. The most significant success since 2011 was marked last year and in international trade, which increased by 4.9%. In industrially advanced countries, the mood of investors has improved, they have started to invest more in expanding production - both in their own countries and in developing countries.

At the beginning of this year, the currencies of developing countries have risen in price relative to the USD. In February, the IMF said that global economic growth has accelerated and reaches more and more countries. However, in the spring, the situation became more complicated. An important trend in the world economy in 2018 is desynchronization - uneven growth [48].

In the USA, there is a strong economic growth and an impetus for its preservation, albeit not as fast as in the first half of the year. Europe is in a neutral position, but the results are weaker than last year. In Asia, economic growth is heterogeneous, and expectations are not optimistic - the rigid USA tariff policy can lead to a decline in China's GDP. In Latin America, the weak dynamics of GDP is observed, which increases with the serious devaluation of the currencies of the largest countries in the region. Not surprisingly, the IMF has lowered the forecast for the growth of Latin America's economy in 2018 - from 2% to 1.6%. The reasons are: the slow growth of GDP of the two largest economies in the region - Brazil and Mexico, and the currency and financial crisis in Argentina.

The USA’s economy, the single largest in the world, continued to expand during 2010-2017 period (Table 2.1).

Table 2.1

The Dynamics of GDP Growth and Trade Balance of USA, 2007-2017

Year	GDP, billion USD	Growth of GDP, %	Export of goods and services, billion	Import of goods and services, billion	Trade balance, billion USD	Growth of trade balance, %

			USD	USD		
2007	14 477.7	-	1 664.7	2 383.1	-718.4	-
2008	14 718.6	1.663938	1 841.9	2 565.1	-723.2	-0.66815
2009	14 418.7	-2.03756	1 587.7	1 983.2	-395.5	45.3125
2010	14 964.4	3.784669	1 852.3	2 365.1	-512.8	-29.6587
2011	15 517.9	3.698778	2 106.4	2 686.4	-580	-13.1045
2012	16 155.3	4.107515	2 198.2	2 763.8	-565.6	2.482759
2013	16 691.5	3.319035	2 276.6	2 768.6	-492	13.01273
2014	17 427.6	4.410029	2 373.7	2 883.2	-509.5	-3.55691
2015	18 120.7	3.977025	2 264.9	2 788.9	-524	-2.84593
2016	18 624.5	2.780246	2 214.6	2 735.8	-521.2	0.534351
2017	19 390.6	4.113399	2 308.4	2 925.5	-617.1	-18.3998

Source: complied by the author based on [9]

After analyzing USA's GDP, it becomes apparent that the economy continues to grow seven consecutive years from 2010, with 2017 remaining one of the fastest (+ 4.11%), while other developed countries can not boast such growth rates. By 2018, the planned GDP growth rate is planned at +3% - 3,2%. However, taking into account one of the components of GDP – the volume of net exports (trade balance), it will become obvious that not everything is so good. The trade balance of the USA during 2007-2017 gained only negative values, with the maximum negative value in 2007 (-718.4 billion USD) with a gradual decline to the minimum level in 2009 (-395.5 billion USD). From 2010 to 2017, the trade deficit ranged from -492 to -617 billion USD, reducing its volatility.

The USA is the world's top importer, and the second leading exporter (after China), of goods and services. USA merchandise exports are highly diversified, and are dominated by machinery, vehicles, chemicals, and refined petroleum products. Imports are as diversified as exports; their composition is led by manufactured products, which make up some 70% of the total. Machinery, transport equipment, and

fuels constitute the main imported products. As in previous years, the merchandise trade deficit was partly offset by a surplus in trade in services and primary income. The USA traditionally posts a trade surplus in cross-border commercial services, with strong surpluses in areas such as financial services, transport, and charges for the use of intellectual property. The services surplus reached 262 billion USD in 2017. Canada, European Union, China, Mexico, and Japan remain the USA's main trading partners for both goods and services. USA trade policy seeks to "promote growth, support well-paying jobs, and strengthen the middle class", as stated in the President's 2016 Trade Policy Agenda. To this end, the USA is actively engaged in negotiations within the WTO framework, as well as in regional or plurilateral settings. The USA has been a strong supporter of the Agreement on Trade Facilitation, which it has

Year	GDP, billion EUR	Growth of GDP, %	Export of goods, billion EUR	Import of goods, billion EUR	Trade balance, billion EUR	Growth of trade balance, %

ratified, and the expanded Information Technology Agreement (ITA), which was implemented on 1 July 2016. Negotiations on the Trans-Pacific Partnership (TPP) Agreement were concluded in October 2015 and the Agreement signed in February 2016, but ratification is still pending.

Monetary policy was relatively accommodative during most of the review period, but the Federal Reserve initiated its "policy normalization process" (steps to raise the federal funds rate and to reduce the Federal Reserve's securities holdings) in 2015. The Federal Open Market Committee (FOMC), the Federal Reserve's policy body, raised the target range for the federal funds rate by a quarter of a percentage point in December 2015. However, the FOMC expects that economic conditions will warrant only gradual future increases in the federal funds rate.

Assessment of the state of GDP and trade balance in EU for 2010-2017 period is shown in Table 2.2.

Table 2.2

2007	9404.6	-	1218.2	956.2	262	-
2008	9640.6	2.50	1428.6	1132.1	296.5	13.16794
2009	9296.2	-3.57	1201.6	1005.9	195.7	-33.9966
2010	9555.2	2.78	1577.8	1396.2	181.6	-7.20491
2011	9805.6	2.62	1898.4	1742.8	155.6	-14.3172
2012	9846.7	0.41	2049.7	1818.2	231.5	48.77892
2013	9944	0.98	2210.7	1949.3	261.4	12.91577
2014	10175.1	2.32	2343.2	1963.1	380.1	45.40933
2015	10534.2	3.52	2282.5	1680.7	601.8	58.32676
2016	10827.5	2.78	2136.7	1589.5	547.2	-9.07278
2017	11205.8	3.49	2280.4	1845.9	434.5	-20.5958

The Dynamics of GDP Growth and Trade Balance of EU, 2007-2017

Source: complied by the author based on [9]

After analyzing the indicators in Table 2.2, it can be concluded that the growth of the Euro area economy is steady from 2009 to 2017, stabilizing in 2009 after the global financial crisis. In 2017, the GDP growth was + 3.49%, the only negative growth rate for the last 10 years was in 2009 (-3,57%). One of the main components of GDP growth was a constant positive net exports (trade balance), from 2007 to 2017, the smallest increase was recorded in 2007 - 103.9 billion EUR. From 2008 to 2017, the trade balance was steadily increasing and reached its peak in 2015 – 601.8 billion EUR. Thus, the EU economy has been steadily increasing over the past 10 years due to the correct conduct of macroeconomic regulation and the rapid response to the changing world market situation.

The main export goods were agricultural products (8.2%), industrial production (81.8%), fuel and raw materials (6.3%). Agricultural products (8.8%), industrial production (67.4%), fuel and raw materials (19.1%) became the main commodities of import. According to the geographic structure, the main export markets are the United States (19.2%), China (10.1%), Switzerland (7.8%), Russian Federation (4.4%), Turkey (4.4%), and others (54,1%). The main partners of EU

imports are China (19.9%), the USA (13.5%), the Russian Federation (7%), Switzerland (5.9%), Turkey (3.7%) and others (50%) [39].

In October 2015, the European Commission issued a new trade and investment policy for the EU – Trade for all: Towards a more responsible trade and investment policy. The new policy is intended to support the growth of global value

Year	GDP, billion USD	Growth of GDP, %	Export of goods, billion USD	Import of goods, billion USD	Trade balance, billion USD	Growth of trade balance, %

chains, services trade, and e-commerce. The main objectives include reducing non-tariff barriers and increasing trade in services, while benefiting from improved technology to facilitate cross-border provision of services and recognizing the importance of labour mobility and mutual recognition of professional qualifications.

While actively participating in the WTO, the EU has also continued to negotiate trade agreements, which cover trade in goods and services, intellectual property, investment, government procurement, access to energy and raw materials, customs and trade facilitation, competition, and regulatory cooperation. The Comprehensive Economic and Trade Agreement between Canada and the EU was signed in October 2016. Negotiations on a number of other trade and investment agreements are also under way.

Assessment of the state of GDP and trade balance of China for 2010-2017 period is shown in Table 2.3.

Table 2.3

2007	3571.45	-	3720.4	3584.5	135.9	-
2008	4604.29	28.92	3851	3747.1	103.9	-23.55
2009	5121.68	11.24	3260	3110.2	149.8	44.18
2010	6066.35	18.44	3734	3594.3	139.7	-6.74
2011	7522.1	24.00	4117.6	3966	151.6	8.52
2012	8570.35	13.94	4302.5	4019.6	282.9	86.61
2013	9635.03	12.42	4373.9	4027	346.9	22.62
2014	10534.53	9.34	4549.9	4158	391.9	12.97
2015	11226.19	6.57	4865	4391	474	20.95
2016	11221.84	-0.04	4941.4	4463	478.4	0.93
2017	12014.61	7.06	5293.7	4770	523.7	9.47

The Dynamics of GDP Growth and Trade Balance of China, 2007-2017

Source: complied by the author based on [9]

During the review period, the Chinese economy continued to be a major driver of global economic growth. However, real GDP growth has been moderating as the economy adjusts to the "new normal", which implies more stable, albeit lower, growth rates of around 7% per year in the foreseeable future; growth rebalances from investment to consumption, from external to internal demand, and from manufacturing to services. Consumption was responsible for around two-thirds of the growth during the review period.

After analyzing the dynamics of indicators in Table 2.3. we can conclude that the Chinese economy has been growing at a very fast pace over recent years. The peculiarity of the Chinese economy is that it did not feel the impact of the global financial crisis in 2008 (the GDP growth was 28.92%, which is a very high indicator). Economic growth occurred by 2015 inclusive, and already in 2016 the negative GDP growth rate was recorded (-0.04%), although the nominal growth rate was fixed at +6.8%. In 2017, real growth was at +7.06%, and the forecasted growth rate in 2018 would be +6.8%.

Merchandise trade (imports plus exports) declined from 33.5% of GDP in

2015 to 31.2% in 2016, with both exports and imports falling. Exports continue to be dominated by manufactures, which accounted for 93.7% of total merchandise exports in 2016. Manufactures are also the largest import category, responsible for around 65% of the import bill. In 2017, merchandise trade amounted to 32.3% of GDP. In 2016 (the latest year for which data were available), the main destinations for merchandise exports were the United States; the European Union; Hong Kong, China; Japan; and the Republic of Korea; which combined represented about 60% of total exports. The main sources of China's imports were the European Union; the Republic of Korea; the United States; the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu (Chinese Taipei); Japan; and ASEAN countries [39].

If we take into account the level of trade balance, then China does not have a negative effect, since from 2007 to 2017 the trade balance was always positive. In 2008, the lowest level of net exports was recorded (+135 billion USD), due to the global financial crisis. Nevertheless, since then, the positive trade balance has grown to this day, due to the faster rate of growth of exports than imports. In 2017, the volume of positive trade balance was +523.7 billion USD (or +9.47% versus the level of 2016).

During the review period, China continued to pursue a proactive fiscal policy, which was guided by supply-side restructuring and adjusting to the "new normal". In 2016, the fiscal deficit rose to 3.8% of GDP from 3.4% in 2015. The increase was due to declining tax revenue as a share of GDP, which can be attributed to the nationwide implementation of the VAT pilot reforms, which reduced indirect tax revenue significantly.

In 2016, the People's Bank of China (PBOC) moved to a more market-based approach of conducting monetary policy. The new approach involves a closer management of liquidity in the banking system through an expanded range of instruments such as repos (or reverse repurchase agreements) and lending facilities to promote better capital allocation and guide market interest rates to more closely match

the PBOC's objectives [48].

Under the new system, the PBOC uses a corridor or an interest rate band, where the upper limit is set by its overnight seven-day and one-month standing lending facilities, while the lower rate is the interest paid by the PBOC on excess deposit reserves. China has a managed floating exchange rate regime, which uses a basket of currencies as a reference. During the period under review, the PBOC continued to increase exchange rate flexibility. Assessment of the state of GDP and trade balance of Japan for 2010-2017 period is shown in Table 2.4.

Table 2.4

The Dynamics of GDP Growth and Trade Balance of Japan, 2007-2017

Source: complied by the author based on [9]

The structure of GDP growth in Japan from 2007 to 2017 is ambiguous. In Japan, as well as in China during the financial crisis in 2008, GDP grew by +11.57%. However, in 2013, real GDP fell by -16.89%, in 2014 -5.95%, and by -9.67% in 2015,

Year	GDP, billion USD	Growth of GDP, %	Export of goods, billion USD	Import of goods, billion USD	Trade balance, billion USD	Growth of trade balance, %
2007	4515.397	-	714.2	622.1	92.1	-
2008	5037.877	11.57	782.1	762.6	19.5	-78.83
2009	5231.378	3.84	580.7	551.9	28.8	47.69
2010	5700.091	8.96	769.7	694.1	75.6	162.50
2011	6157.223	8.02	822.6	854.9	-32.3	-142.72
2012	6203.246	0.75	798.6	886.1	-87.5	-170.90
2013	5155.482	-16.89	714.6	832.4	-117.8	-34.63
2014	4848.971	-5.95	690.2	812.2	-122	-3.57
2015	4380.015	-9.67	624.8	647.9	-23.1	81.07
2016	4936.667	12.71	644.9	607.6	37.3	261.47
2017	4872	-1.31	698.2	671.3	26.9	-27.88

but nominal GDP grew during this period. Japan's trade balance in the last 10 years has reached the minimum value in 2014 -122 billion USD, and the maximum in 2007 was 92.1 billion USD. The major cause of the negative trade balance was the growth of imports rather than exports.

Japan is the world's fourth-largest exporter and importer of goods and services. Both merchandise imports and exports declined between 2016 and 2017, reflecting, inter alia, a weak global demand and falling commodity prices; as the decline was substantially larger in imports than exports, Japan's merchandise trade deficit sharply contracted. Services exports and imports also declined during the same period; as in the case of merchandise trade, services trade deficit declined.

In 2017, real GDP contracted by - 1.31%, reflecting the backlash from the consumption tax rise in the same year. Private consumption fell as purchasing power deteriorated, and business investment declined. Under these circumstances, the authorities decided to abstain from a further consumption tax rise until October 2019. The Bank of Japan is at the forefront of the country's efforts to boost private consumption, through quantitative and qualitative monetary easing with a negative interest rate. On the fiscal front, a number of economic plans have been adopted with a view, inter alia, to improving the country's public finances including its debt position, and boosting the competitiveness of the economy through large-scale investments. Structural reforms including those aimed at encouraging labour force participation and improving Japan's corporate governance framework are also under way.

After analyzing the growth rates of GDP and the trade balance of the main participants in the world currency wars, we can conclude that the best state and dynamics of economic growth of GDP are inherent in China, the USA and the EU, and in Japan, the situation is much worse. Trade balance surplus between 2007 and 2017 was characteristic of China and the EU, in Japan this figure varies with a

negative value, and the worst situation in the USA, the trade balance was negative throughout the period, which negatively affects the domestic economy of the country.

2.2. Analysis of the Activity Central Banks of USA, China, Japan and EU in the World Currency Manipulations

The modern currency system - Jamaica - is based on the principles of free conversion of currencies and floating exchange rates. Earlier, the USA dominated the world currency market. At the time of the Bretton Woods treaty (from 1944 to 1978), the USD, along with gold, had the function of world money. The price of the USD was firmly tied to gold. Under the Jamaican system, the gold standard has been abolished, and the currency market has established equal rights.

However, traditionally, as well as through the USA FRS's policy of monetary expansion, the USA currency remained the most beneficial settlement tool, which allowed the USA to maintain its position as the world's largest economy and the largest financial center. In fact, in all three currency wars - 1921-1936, 1967-1987, and also from 2010 to 2015, the USA was and is the initiator and one of the largest players.

The first step taken by the FRS for the devaluation of USD in the current currency war was the decline in the USA interest rate from 4.25% in January 2008 to 0.25% in June 2008. When, however, the interest rate has become close to the zero threshold (0.25%), then the FRS would not be able to further reduce it further to further weaken USD. Such a situation is called a liquidity trap, which may arise from deflation or very low inflation. Therefore, the mechanism for conducting a traditional monetary policy for the USA has run out.

The second step, The FRS's leadership was one of the first in the world to introduce a program of quantitative easing of a total volume of about 4 trillion USD which was conducted in 3 stages:

- QE1 (from November 2008 to December 2009). The main purpose of the program was repurchase of mortgage and other bonds worth 1.7 trillion USD. Thus, the bankruptcy of large corporations and banks, including Bank of America, Morgan Stanley, Citigroup, Merrill Lynch, was warned;

- QE2 (from November 2010 to June 2011). Provided purchase of government bonds to the USA Treasury for 600 billion USD (at 75 billion USD a month), as well as reinvestment by the end of the third quarter of 2011, the same assets are still worth 300 billion USD earnings from previously purchased bonds;

- QE3 (from September 2012 to October 2014). The program did not have a predefined end date. Such a date was to set economic indicators, first of all, to increase the employment rate of the population. It was supposed spend 45 billion USD a month for the purchase of treasury bonds and 40 billion USD - mortgage. As a result, during the period of the policy of the QE, the balance of assets of the FRS increased by almost 5 times. The main purpose and consequences QE1, QE2, QE3 are shown in Table 2.5.

Table 2.5

Main Purpose and Consequences of QE1, QE2 and QE3 in USA

Indicators	QE_1	QE_2	QE_3
Duration	November 2008 – December 2009	November 2010 – June 2011	September 2012 – October 2014
Total issuance of new money into the economy	1,7 trillion USD	0,9 trillion USD	2,2 trillion USD
The main goal	Rescue of large corporations, banks and private enterprises	Reviving the economy, reducing long-term rates on securities	Reducing unemployment
Consequences for the economy	Restoration of the securities market; gradual devaluation of USD; rescue business	Growth in consumer demand; strengthening the US economy after the crisis	Growth of mortgage bonds on the FRS balance sheet, lowering unemployment

Source: complied by the author based on [34]

The first task faced by the USA regulator was prevent a large-scale banking crisis. A special role was played by the bankruptcy of Lehman Brothers and massive bankruptcies during the Great Depression caused by a lack of liquidity. Under these conditions, the accelerated provision of unprecedented liquidity by Central banks through debt purchases, REPO transactions and direct lending at discount rates took place naturally within the framework of the existing paradigm of the monetary regulator [39].

Measures taken in this period can be regarded as the beginning of quantitative easing, although the formalization of the term and the theoretical substantiation of the essence of "non-traditional monetary policy" took place at the stage of further monetary relaxation in order to stimulate business activity as a prerequisite for economic recovery. Table 2.6 shows: GDP, unemployment rate, inflation rate, Dow Jones index, trade balance and discount rate, including period QE1, QE2, QE3, 2015 and 2017.

Table 2.6

Main Macroeconomic Indicators of the USA in the Years of the Quantitative Easing Policy and the Current Period

Indicators	QE_1	QE_2	QE_3	*2015 (End of QE)*	*2017*
• *Balance of foreign trade, billion USD* • *Volume of export, billion USD* • *Volume of import, billion USD*	-537 1 473 2 010	-450 1 957 2 407	-396 2 366 2 762	-460 2 580 3 040	-617 2 308 2 925
GDP, billion USD	14 568	15 240	16 155	17 968	19 390
Unemployment rate, %	7,3	9,7	7,6	5,3	4,3
Dow Jones Index, %	+8,82	+11,06	+13,54	+24,29	+28
Inflation rate, %	+1,2	+2,25	+1,33	+0,75	+2,1

Discount rate, %	0-0,25	0-0,25	0-0,25	0,25-0,5	1,25-1,5

Source: complied by the author based on [34]

Reducing the FRS's discount rate, during the period of the global financial crisis (2008-2009) to 0-0.25%, and implementing the quantitative easing policy (QE1, QE2 and QE3) allowed to restore key macroeconomic indicators and stimulate further economic development of their country.

Quantitative easing policy was finally completed in mid-2015, at the same time interest rates remained at the lowest level. Subsequently, the FRS set a new target inflation rate for the country's economy - 2%. The increase inflation rate to the target level in end of 2015, the FRS began to raise the level of discount rate. The first increase occurred to the level of 0,5-0,75 percent, the last increase occurred in October 2018, present level of the discount rate is 2-2,25%. According to the FRS, the next revision of the discount rate should take place in December 2018 and three more in 2019.

In the West, many experts and politicians are convinced that it is China that has been rapidly increasing its industrial capacity in recent years and its export to such developed countries as the USA, EU and Japan, is the root cause of the current currency war. The flow of cheap Chinese goods, has destroyed many jobs in industrial enterprises in developed countries [34].

For 10 years, from 1995 to 2005, the CNY was fixed relative to the USD in the ratio of 8.28 CNY/USD. The People's Bank of China (PBC) did not allow the strengthening of the national currency, at the expense of currency interventions, in which it bought up USD, as a result of which the gold and currency reserves of China reached the highest rate in the world 3.113 trillion USD in August 2018. The USA, the EU and Japan criticized China for the underrated CNY rate, which allowed them to gain price competitive advantage for Chinese goods in foreign markets. As a result, China abandoned the tight bind in 2005, the course became floating and the CNY

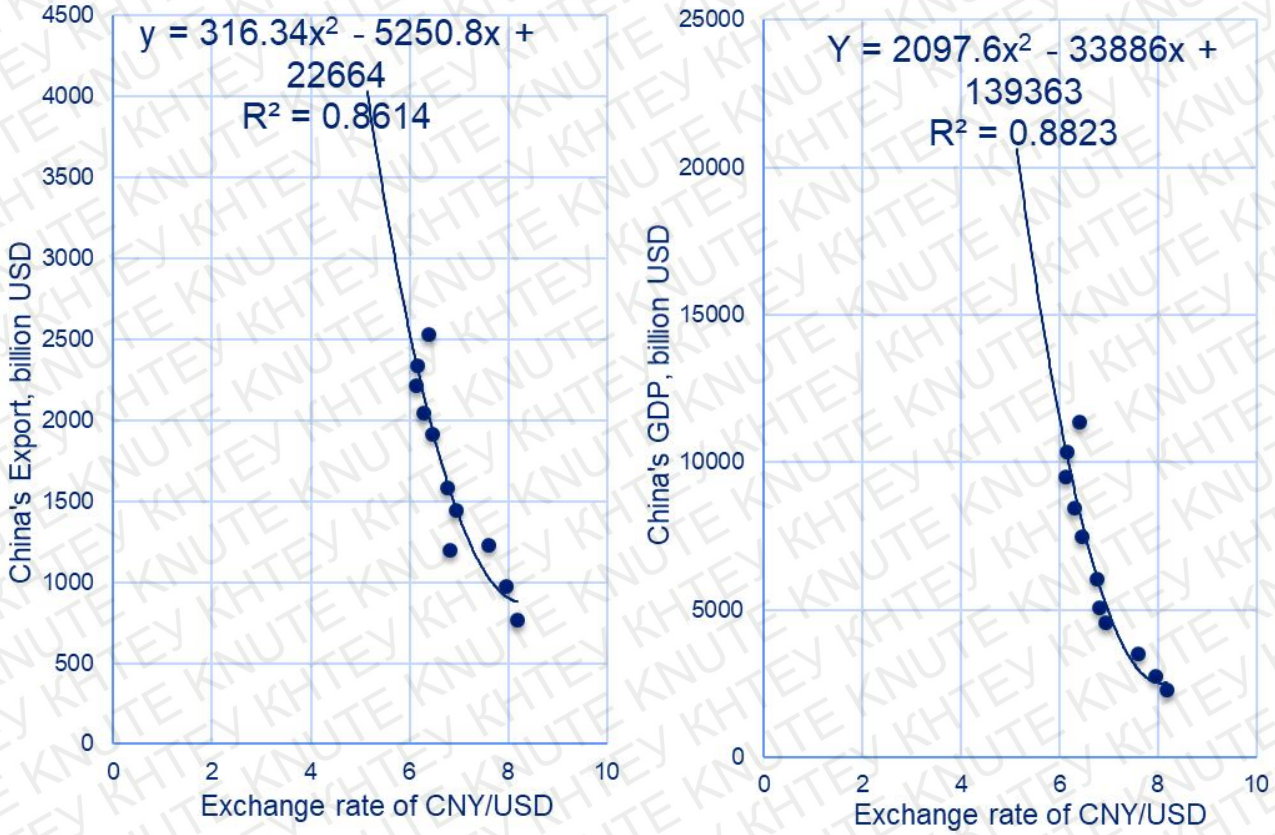
strengthened by almost 16.18% (to 6.94 CNY/USD) by mid-2008, stabilizing at this level. But in September 2009, it again began to revalue, the peak fell to January 2014, when one USD was 6.14 CNY [34,39].

During 2014-2018, the People's Bank of China (PBC) devalued the CNY by 13.2% (from 6.14 to 6.95 CNY/USD). After the first reports of devaluation appeared, much was said that China launched a new phase of currency wars, in the course of increasing the price competitiveness of its products on the world market. The devaluation of the CNY was not much like the USA and the EU, since imports of Chinese goods to these countries are now cheaper, while exports to China will be more expensive, despite the fact that, as in the USa and EU, there is a negative foreign trade balance with this country, and now there is an additional premise that this gap will increase, which will have a negative impact on the economies of the USA, the EU and many other countries that have close trade relations with China. There are two main logical explanations why the PBC devalued CNY by 13% during 2014-2018, resulting in a double benefit from devaluation [48].

First, the devaluation of the CNY could be a step towards China's dream of turning CNY into an international reserve currency. China wanted to implement the conceived, back in the distant 2010, but was refused. The IMF noted that the Chinese national currency does not meet the definition of "FREELY USED". After 5 years (November 30, 2015), the IMF still decided to replenish the list of reserve currencies by Chinese CNY. This decision was made for the first time in the last 35 years and came into force on October 1, 2016. The IMF, in a separate message, specified the share of currencies in the SDR basket: the share of CNY will be 10.92%, that is, it will pass the GBP (8.09%) and JPY (8.33%). The championship will save the USD - 41.73%, in the second place - the EUR with 30.93%. In this context, the devaluation of the CNY may seem justified [42].

Secondly, the actions of the Chinese Central Bank (PBC), obviously, had another subtext, to overcome the negative trends in the economy, which became

especially noticeable in the summer of 2015. China has fallen in exports, increased deflation, industrial production and capital investment declined. Chinese authorities had to think about more proactive measures to stimulate the economy and achieve the planned GDP growth rate of 7% in 2018.



The devaluation of the CNY, obviously, is also a way to help Chinese exporters, and accordingly, to stimulate GDP growth towards the target. The correlation between CNY, GDP and the volume of Chinese exports are shown in Figure 2.1.

Figure 2.1. Correlation Model Between Exchange Rate of CNY/USD, China's GDP and Export of Goods

Source: complied by the author based on [9]

From indicators of Figure 2.1 we can conclude that there is a strong relationship between the exchange rate of the China's national currency – CNY, volume of production (GDP) and the volume of exports: R^2= 0,8614 and R^2= 0,8823

respectively, hence, between the decrease in the value of the national currency, the growth of exports and GDP of this country there is a straightforward proportional interdependence. That is, PBC has an effective tool, changing the conduct of monetary policy, it has the ability to influence the change in the level of GDP and the volume of exports of the country. Therefore, there is a high probability that in 2019, China will continue to devalue CNY in 2019 at a faster pace than it did in the 2014-2018 period, and in particular because of the growing risks of a full-scale trade war with the USA and other countries of the world.

Japan began its activation in the international currency wars in 2012, when the new prime minister of this country, Shinzo Abe, was elected. It was he who began a new economic policy in Japan, which was named after him - "abenomika" policy, whose main purpose was to stimulate the growth of the Japanese economy (growth of GDP). He did not spend time, but chose a simple and proven way of devaluation of national currency – a policy of competitive devaluation.

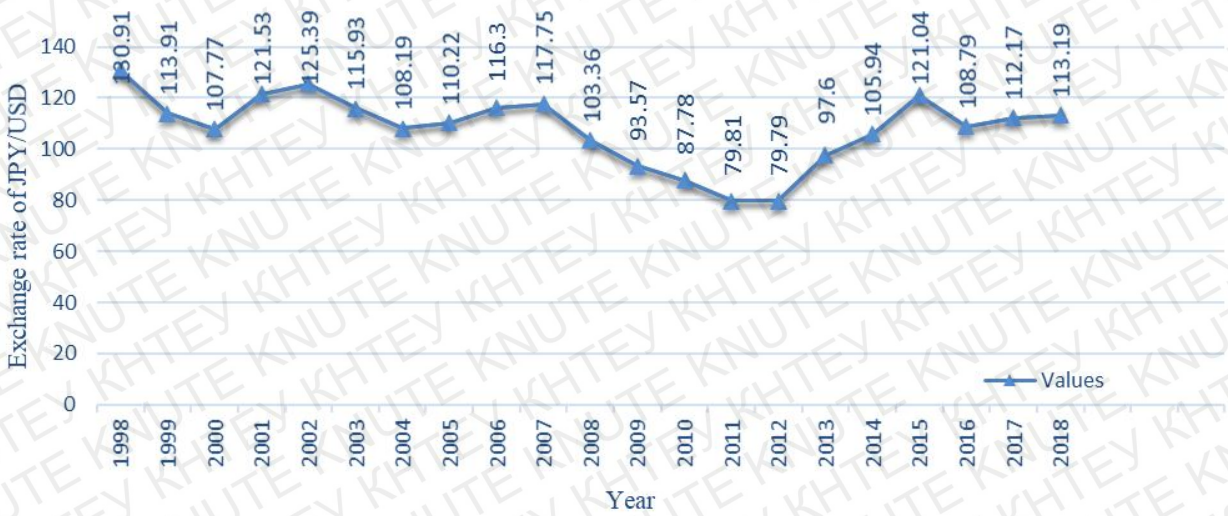
Shinzo Abe did not hide his economic program and immediately began to act. The first step in decrease exchange rate of the japanese yen (JPY) was the large-scale currency interventions in which the Central bank of Japan bought up huge amounts of USD and sold JPY, the total amount of operations amounted to about 25 billion USD. On the contrary, JPY did not begin to devalue, but on the contrary continued to strengthen, then the Central bank of Japan took the next step. The second step was to reduce the discount rate to zero. The third step was characterized by the launch of a policy of quantitative easing (QE), which, by the end of 2014, the Central bank of Japan increased the money supply by 2 times from 138 trillion JPY (at the end of 2012) to 270 trillion JPY (at the current exchange rate it is plus 1.4 trillion USD) [51].

The combination of all three steps led to a gradual devaluation of JPY in October 2012, after 4 months the JPY weakened by 25% - the target was reached. The decline in the value of the Japanese national currency continues to this day, in general,

the JPY devalued from 2012 to 2018 by 41.8% (from 79.7 JPY/USD in 2012 to 113.19 JPY/USD in October 2018) Figure 2.2.

Figure 2.2. Exchange Rate of JPY/USD for 1998 - 2018

Source: complied by the author based on [9]

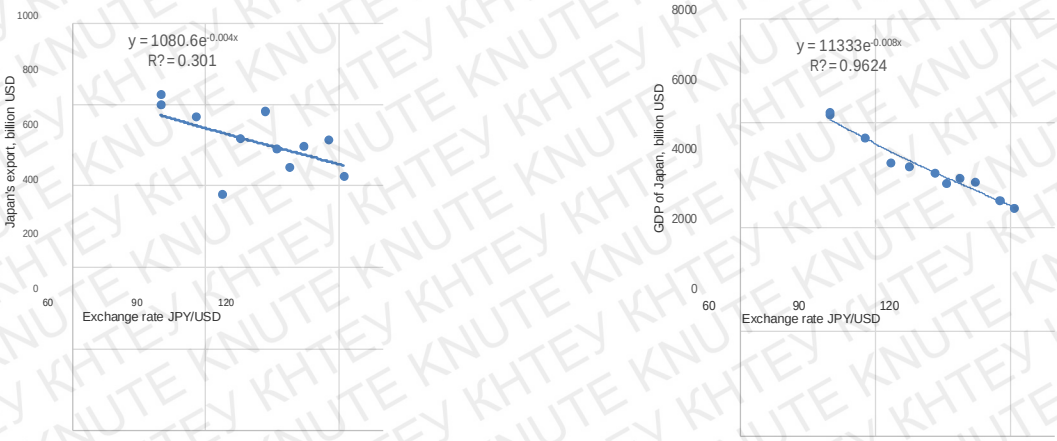


In Japan, the formation of the value of exchange rate of the national currency is based on a floating format, in contrast to other countries in the world, Japan has never used a system of fixed exchange rates, which could quickly change the value of the national currency by reacting to certain macroeconomic factors or the world market situation.

Critics of the floating exchange rate system point out that constant fluctuations in exchange rates destabilize the entire system of foreign economic relations, generate systematic currency speculation, disorienting producers of the export sector and consumers of imported goods and services, hampering the conclusion of mutually beneficial contracts on a long-term basis.

A classic example of contradictions in the area of currency relations in recent decades is the contradiction between Japan and the USA. Japan seeks to systematically conduct a devaluation of its national currency, the JPY against the

USD, against which the USA sharply advocates, because for the USA it impedes the sale of products in the Japanese market and causes an increase in the deficit of the



trade balance. For Japan, the devaluation is profitable, as it stimulates the export sector of the economy, which is largely due to the high rates of development of the Japanese economy [24].

Figure2.3 shows dependence of the Japan's GDP and exports from the exchange rate of JPH/USD from 2007 to 2017. The one-factor correlation model of the relationship between the exchange rate JPY/USD and the volume of exports ($y = 1080.6e^{-0.004x}$) suggests that there is a weak correlation (R? = 0.301) between these

Figure 2.3. Correlation Model Between Exchange Rate of JPY/USD, Japan's GDP and Export of Goods

Source: complied by the author based on [9]

figures, which means that the devaluation of the JPY will not lead to a significant convergence of exports and the improvement of the trade balance. Instead, the

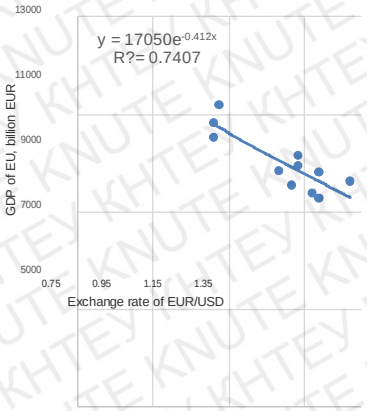
correlation between exchange rate of JPY/USD and GDP ($y = 11333e^{-0.008x}$) showed a strong correlation between these indicators (R? = 0.9624), thus Japan has the potential to stimulate GDP growth in the future by reducing the value of the national currency.

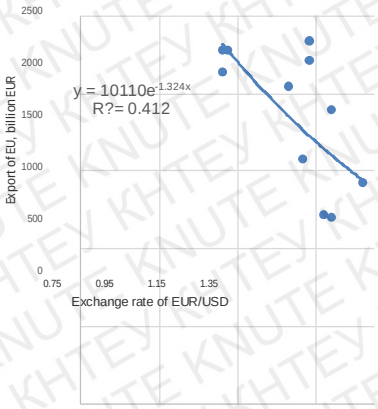
Japan has become the main opponent of the USA, EU and other countries on the world market, raising the price competitiveness of national products, including the market for high-tech products, through a policy of competitive devaluation. Most scholars believe that the weakened JPY is one of the main prerequisites for reducing the economic growth of Japan's competitors, which has become an aggressor in the global foreign exchange market, out of the usual deflation of local businesses.

The main preconditions for the introduction of a new monetary policy in the EU the threat of deploying a deflationary spiral in the EU, a negative outlook for GDP growth and ineffectiveness of interest rates dropped to almost zero (0.05% since September 2014) became a threat. Consequently, the management of the ECB decided on a large-scale redemption of bonds in the Euro area in order to create an excess supply of credit on the markets, the formation of positive inflationary expectations and the acceleration of inflation. For this purpose, the ECB spent 1.08 trillion USD from March 2015 to September 2016. The EUR is for the purchase of sovereign and corporate bonds of governments and enterprises in the Eurozone. The ECB announced the following mechanism for the implementation of the program: 1) Since March 2015, the redemption of state and corporate bonds with a maturity of 2 to 30 years, amounting to 60 billion EUR monthly, has begun; 2) The program includes, initially, debt securities of countries that receive assistance from the EU or IMF. The condition of getting into a ransom program is the availability of an investment rating; 3) The guide for achieving inflation will be up to 2% today - 0.2% [9].

Declaring the policy of the QE, the ECB has especially warned the governments of the countries from a substantial increase in the total amount of public debt. As there is a threat of a current financial crisis falling into the crisis of public finances, sovereign debts of many countries of the world have increased considerably

recently, especially in conditions of stagnation. Let's pay attention to the targeted influence of the policy of the QE of the ECB on the state debts of the participating countries through one of the peculiarities of





the mechanism for its implementation.

The redemption of government debt within the framework of this program allows them to restructure for longer periods, reduce interest rates on them and, as a result, improve sovereign credit ratings. Immediately after the announcement of the decision to introduce a new monetary policy, the EUR fell from 1.333 to 1,111 USD/EUR in 2014, that is, to the level of 2004. The effectiveness of competitive devaluation in the EU can be determined by means of the correlation between GDP, exports of goods and exchange rate of EUR/USD (Figure 2.5).

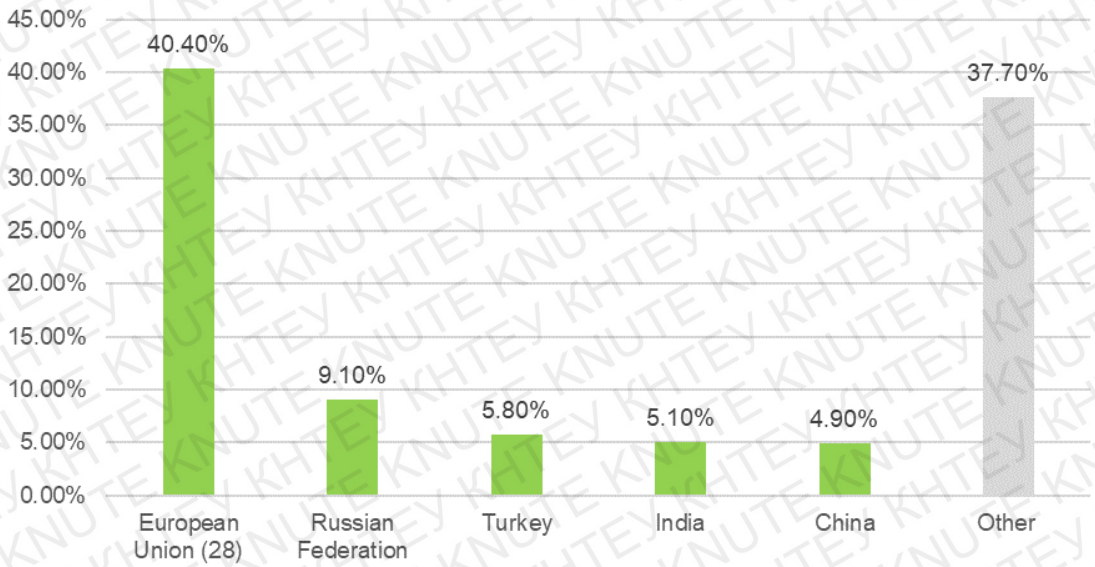
Figure 2.5. Correlation Model Between Exchange Rate of EUR/USD, EU's GDP and Export of Goods

Source: complied by the author based on [9]

The correlation model of the dependence (exponential dependence) on GDP in the EU ($y = 17050e^{-0.412x}$) and the exchange rate of EUR/USD has shown a fairly strong connection (R? = 0.7407) between these parameters. The calculations show that the rise in the value of the EUR will stimulate an increase in volume GDP, due to the fact that the driver of economic growth in EU is domestic consumption. Instead, the interdependence between the volume of exports and the EUR/USD has indirect interconnections ($y = 10110e^{-1.324x}$), and hence a decrease in the value of the EUR, will stimulate the growth of exports, which will positively affect on the trade balance and balance of payments in region. The competitive devaluation has helped the USA, China, Japan and the EU boost GDP growth, and increase export volumes.

2.3. Estimation of the Influence of Competitive Devaluation by Open Economies on the State of Ukraine's Trade Balance

International currency wars that many countries in the world (primarily world leaders: USA, China, the EU, Japan) today are exposed, can largely destabilize both the world economy and the economies of developing countries. Financiers from all over the world, believe that the first victims of currency manipulations will be countries with a small open economy, and therefore directly affect the economy of Ukraine. The artificial reduction of the value of the currencies of major trading partners of Ukraine negatively affects on Ukrainian exporters and, accordingly, positively affects on Ukrainian consumers. Ukrainian exporters, competing in world



markets, are forced to bid at a slightly higher price than the prices of trading partners, where the price of currency is artificially adjusted. As for the domestic market, the decline in the exchange rate of the trading partners has a certain positive effect on our consumers. The geographic structure of Ukraine's foreign trade for 2017 is shown in Figure 2.6 and Figure 2.7.

Figure 2.6. Distribution in the Total Exports of the Ukrainian Economy, 2017

Source: complied by the author based on [9]

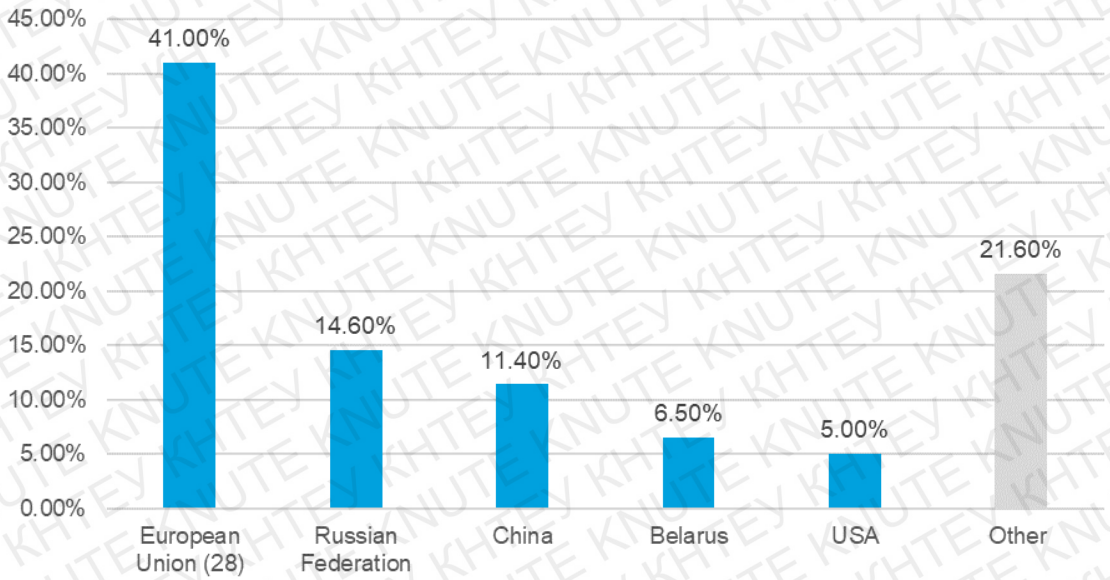


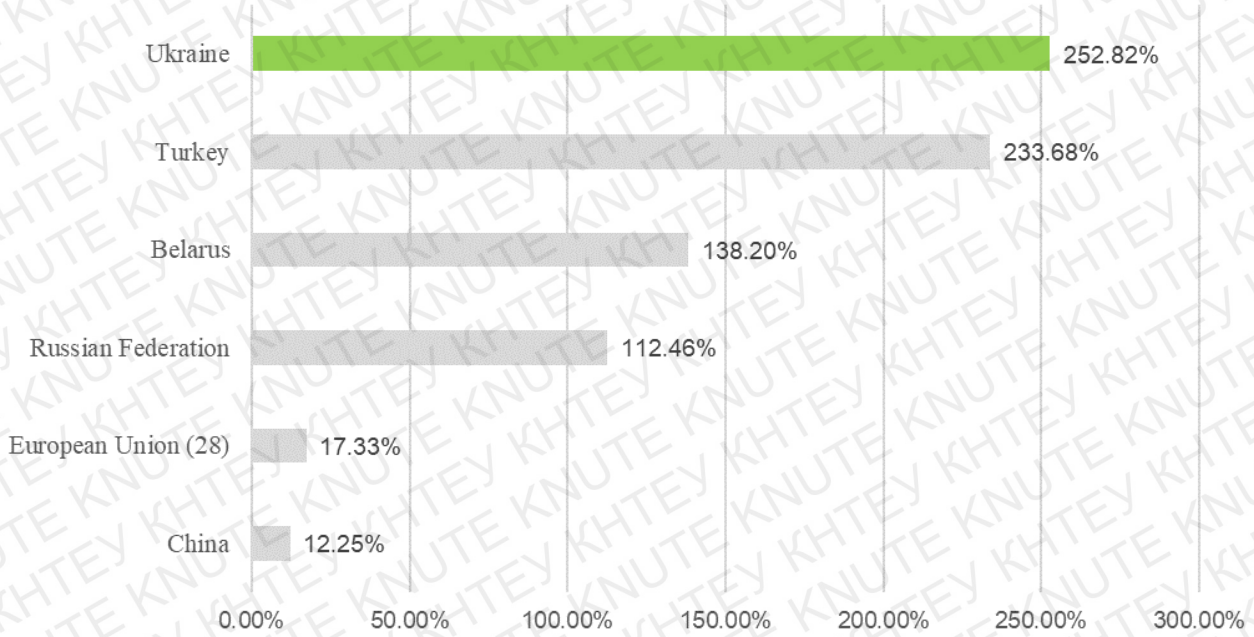
Figure 2.7. Distribution in the Total Imports of the Ukrainian Economy, 2017

Source: complied by the author based on [9]

Having analyzed the geographical structure of Ukraine's foreign trade (export and import of goods) for 2017, it is possible to draw a preliminary conclusion that the largest trading partners for the total trade turnover are: EU, Russian Federation, China, Belarus and Turkey. Despite the fact that the volume of Ukraine's foreign trade in goods with the Russian Federation for 2017 continued to decrease (from 2014, inclusive as a result of deteriorating international political and economic ties), Russian Federation remains the most important (second-largest) trade partner for Ukraine.

Accordingly, if the value of the currencies of the main trading partners of

Ukraine, such as EU, Russian Federation, China, Belarus, Turkey will decrease relative to USD at a faster pace than the value of the ukrainian national currency - UAH, this situation can cause a number of negative consequences for the Ukrainian



economy. First of all, this is a deterioration of foreign trade balance, Ukrainian exports will be more expensive for countries that devalue their national currencies, as a result, exports in cash equivalent will begin to decrease [9].

Imports from countries that devalue their national currencies at a higher pace than Ukraine will begin to grow in monetary terms, as hard currency in the world market will be less than the period of devaluation. In this way, Ukraine's net exports or foreign trade balance will deteriorate, which will negatively affect the country's macroeconomic situation and reduce currency revenues. In Figure 2.8 is shown level of devaluation of UAH, as well as other currencies, the main trading partners of Ukraine for the period from 2013 to 2018 [11,9].

Figure 2.8. The Level of Devaluation of Ukrainian Currency (UAH) and Currencies of Main Foreign Trade Partners of Ukraine for 2013-2018

Source: complied by the author based on [9]

As can be seen from the Fig. 2.8, Ukraine devalued its currency at the fastest pace compared to its main foreign trade partners. From 2013 to 2018, the level of devaluation amounted to 252.82% (UAH devalued from 7.99 UAH/USD in 2013 to 28.19 UAH/USD in 2018). Such a sharp devaluation is not related to Ukraine's participation in the world currency war, and because of the transition from fixed exchange rate to floating.

When National Bank of Ukraine (NBU) in February 2014, abandoning the fixed rate to the USD, UAH is still not able to find its equilibrium position in the market. It has a lot of volatility, due to a combination of factors that affect its value, in the first place such as: the conflict in the Donbass, the supply of regular loans from the IMF, the number of imposed or abolished administrative restrictions of the NBU [].

Despite the fact that the value of currencies, the largest of the three trading partners of Ukraine since the beginning of 2014, decreased at the slowest pace compared to others: Russian Federation (112.46%), the EU (17.33%), China (12.25%), however the EU and China continue to pursue a policy of competitive devaluation on a global scale. Some Chinese economic departments have already started to make forecasts based on the fall of the rate to 8 CNY/USD by the end of 2019 [9].

In addition, Ukraine adheres the doctrine of free trade (from January 1, 2016, an agreement on entry into the Free Trade Area with the EU is in force in the country), this will cause a number of positive and negative effects. The gradual devaluation of the EUR and the CNY will lead to such an impact on the Ukrainian economy:

- The price competitiveness of our products in the European and Chinese markets will tend to fall *(negative effect)*.
- Ukrainian consumers will have access to European and Chinese goods at lower prices *(positive effect)*.

- Reduction of currency revenues from Europe and China *(negative effect)*.
- Stimulating Ukrainian exporting producers to finally engage in strategies for the geographical diversification of their product flows *(positive effect)*.
- Reduction of Ukrainian gold and foreign exchange reserves, due to a revaluation of the share of EUR *(negative effect)*.
- A portion of the Ukrainian population who travels to EU and China will spend less on these trips *(positive effect)*.

In order to understand how effectively devaluation helps the ukrainian economy and to determine the real effect of the impact on a given macroeconomic indicator, it is necessary to calculate the elasticity factor. The simplest and most understandable is the calculation of the export elasticity.

The coefficient of elasticity shows the degree of quantitative change of one factor with the change of another by 1%. The elasticity of exports is calculated as the ratio of the percentage change in the value of export to the change of any determinants. Determinants are factors that affect the volume of export. In our case, the determinant will be the exchange rate of the national currency - UAH. In a simple variant, the coefficient of elasticity of export will reflect the dependence between the change in exchange rate of UAH/USD and the volume of export.

All necessary indicators for calculation, namely: export volume and exchange rate UAH/USD for 2016 and 2017, are shown in Table 2.7.

Table 2.7

Volume of the Export and Exchange Rate of UAH/USD for 2016-2017 in Ukraine

Year	*Exchange rate of UAH/USD*	*Volume of export, million USD*
2016	25,551	36 360
2017	26,596	43 275

Source: complied by the author based on [11]

ΔQ = (43 275 - 36 360)/ 36 360 * 100% = 19,01%;

ΔER = (26,596 – 25,551)/ 25,551 * 100%= 4,089%;

E_{ER}^{E} = 19,01 / 4,089 = 4,649%;

$E_{ER}^{E} > 1$;

Where E_{ER}^{E} - export elasticities ratio depending from exchange rate of UAH/USD; ΔQ – deviation of export; ΔER – deviation of exchange rate (UAH/USD).

From the above calculations, one can conclude that the elasticity rate of exports is more than 1, and therefore the change in the value of the exchange rate of the national currency in the international market will have a direct impact on the volume of exports. In this analysis, the above made calculations shows that the devaluation of UAH/USD by 1% will lead to an increase in exports by 4,649%. There is also an opposite interconnection, with a revaluation of the national currency by 1%, the volume of Ukrainian's exports will decrease by 4,649%.

In order to stimulate the growth of exports and net trade balance, Ukraine may resort to artificial measures in the future, devaluing its own currency if it is necessary to achieve certain targets. It should be remembered that the devaluation is a double-edged sword, on the one hand it helps to improve the trade balance, but on the other it reduces the real level of income of the population and devalues their national currency savings, which uniquely affects the financial condition of the majority of the population.

Therefore, the probability of an artificial devaluation of the national currency depends on the monetary policy of the government authorities and the goals they pursue. Because it allows depreciation to align macroeconomic imbalances, while not pursuing political and economic reforms to identify and overcome the real problems, which are the primary source of an imbalance. Reducing the value of the national

currency is a simple and convenient tool that does not require much effort in the proper management of the country's foreign economic policy, which is why it is still so popular in practically all countries of the world, both in developed and in

Year	*Country*	*Exchange rate to USD*	*Volume of export in Ukraine, million USD*

developing countries.

Another important indicator necessary to calculate the impact of competitive devaluation of Ukraine's major trading partners on its economy is to determine the level of import elasticity, depending from the exchange rate of their national currencies. This is indicator that will allow us to understand how the devaluation of the national currencies of the main trading partners will affect the volume of Ukrainian imports from these countries.

The calculations were carried out on the basis of three countries (the largest partners of Ukraine for the import component) - the EU, the Russian Federation and China. The indicators on which the calculations are made are presented in Table 2.8. The coefficient of elasticity of import of goods into Ukraine comes with the EU - $E^I_{ER,EU}$= -19,22%, the Russian Federation - $E^I_{ER,Russian\ Federation}$= -3,069%, and from China - $E^I_{ER,China}$= 11,388%.

Table 2.8

2016	EU	0,9	17 140,8
2016	Russian Federation	67,06	5 149,3
2016	China	6,64	4 687,7
2017	EU	0,89	20 799,4
2017	Russian Federation	58,34	7 204,1
2017	China	6,76	5 648,7

The Exchange Rate of the National Currencies and the Volume of Export into Ukraine from The EU, the Russian Federation and China, 2016-2017

Source: complied by the author based on [9]

The coefficient of import elasticity for the EU and the Russian Federation is negative, which means that with the revaluation of national currencies by 1%, imports from these countries to Ukraine increased by 19.22% and 3,069% respectively (for 2017). The main reasons explaining the mutual interconnectedness are three: 1) Ukraine imports high-tech goods from the EU and natural resources (gas, oil), which prices have considerably increased in 2017; 2) impossibility to replace import of goods from other countries; 3) impossibility to switch to import substitution (goods of national production).

Instead, the coefficient of the elasticity of imports from China to Ukraine shows that with a devaluation of 1%, it helped to increase the volume of imports of Ukraine from China by 11,388%. The trade balance of Ukraine, at the same temp of growth of imports from these countries (EU, Russian Federation and China), will increase the negative value of trade balance, especially when the national currencies devaluate the main import partners of Ukraine, which will negatively affect the state of the economy.

The share of Ukraine's GDP in world GDP is 0.12%, Ukraine is small open

economy and has a small domestic market. The high degree of dependence of Ukraine's economy on the situation in the world economy is more than obvious. We need to increase the level of self-sufficiency of the economy through the development of domestic consumption. The situation on this issue is sad - in the last few years Ukraine together with Moldova occupy the last places in Europe with purchasing power per capital. The deviation from the average for EU countries is tenfold. Self-sufficient domestic market - one of the conditions necessary to protect against external shocks.

The situation of the main export markets should become positive for the Ukrainian economy. Thus, the average world steel prices, after a decline in March 2018 to 560 USD per ton, recovered and rose to 600 USD per ton in September. A similar situation with the prices of iron ore - after the March fall to 54 USD per ton until September, they have grown to 59 USD per ton. World wheat prices in 2018 show a good growth rate (with the exception of June-July), now they are about 240 USD per ton [11].

This gives some confidence that, in the short term, the boat of the Ukrainian economy does not spill storm waves in emerging markets and the possible slowdown in USA and China. Moreover, the strongest storms are now in the region, economic ties with which are insignificant in Ukraine - in Latin America. On the other hand, it underlines all the drawbacks of the export-raw material model of the economy formed in Ukraine - restrained optimism is based predominantly on the favorable conditions of foreign markets. It's easy to imagine what will happen if it changes.

Thus, the devaluation of the national currencies of the main import partners of Ukraine can have negative consequences for the trade balance of Ukraine. The coefficient of the unitarity of Ukraine's exports showed a high interdependence from the change in the exchange rate of UAH/USD. The coefficient of the elasticity of imports from the EU and the Russian Federation has a indirect proportional

correlation with the exchange rate of their national currencies, while the coefficient of elasticity of imports from China has shown a direct proportional dependence.

CONCLUSIONS TO PART 2

Analysis of tindicators of dynamics GDP and the trade balance of the main participants in the world currency wars (USA, EU, China and Japan) for 2007-2017 showed diversification in different countries. In the USA, competitive devaluation has led to a steady increase in the GDP of the country, but the trade balance has always been disproportionate; in the EU and China, competitive devaluation had a positive effect, as it became a catalyst for GDP growth and surplus trade balance throughout the period (2007-2017). In Japan, the situation is most ambiguous, because participation in the world currency war - has shown the alternation of positive indicators of GDP growth and trade balance with the negative. The analysis main actions of the Central banks of EU, USA, China and Japan during world currency wars showed the following situation:

- The USA has been actively using the quantitative easing policy and lowering the discount rate for devaluation of the national currency; however, since 2015, the USA has completely ceased to apply quantitative easing policies and resumed the growth of the discount rate, and thus switched from the active phase of passive participation.
- The main instrument of devaluation for the EU was also the policy of quantitative easing and lowering the discount rate to zero (similar to the USA), but the EU does not raise the discount rate until now.
- Central banks of China and Japan mainly used currency interventions to devalue the national currency. The second subsidiary tool for Japan was to lower the discount rate to zero. The analysis of calculation of the effect competitive devaluation of main import countries on the trade balance of Ukraine showed a high dependence on the value of their national currencies.

PART 3. DIRECTIONS OF COUNTERFEITING INTERNATIONAL CURRRENCY WAR ON THE GLOBAL AND NATIONAL LEVEL

3.1. Development of Institutional Mechanisms for the Prevention of International Currency Wars

The modern world market is characterized by a rapid increase in competition and relatively saturated with a variety of goods and services. Such conditions affect the economic relations between the states, especially their measures used in foreign trade policy. Many countries in the competitive struggle, instead of trade restrictions, are increasingly using a variety of measures to promote domestic products to foreign markets. Reducing value of national currency is one such measure, a manifestation of price competition and, at the same time, a form of price discrimination.

All international financial institutions, including the International Monetary Fund (IMF), World Trade Organization (WTO) and the World Bank (WB), have repeatedly expressed concern about the further development of currency wars in the world. The IMF's former director, Dominique Strauss-Kahn, emphasized that the idea of the currency being used as a political weapon is gradually taking root in the world. As a matter of fact, states use a very effective mechanism to protect their countries from import, without resorting to the introduction of customs duties and other restrictions that require the authorization of the WTO [13].

At the same time, WTO General Director (2005-2009) Pascal Lamy stated that divergences regarding exchange rates could turn into trade wars. The IMF and the WTO, as international financial organizations of global scope, should set and implement a globalization task in their work, one of which should be to prevent attempts to artificially devaluation currency and thus prevent the recurrence of currency wars [5].

Unfortunately, today, neither the IMF nor the WTO (which became the successor of the GATT as an arbiter in the world trade) do not have the proper tools to deal with such problems. The regulatory documents of the GATT require access to IMF recommendations on any issues related to the mechanism of the exchange rate, foreign exchange reserves, balance of payments and other similar topics. Thus, in 1977, IMF countries agreed that "long-lasting large-scale interventions in the currency market produced in one direction" could be evidence that the country is manipulating the exchange rate of its currency.

In the past, the IMF's oversight of the exchange rate issues was weak as officials were not inclined to criticize the exchange rate policies of important member states. The IMF report on China notes that the CNY is "substantially lower than the medium-term economic determinants," and that "the strengthening of the CNY is needed." But even if it were concluded that there was a violation of the concluded agreements, the IMF has no ability to force the country to change its policy [13].

In today's world trade, currency dumping is widely used as one way to fight for markets in foreign economic expansion. The GATT adopted the International Anti-Dumping Code provides for the application of sanctions and special operations (accrual of large fines, duties, etc.) in the case of currency dumping. At the moment, IMF and WTO members need to join efforts to resolve disputes in applying competitive devaluation measures in the area of exchange rate policy.

After all, these disputes can affect other countries as well as affect their foreign trade relations with one another. Some measures to resolve the situation were attempted by the IMF. At the summit of IMF and WB countries, a compromise was made to reduce the quotas of developed countries, in particular the USA in IMF management and increase the quotas of developing countries. There are three main ways to solve the problem of world currency wars at the international level using institutional (Table 3.1).

The first way to solve the problem of further development of world currency wars at the institutional level is to delegate the powers of the IMF and the WTO. Regulating and managing the negative effects of world currency wars on the economies of the world, could be the delegation of world powers to international organizations

Table 3.1

Main Ways to Solve Problem of World Currency Wars at the International Level

Ways of realization	*Complexity of using*	*Efficiency of using*
1. Delegate the powers to the IMF and WTO	Average	High
2. Conducting periodic meetings of countries G-20	Low	Average
3. Creating a single currency (SDR) and single world Central bank	High	High

Source: complied by the author based on [11]

such as International Monetary Fund (IMF) and World Trade Organization (WTO). IMF in this case will be able to determine the true cause of the devaluation of one or another national currency. Having categorized the reasons for devaluation into two main groups, the first will be those that are objective and caused by macroeconomic imbalances of the average economy, and the second group, which are aimed at obtaining price competitiveness on the world market at the expense of its trading partners.

The WTO has an Anti-Dumping Code to regulate currency conflicts between countries, which can be used as the basis for regulating foreign exchange relations between countries in world trade. Article VI "Antidumping and Compensation Fees" of the GATT states that the parties determine that the dumping, through "which goods

of one country enter the market of another country at a value less than the normal value of goods. Should be condemned if it causes material damage or puts the threat of material damage to the industry created on the territory of the party, or significantly impedes the creation of domestic industry". The product is considered to be the subject of dumping, then the keel is entered into the trade of another country at a price lower than its normal value. Moreover, the price of goods imported into the customs territory of the country is considered lower than its normal value.

The mechanism for conducting an WTO investigation into the use of competitive devaluation in order to obtain preferences in world trade may have the following order:

1. The submission by the country of a written application for artificially reducing the value of the national currency of another, which does not correspond to the macroeconomic indicators in the short and medium term development of the country.

2. Investigation of the application by the investigating authority. Before the investigation begins, the investigating authority must inform the exporting country of subject to the investigation of receipt a statement of the initiation an investigation into a competitive devaluation.

3. The authority conducting the investigation will reject the application if it does not contain sufficient evidence of the existence of an artificial reduction in the value of the national currency of the exporting country. In this case, the investigation does not begin. If, in a statement, the existence of currency dumping is proven, the authorities begin an investigation of what should be done in an official statement in the press.

4. Immediately after the commencement of the investigation, the investigating authority sends the authorities of the exporting country the subject of the investigation a full statement of the initiation of the investigation. According to the request, the text of the statement should be accessible to other interested parties of the investigation.

The authority conducting the investigation sends questionnaires to known exporters, importers, other parties that they consider it necessary to engage in a currency antidumping investigation or the competent authorities of the country of export in order to obtain information and evidence used to conduct an anti-dumping investigation.

5. After completing the deadline for responding to the questionnaire, interested parties may submit their comments. Non-confidential versions of these comments should be available for study by other interested parties. Stakeholders also have the right to request consultations in order to resolve the problematic issues of the investigation.

6. An analysis of all collected information is carried out. On its basis, a preliminary conclusion is made on the existence of a currency dumping phenomenon in relation to other countries.

7. The authority conducting the investigation on the basis of a preliminary opinion on the existence of artificial devaluation and causing damage to the national industry may enter into force previous anti-dumping measures, which should be published in the official press. In such a case, the parties should be informed of the investigation, on the basis of which it was decided to enter into force the previous anti-dumping measures. Previous currency anti-dumping measures may take the form of a preliminary duty or (and better) security in the form of a cash deposit or a debt obligation equal to the amount of the pre-calculated currency anti-dumping duty, which is not greater than the previously calculated amount of damage.

8. Stakeholders may submit their comments and have the right to request consultations on issues related to the introduction of the previous ones.

9. The investigating authority analyzes all available information and concludes with regard to the existence of a competitive devaluation.

10. Inform the interested parties of the investigation into the conclusion reached. Interested parties are given an opportunity to comment on the conclusion made within the time limit set by the investigating authority.

11. Analysis by the authority conducting the investigation of the comments and proposals sent by the interested parties.

12. Approval and publication of the decision on the introduction of definitive currency anti-dumping measures, which are introduced for a period of up to five years.

The second way to avoid the problem of the future development of world currency wars at the level of international institutions is to periodically organize G-20 meetings. It is this mechanism that is the easiest to use, does not require much effort, does not require the development of an additional regulatory framework, does not require the delegation of authority to international financial and economic institutions, does not require significant investments of financial resources, etc.

This mechanism involves solving conflict situations in the format of controversial discussions between delegated representatives from each country. The greatest efficiency can be achieved if representatives of each country are headed by the ministries of finance and Central banks, that is, those who have the relevant theoretical and practical knowledge of understanding the formation of the fair value of the national currency.

Participation of representatives from other countries will be ineffective, since more and more the impact on the stability of the world economy by 80% is formed at the expense of 20% of the world's largest economies. Only devaluation of the national currency of one of the G-20 countries can create a chain reaction all over the world. The main parameters of this mechanism will be the following criteria:

1. Meeting of representatives of the G-20 (heads of ministries of finance and Central banks) on a periodic basis (approximately every 180-360 days).

2. Consideration of controversial situations that have been put forward for discussion on the competitive devaluation by the initiating country.

3. Development and application of restrictive measures against the country conducting a policy of competitive devaluation.

4. Prohibition of artificial reduction of the value of the national currency, which may bring losses to other participants in the world economy.

5. Informing international trade and economic organizations about the use of competitive devaluation (as one of the tools of trade wars) in order to influence the aggressor country.

This mechanism has already proved its effectiveness in practice, representatives of the countries have repeatedly discussed this problem and the need to refrain from competitive devaluation of the leaders of the world economy. As a result, a country that was an active participant in currency wars changed the mechanism of monetary policy towards fair competition in the world market. A vivid example is Japan, which, after the G-20 summit in Moscow шт 2013, ceased to pursue monetary policy aimed at slowly devaluing the national currency.

In post-crisis conditions, due to inefficiency of other instruments, the devaluation of the national currency is used by developed countries to overcome the recession. To distinguish between devaluation to overcome the effects of the economic crisis and competitive devaluation in order to benefit from international trade is very difficult, so it is necessary that the analysis of the real value of the national currency, which is formed on the basis of macroeconomic callers in the short and medium term, was carried out by the heads of the central financial institutions of the countries G -20. G-20 countries are against early confrontation and exchange ensures that actively counteract attempts to use monetary and exchange mechanisms for competition in world markets. Following the summit in Moscow in 2016, the leaders of the G-20 countries announced their intention to keep the economy open, to avoid protectionism and refrain from deliberate devaluations of national currencies.

However, such actions are not new, because the similar intentions of the leaders of the G20 countries declared at the Seoul summit in 2010.

The third alternative way to avoid the future development of the world currency war is to create a single world currency that will replace all existing ones in the world. The only issuer and institution that serves as the world's Central bank is to be delegated to the IMF. It should be noted that the given way of solving the problem of competitive devaluation of different countries of the world is least likely to be implemented. The biggest disadvantage of this method will be the inability of national economies to regulate monetary policy within the country.

The introduction of a single currency in the context of a global movement of capital, goods, works, services and labor would deprive the world economy of imbalances and increase its stability. At the same time, the institutional prerequisite for such an introduction is the creation of a supranational Central bank as a regulator for the issue and circulation of such a currency. It is also necessary to develop common mechanisms for the use of such a currency for all countries of the world. And if such a currency will be based on the SDR, then the IMF itself will need to restructure, which currently holds the largest share of votes in the fund (about 35%) in the USA, China, Japan and Germany, in accordance with the current quotas of the member states.

In the case when the IMF serves as the world's Central bank, decisions in it should be based on the principle of "one country, one vote". Therefore, there will be no loss of financial independence, from which, at this stage, not all countries will be able to refuse. Since the collapse of the global financial crisis (2008-2009), many reputable economists have begun to urge the world community to create a new world reserve currency that would replace the national currencies of the world. Most financial experts agreed that the linking of the entire planet economy to one developed country (for example, the USA), which is experiencing a long-term economic downturn and is unlikely to be able to set the tone at the previous level, is

the main reason for the imbalance of the global financial system.

However, no real steps have been taken to make real steps towards creating a new world currency. The reason is rather banal – the current state of affairs in general is suited by the USA and the EU, whose currencies today are reserve, since they allow their economies to gain additional benefits. However, the opinion of other countries, however - as the opinion of economists, the IMF and the UN, is ignored. Thus, the concept of the existence of a single currency in the world (for example, SDR) will be based on the following criteria:

1. Loss of value and termination of functioning of all currencies of the world.

2. Recognition by all countries of the world of a single monetary unit (SDR), which will act as money.

3. Delegation of powers by the Central banks of the world and the creation of a single world bank on the basis of the – IMF.

4. Absence of any way to conduct competitive devaluation (artificially understate the value of the national currency).

5. Simplification of the architecture of the world monetary system and international settlements between the participants of the world economy.

An alternative to the existence of a single world currency may be the use of decentralized digital money. In 2009, the world's virtual community came up with a digital currency - Bitcoin - uncontrollable to any government or bank. By expanding the currency and the economic system, by clearly defining the algorithm for its emission and circulation at the program level, enthusiasts completely excluded the influence of economic, political and other factors on currency quotes and thus may have created a prototype of the future currency. The fact that Bitcoin existed since 2009, it is accepted for payment for services and goods, and also freely converted into electronic and real currencies in most countries of the planet, is enough to treat it as a serious phenomenon.

In addition to the benefits of decentralized money, there are also many disadvantages, the main of which are:

1. The absence of a Central bank that could at least have minimal control and influence on monetary policy of the world.

2. Lack of a stable infrastructure for a decentralized market for participants in the world market.

3. Lack of a regulatory framework that would regulate and establish clear rules of the game.

4. Great volatility of decentralized money.

5. Low level of popularity in the world (decentralized money, more popular only in developed countries of the world).

6. The complexity of monetary payments.

7. The possibility of breaking electronic purses and theft of money.

Thus, it is possible to solve the problem of deploying world currency wars in future periods at the institutional level using three main methods. The first method involves the delegation of powers of the IMF and the WTO to determine the real value of the currencies of the world based on macroeconomic indicators of the country's development in the short and medium term. If the IMF proves a competitive devaluation of a particular country, the WTO will be able to apply anti-dumping measures. The second way of dealing with currency wars is to organize regular meetings of heads of finance ministries and heads of Central banks of the countries of the G-20 and discuss controversial issues (in the form of a discussion), with the possibility of applying light restrictions against countries that artificially reduce the value of national currencies or inform the WTO on the use of countries dishonest methods of price competition with the requirement to apply the limitations. The third way is least likely, its essence lies in the existence of a single currency (for example, SDR) in the world and the creation of an IMF - the world's Central bank, which will regulate the global monetary policy.

3.2. Areas of Protection of the Domestic Economy from the Negative Impact of International Currecy Wars

The economy of any country at the present stage can not do without entering the world markets. Expanding the scope of such an exit by increasing the volumes and range of products of national commodity producers provides an increase in the power of the state and contributes to strengthening its competitiveness in world markets. With the collapse of the Soviet Union in front of Ukraine, there was a problem of penetrating world markets with its goods. The deep degree of their globalization and the already existing structure have led to the fact that Ukraine has to enter into price competition with more economically developed countries or associations of countries.

At the same time, Ukraine, which is on the path to market reforms, has to spend a lot of effort, concentrating them on certain areas, the most accessible in view of the existing conditions of economic activity. In these conditions, the question arises of the competitiveness of the national economy as an opportunity to realize the country's competitive advantages in foreign markets [11].

The dynamics of competitiveness indicators of the national economy is formed under the influence of the exchange rate of national currency, which is an important regulator of foreign economic relations and an important lever in the development of the economy, especially Ukrainian, due to the long-term internal financial-economic crisis (2014-2015) and the incompleteness of the formation of market infrastructure. Therefore, forecasting the competitiveness of the national economy is impossible without taking into account the influence of the level and dynamics of the exchange rate of national currency – UAH on this process.

No less important is the problem of creating a plan for protection the price competitiveness of Ukrainian goods on the world market during the intensification of

the world currency war by major players such as the USA, China, the EU, Japan and others. When these countries devalue their national currencies, the economies of developing countries (such as today is Ukraine) are beginning to experience a negative impact on their economies.

The necessity of creating a system of measures that would protect the Ukrainian economy from the negative impact of the consequences of further development of world currency wars (competitive devaluation policies) as the leaders of the world economy and Ukraine's main trading partners is due to the lack of a methodological position that would allow determining the price competitiveness of the national economy on the world market. and to apply mechanisms of protecting Ukrainian economy from the world currency war, which participants can be both leaders of the world economy and the main trading partners of Ukraine.

The existence and development of currency wars in the world during the last century in order to obtain the price competitive advantages of some countries at the expense of its trading partners has actualized the problem of creating a plan of measures to counteract the negative effects of the latter. The issue of creating a plan of action to counter global currency wars in Ukraine remains controversial and insufficiently studied [39].

To date, Ukraine has responded to the negative effects of currency war in the world after the fact of devaluation national currencies by other countries. There was no provision or methodological guidance that would recommend how to respond to the devaluation of the national currencies of main trading partners and what measures to apply. After a negative impact on the Ukrainian economy and the need to overcome imbalances in macroeconomic indicators, the only way out was to mirror the devaluation of the national currency – UAH.

Obviously, the need to create a high-level management in Ukraine is a «Detailed Roadmap» that would recommend how to react to the devaluation of a

particular currency (or several currencies at the same time) and what measures to apply in response to avoid the negative impact of devaluation of other currencies.

A «Detailed Roadmap» that will protect the Ukrainian economy from the negative effects of competitive devaluation on a national level should be established in cooperation with state authorities involved in macroeconomic regulation in Ukraine National bank of Ukraine (NBU), Ministry of Finance of Ukraine and Ministry of Economic Development and Trade. As a result, the cooperation and interaction of these authorities should create a «Detailed Roadmap» for the protection of the Ukrainian economy from the negative impact of the devaluation of other currencies of the world in the medium-term perspective, due to the consideration of this issue. Key characteristics of the document «Detailed Roadmap» for managing the negative effects on the economy of Ukraine on the national level are shown in Table 3.2.

Creating the «Detailed Roadmap» for managing the negative impact of world currency wars on a small open Ukrainian's economy should be an internal and secondary protection tool that will be used by the state authorities. That the primary instrument for regulating the negative impact of world currency wars on the economies

Table 3.2

Key Characteristics of the Document «Detailed Roadmap»

Internal parameters of a Detailed Roadmap	*Key condition for implementation*	*Ways of realization*
Analyze the current state of world currency wars.	Delegate government authority to create this document which are involved in macroeconomic regulation: -National bank of Ukraine (NBU), -Ministry of Finance -Ministry of	Establishing at the legislative level the necessity of creating this document.
Determine the level of devaluation of the leaders of the world economy and the main trading partners of Ukraine.		View and update a Detailed Roadmap for the medium term.
		Inclusion of this document in the composition of one sections monetary policy our state.
Determine the level of negative impact on the Ukrainian economy in case of devaluation of each currency of the trading partner of		Development of methodology and recommendations in the event of a possible devaluation of a currency.

Ukraine.	Economic Development and Trade	
To develop a forecast of probable future steps of aggressor countries in the world currency war.		Permanent and clear cooperation between the NBU, Ministry of Finance and Ministry of Economic Development and Trade.

Source: complied by the author based on [11]

of all other countries should be – an external instrument developed at the global level

Additional ways to protect the national economy from the negative impact of international currency wars may be as follows:

1. To devalue UAH by the amount on which the main competitors of Ukraine devalued their national currency (main trade partners for trade turnover: the EU, the Russian Federation, China, etc.). Ukraine must closely monitor the monetary policy of the most economically developed countries of the world and respond promptly to the competitive devaluation of other countries. Change of exchange rate for rapid response is one of the easiest and most effective in protecting the national economy.

Flexible exchange rate of UAH during the period of the policy of competitive devaluation, involves a certain devaluation of the domestic currency. This will increase the competitiveness of the economy, in connection with this, that today most countries of the world will conduct a devaluation policy in relation to their currencies to support exporters. However, it is this trend that entails very large risks to the economies of developing countries [9].

A similar practice of currency races in the future may lead countries to trade wars. The germs of this, now can be seen, first of all, between the USA and China. In the world it does not happen that absolutely everyone earned on export, if somewhere it grows, it must necessarily decrease. If one currency falls, another should automatically increase in relation to the first.

The maintenance of the exchange rate at a constant level and, moreover, the appreciation of the UAH during the active phases of currency wars harm the economy

in a situation where inflation in Ukraine exceeds inflation in the USA and the EU. Import outstrips exports - production in Ukrainian factories is shrinking. That is, the national economy is suppressed, and this is a capital economic truth.

After a strong devaluation of the UAH in 1998-1999, the strategy for keeping a stable UAH was adopted, and the revaluation of 2005 and 2008 was a square error. It is thanks to the powerful devaluation of the UAH, when the exchange rate grew from 2 UAH/USD to 5.3-5.5 UAH/USD, the Ukrainian economy was able to quickly become legs starting in 2000. However, stability and even some strengthening of the UAH over the next few years have made a black affair.

2. To create competitive products for high-quality characteristics with high added value. The structure of the Ukrainian economy, which operates mainly in the 3rd and 4th technological processes, determines the export potential of the country where commodity predominates. The similarity of Ukraine's structure with Russia shows the prospects of domestic enterprises in the Russian market, where they can still be competitive, unlike European and American ones.

The lack of ability to compete on the world market as a result of the periodic deployment of world currency wars by different countries based on price parameters of production creates an opportunity for Ukrainian producers to modernize their equipment and production process. There is an alternative way to sell their goods on the world market - by increasing the quality parameters of the competitiveness of Ukrainian goods. Thus, the increase in the cost of Ukrainian production in the world market due to the devaluation of national currencies by other countries of the world will make Ukrainian exports less sensitive due to the growth of qualitative characteristics of goods [13].

Production of Ukrainian goods can have high competitiveness on quality characteristics only in the CIS market, in the EU and in the USA market high-tech products are low-competitive on qualitative parameters. It should be borne in mind that according to the UN Economic Commission for Europe, none of the CIS

countries has an effective system of research and development that meets the current trends of developed countries. From this, and taking into account that most of the transition countries are conducting such a search, it is necessary to co-operate more extensively with other countries' own assets, experiences and prospects in order to keep up with and not to bear the full cost burden of solving a wide range of problems. in this area.

3. Conduct a flexible monetary policy. In this case, the NBU does not have to conduct a currency policy based on a fixed exchange rate of the national currency. The UAH exchange rate should be on the basis of a floating rate, be able to react instantly to all the negative factors that may put pressure on Ukraine's macroeconomic indicators.

The effectiveness of the monetary policy mechanism depends on the chosen monetary strategy. Modern challenges are causing changes to existing monetary models around the world.

The transition to the inflation targeting regime in Ukraine (from 2016) is complicated by the high level of the budget deficit, the underdevelopment of the percentage channel of the monetary transmission, and the lack of independence of the Central bank and the flexibility of the exchange rate. Significant dollarization and debt burden of the economy, a negative balance of foreign trade increase the financial vulnerability of the country. Therefore, changing of the monetary system in Ukraine, it is very important to take into account the Central bank's target function besides indicators of inflation and economic growth, and also the exchange rate, leaving an inflation priority.

Since, in modern conditions, the mechanism for the implementation of monetary policy is aimed at maintaining financial stability, it must be based on controllability of the real exchange rate and the ability to withstand external and internal shocks. This criterion is the key to assessing the effectiveness of the NBU's monetary policy in terms of its impact on the financial stability of the economy.

4. It is necessary to establish (to increase) the level of import duties and tariffs against countries that conduct a policy of competitive devaluation in relation to the Ukrainian national currency – UAH. Due to the devaluation national currecies of Ukraine's trading partners, imported goods in the domestic market in the UAH equivalent will become cheaper, respectively, the volume of imports will increase from that country in the monetary equivalent. In order to protect the national economy against such countries, it is necessary to increase the level of tariffs, thus Ukraine will be able to neutralize the competitive advantage of the country due to artificial reduction of the value of the national currency.

In addition to the established tariffs against the country of the aggressor (which artificially devalues its currency) possible application also is non-tariff restrictions. The main task of Ukraine in this case will be to reduce the volume of imports to the initial (before the beginning of the competitive devaluation) and the restoration of trade balance. Negative in this case may be the situation - the filing of applications against Ukraine in the WTO, with allegations of the application of tariff restrictions and requests for rules of world trade. Thus, when import tariff is introduced for Ukraine, the following economic effects will occur:

- the effect of the state income, that is, the state will receive additional income;
- the trade effect, that is, the reduction of imports from a given country;
- consumer effect, that is, reduction of domestic consumption of imported goods.

5. Provide Ukrainian exporters trade preferences that export products to a country that is an active participant in world currency wars. Due to the reduction of the country's national currency value, Ukrainian exports will be more expensive in the foreign market, and volume of exports will decrease. To overcome the negative impact of competitive devaluation from other countries, Ukrainian government officials should develop a set of measures that will encourage a national producer to continue exporting to this country.

The system of preferences developed by representatives of the state government should be based on the principle of compensating the Ukrainian exporter for the appreciation of its products on the foreign market, as a result of the appreciation of the UAH against the artificially devalued currency of the country importer of Ukrainian products. With the help of this mechanism, obtaining a tax exemption from the state, the Ukrainian exporter will be able to reduce the cost of its products on the foreign market. In this way, Ukrainian exporter will restore the price competitiveness of his goods.

The system of state preferences for Ukrainian exporters may include the following elements:

- state subsidies;
- preferential crediting;
- reduction of the tax burden;
- development of state programs;
- and so on.

6. Diversify the geographical structure of exports and imports. Trade of Ukraine in the geographic structure is currently too concentrated, with the three main trading partners (EU, Russian Federation and China) accounting for about 2/3 of all foreign trade. In order to diversify and properly manage risk (reducing the value of their national currencies), Ukraine should increase the geographical number of markets for its products.

In the course of devaluation of national currencies, the main trading partners of Ukraine, the state of trade balance can be considerably deteriorated. First of all, this will happen due to cheaper imports (from the EU, the Russian Federation and China) and rising prices for Ukrainian exports on the same markets. It is necessary to promote products of Ukrainian production primarily in the CIS markets (where it will be more competitive), and to sell the most high-tech products in the markets of the Asian countries, northern and southern America. This way of protecting against world

currency wars will help to avoid a significant negative impact of the devaluation of the national currency one of the three Ukrainian trade partners of Ukraine. Will allow to reduce the level of risk and make Ukraine less dependent on a specific market, which will to some extent increase the level of economic security of our country.

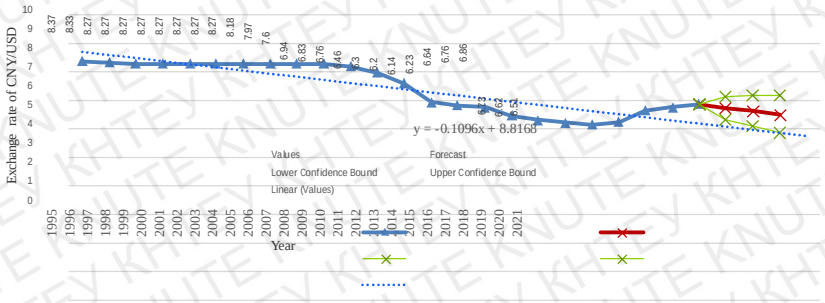
Thus, the main methods of protection against the negative impact of world currency wars on the Ukrainian economy (created at the national level) may be – creating document «Detailed Roadmap» the government structures responsible for macroeconomic regulation (NBU, the Ministry of Finance and the Ministry of Economic Development and Trade), in this document, the risk of devaluation of national currencies (trade partners of Ukraine) should be determined and appropriate recommendations for managing this risk (the mechanism of counteraction and protection of the national economy).

Additional methods of counteracting the negative impact of the world's currency wars on the part of Ukraine may be: diversification of the geographical structure trade of Ukraine, devaluation of the UAH by the same amount as devalued trading partners, create competitive products for high-quality characteristics with high added value, conduct flexible monetary policy, establish duties and tariffs against aggressors in currency wars, granting preferences to Ukrainian exporters.

3.3. Application of the Scenario Approach for Forecasting Exchange Rate and Trade Balance of Countries with Open Economy in Conditions of Conducting International Currency Wars

An important role in the possible development of active actions in the world currency war for the financial stability of many countries is the problem of correct forecasting of macroeconomic parameters of future development. One of the main elements of the balance of payments stability is the definition of forecasting levels of value of the national currency and state of trade balance of the country.

Each country performs forecasting of these indicators both on the basis of the short and medium term, in order to understand future expectations in the results of foreign trade with its counterparties. Understanding calculatedindicators, states can develop measures that would improve the conditions of foreign trade, reduce the risk of negative consequences, etc.One of the most active participants in world currency wars is China, analyzing the exchange rate of the CNY/USD from 1995 to 2018, we can draw the following conclusions. For 10 years, from 1995 to 2005, the CNY was



fixed relative to the USD in the exchange rate of 8.28 CNY/USD (Figure 3.1).

Figure 3.1. Exchange Rate of CNY/USD and its Forecast on Next Period

Source: complied by the author based on [9]

The People's Bank of China (PBC) did not allow the strengthening of the national currency, the USA, the EU and Japan criticized China for the underrated CNY rate, which allowed them to gain price competitive advantage for Chinese goods in foreign markets. As a result, China abandoned the tight bind in 2005, the course became floating and the CNY strengthened by almost 16.18% (to 6.94 CNY/USD) by mid-2008, stabilizing at this level. But in September 2009, it again began to revalue, the peak fell to January 2014, when one USD was 6.14 CNY, further revaluation to

date (October 2018) replaced the policy of devaluation of the CNY, the exchange rate now is 6.9529 CNY/USD.

By constructing a linear trend (y = -0.1096x + 8.8168) based on retrospective data - CNY exchange rate (from 1995 to 2018), we can make a forecast for the next 3 years: 2019, 2020, and 2021, under other unchanged conditions. As shown in the Fig. 3.1, CNY for realistic forecast should revalue over the next three years in 2019 to the level 6.73 CNY/USD in 2020 to 6.62 CNY/USD and in 2021 to 6.51 CNY/USD, for optimistic forecast in 2019 – 6,32 in 2020 – 6,07 and in 2021 – 5,85 CNY/USD appropriately and for pessimistic forecast in 2019 – 7,14 in 2020 – 7,17 and in 2021 – 7,17 CNY/USD appropriately.

On the basis of the retrospective data of Table 2.3, a forecast was made - the linear trend (y = 46.448x + 10.284) of China's trade balance for the period 2018-2020. Table 3.3.

Table 3.3

Forecasted Level of Trade Balance for China, 2018-2020

Year	Pessimistic forecast, billion USD	Realistic forecast, billion USD	Optimistic forecast, billion USD
2018	484,4	570,55	656,46
2019	501, 29	616,92	732,55
2020	524,09	663,28	802,48

Source: complied by the author based on [9]

Under the standard terms of development, China's trade balance will become realistic forecast. With the devaluation of the national currency (CNY), China can stimulate an increase in the surplus value to the one indicated in the optimistic forecast. The general analysis shows an increase in the trade balance in each of the forecast, which will positively affect the macroeconomic development of the economy.

In Japan, the formation of the value of exchange rate of the national currency is based on a floating format, in contrast to other countries in the world, Japan has never used a system of fixed exchange rates, which could quickly change the value of the national currency by reacting to certain macroeconomic factors or the world market situation. Figure 3.2. shows the exchange rates of the national currency (JPY) for last 10 years (from 2008 to 2018).

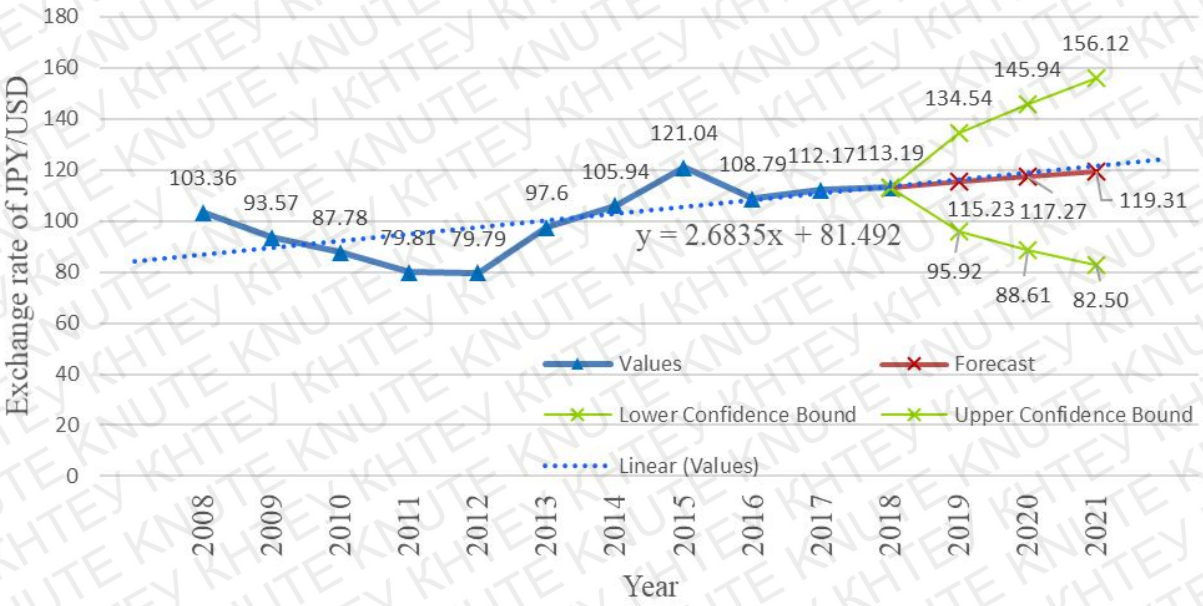


Figure 3.2. Exchange Rate of JPY/USD for 2008-2018 and its Forecast on Next Period (2019-2021)

Source: complied by the author based on [9]

Based on a retrospective analysis of the Japanese JPY, one can build a forecast (linear trend: y = 2.6835x + 81.492) for the next three years (from 2019 to 2021). As can be seen from Fig. 3.2, JPY will decrease against USD from today's level of 113,19 JPY/USD in 2018 to 119,31 JPY/USD in 2021 for realistic forecast. Thus, reducing of value national currency (JPY) will create price advantages for Japanese export products on world markets, and will make imported goods more expensive on the domestic market.

In a negative forecast, the JPY will begin to rapidly increase its value from

113.19 JPY/USD in 2018 to 82.5 JPY/USD in 2021 - which will cause significant losses to the export industries in the country, and will stimulate the growth of imports. And according to positive forecast, the JPY will devalue to 156.12 JPY/USD in 2021, in this case, Japan will become one of the most active participants in the world currency wars, it will positively affect the macroeconomic development of the country.

On the basis of the retrospective data of Table 2.4, a forecast was made - the linear trend (y = -8.1018x + 39.293) of Japan's trade balance for the period of 2018-2020 Table 3.4.

Table 3.4

Forecasted Level of Trade Balance for Japan, 2018-2020

Year	Pessimistic forecast, billion USD	Realistic forecast, billion USD	Optimistic forecast, billion USD
2018	-185.15	-41.53	102.08
2019	-197.88	-49.80	98.27
2020	-210.51	-58.07	94.35

Source: complied by the author based on [9]

According to a realistic forecast, the trade deficit of Japan will become disproportionate over the three forecasted years in 2018 (-41.53) billion USD in 2019 (-49.80) billion USD in 2020 (-58.07) billion USD. In a pessimistic scenario, the trade balance will accelerate the growth of negative values up to 5 times faster than realistic. Only in the optimistic scenario, the trade balance will be positive, so for its achievement Japan will need a slow devaluation of the national currency.

In order to stimulate economic growth, and to achieve a positive trade balance, it is necessary to develop a plan to increase the export of Japanese products to the world market and, accordingly, reduce the volume of imports from other countries. Without paying enough attention to the solution to this problem, Japan's economy may not, at best case, grow, and in the worst case, have a slight increase.

Consequently, in the medium-term, the macroeconomic indicators of Japan will continue to worsen in the medium-term.

After analyzing the dynamics of the exchange rate of EUR against the USD one can make a clear conclusion that the ECB has never recorded the value of the national currency, and the process of forming exchange rate of EUR was based on a floating rate. Figure 3.3 shows the dynamics of the EUR exchange rate over the past 10 years (2008-2018).

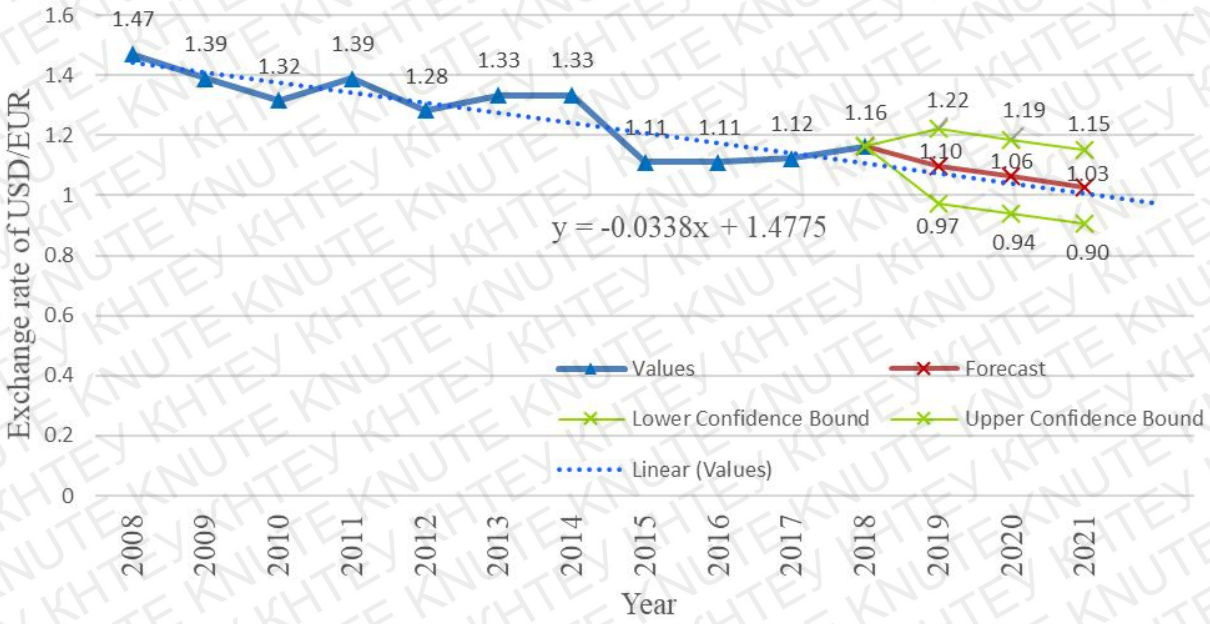


Figure 3.3. Exchange Rate of USD/EUR for 2008-2018 and its Forecast on Next Period (2019-2021)

Source: complied by the author based on [9]

As can be seen from the retrospective analysis and the forecast based (linear trend y = -0.0338x + 1.4775) on it, in the period from 2019 to 2021, the value of the EUR will decrease relative to USD (according to realistic and pessimistic forecast) and according to optimistic forecast value of EUR will increase relative to USD only in 2019 and in 2020-2021 will decrease too. The future EUR's exchange rate should deevalue from today's 1,16 USD/EUR in 2018 to 1,03 USD/EUR in 2021.

An increase in the value of EUR in the medium term may worsen the ability of European producers to sell their products on foreign markets. Price competitiveness

of goods will decrease, therefore for the EU countries, which are more developed, the task is to increase the competitiveness of their products even more due to qualitative parameters. Taking into account that the EU is one of the most active participants of the world currency wars, the formation of the EUR exchange rate will take place at the expense of the pessimistic scenario (2019 – 1,22 USD/EUR, 2020 – 1,19 USD/EUR, 2021 – 1,15 USD/EUR).

On the basis of the retrospective data of Table 2.2, a forecast was made - the linear trend (y = 46.448x + 10.284) of EU's trade balance for the period of 2018-2020 Table 3.5.

Table 3.5

Forecasted Level of Trade Balance for EU, 2018-2020

Year	Pessimistic forecast, billion EUR	Realistic forecast, billion EUR	Optimistic forecast, billion EUR
2018	484.65	570.55	656.46
2019	501.29	616.92	732.55
2020	524.09	663.28	802.48

Source: complied by the author based on [9]

Forecast EU trade balance between 2018 and 2020 shows that with all possible scenarios of development (optimistic, realistic and pessimistic), the EU trade balance will be surplus. These calculations indicate a stable development of macroeconomic indicators, and therefore guarantee the financial stability of the region. The competitive devaluation policy used by the ECB in previous periods brought positive results. The EU and China are the only (among the largest) participants in the world's currency wars, which, due to the devaluation of national currencies, have achieved a surplus level of trade balance over the past ten years, and projected forecasts for 2018-2020 confirm this fact. Due to the achievement of the key goal of world currency wars - a stable level of surplus trade balance, it is possible to predict a decrease in future EU activity in competitive devaluation policies.

The latest trade balance, which requires detailed analysis and plays an important role in the possible development of world currency wars and can have a significant impact on the stability of the world economy, is the USA's trade balance. On the basis of the retrospective data of Table 2.1, a forecast was made - the linear trend (y = 9.3055x - 615.77) of USA's trade balance for the period of 2018-2020 Table 3.6.

Table 3.6

Forecasted Level of Trade Balance for USA, 2018-2020

Year	Pessimistic forecast, billion USD	Realistic forecast, billion USD	Optimistic forecast, billion USD
2018	-729.84	-521.49	-313.14
2019	-726.64	-511.82	-297.01
2020	-723.29	-502.15	-281.02

Source: complied by the author based on [9]

Having analyzed the forecasted USA's trade balance in the medium term (2018-2020), we can draw the following conclusions. The USA, regardless of scenario approach (optimistic, realistic or pessimistic), will have a negative trade balance. The gap between exports and imports in the pessimistic scenario will remain at level (-720) billion USD per year, with a realistic scenario of (-510) billion USD per year, with an optimistic (-300) billion USD per year. Today, USA has the largest trade deficit in all world.

These indicators indicate a deterioration of key macroeconomic indicators in the future and will put pressure on the level of financial stability of the country. In order to reduce its negative impact, the USA should develop a system of measures that would level out or at least reduce the negative impact. One of the possible ways to reduce the negative trade balance may be the devaluation of the national currency (a policy of competitive devaluation). Devaluation of the USD may cause a chain reaction in the world, in this case, the main trading partners of the USA can take

mirror measures. Thus, a new stage in the world currency war, which will be affected, in the first place, will be affected by developing countries [13].

It should be noted that, at the moment the USA has ceased to pursue a policy of competitive devaluation, thereby having entered the stand-by mode, despite the fact that it is actively conducting trade wars with China. Today the priority in trade wars is given to classical instruments of trade wars, namely to increase the level of duties and tariffs, the policy of competitive devaluation is a spare option, which can be used in the future period, with a greater aggravation of trade confrontation with China.

After analyzing the dynamics of the exchange rate of UAH/USD since the introduction of the currency into circulation as the official and only means of payment and exchange in 1996 to 2018, one can see that the main periods of devaluation of the national currency coincide with global financial crises (1997-1998, 2008-2009) or internal crisis (2013-2015). In this way, it is clear that Ukraine is not an active player in the world currency war, but only a passive participant who used this tool to cope with the crisis. During the 22 years of the existence of the UAH, the general level of devaluation reached +1540% (from 1.83 UAH/USD in 1996 to 28.19 UAH/USD in 2018), which is a very high indicator of the depreciation of the value of the national currency, compared with other developing countries (Figure 3.4).

Small open economies (including Ukraine) can only mimic the devaluation of hard currencies, to mitigate the negative impact on their economies, and to introduce mirroring measures to deactivate the country's aggression in a competitive devaluation. Another important reason for the devaluation of a small open economy is to minimize negative imbalances in its own economy. In this case, the country is not a participant in the currency war, but only tries to balance its own indicators to a normal (stable) level to prevent their further increase in the negative side, which could cause serious macroeconomic problrms, and eventually result in political and social problems within

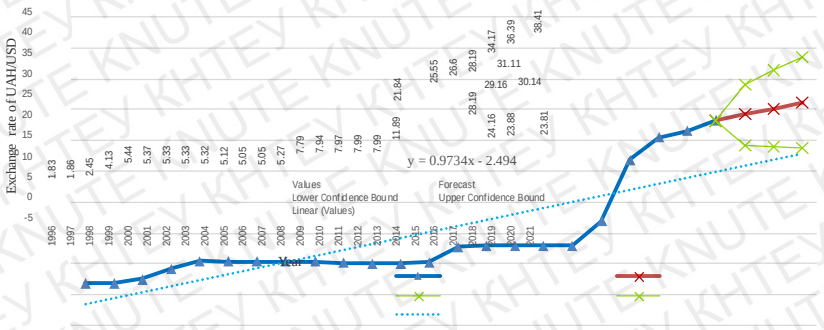


Figure 3.4. Exchange Rate of UAH/USD for 1996 - 2018 and its Forecast on Next Period (2019-2021)

Source: complied by the author based on [9]

the country.

After calculating the forecasted figures for trade balances and exchange rates of the main participants in the world currency wars in the medium-term period, the following conclusions can be drawn. According to the scenario approach, the value of the Chinese national currency (CNY) in the period 2018-2020 will increase its value, thereby exacerbating the export of Chinese goods to the world market, the projected trade balance over the next three years will have a positive impact on macroeconomic development and stability of the country. This characteristic also applies to the EU, the EUR must be revalued in the period from 2018-2020, and the trade balance will be profitable. Instead, the Japanese currency (JPY) will slowly devalue, while the country's trade balance will be scarce in pessimistic and realistic scenarios, in the USA, the trade balance for all three scenarios (pessimistic, realistic and optimistic) will be negative. Therefore, the main promoters of the future world currency may be Japan or USA.

CONCLUSIONS TO PART 3

The main ways of protecting development of world currency wars in the future may be: delegate the powers to IMF and WTO to control the formation of the fair value of national currencies and, in the case of artificially undervalue the currency, apply the sanctions developed and restrictions on the currency anti-dumping code. The second way would be regular meetings between heads of finance ministries and heads of Central banks of the G-20 to discuss controversial issues on artificially undervalueing the national currencies and solving problems in a live discussion format. The third way could be to create a single world currency like SDR, and the functions of Central banks should be delegated to the IMF (IMF will be one world central bank).

To protect the Ukrainian economy from the negative impact of world currency wars can be cooperation between such structures as the NBU, the Ministry of Finance and the Ministry of Economic Development and Trade is needed to create a “Detailed Roadmap” that will determine the risk of devaluing the currencies of major trading partners of Ukraine and a system of actions that will reduce or neutralize the negative impact on Ukraine's economy. Additional measures can be:

1. To devalue UAH for the same amount as the main trading partners of Ukraine.

2. Reorient to the production of high-tech products to compete in the world market with qualitative parameters, and not just for the price.

3. Conduct a flexible monetary policy.

4. Diversify the geographical structure of foreign trade.

5. Increase the level of duties and tariffs.

6. Provide preferences to Ukrainian exporters, etc.

The main promoters of the new world currency war may be Japan or the USA, because forecast of their trade balances in the medium-term (2018-2020) will be negative. Instead, China and the EU will have a positive trade balance.

CONCLUSIONS AND PROPOSALS

The twenty-first century is characterized by the emergence of so-called "democratic wars" in the world, which does not inherent in the features of classical wars between states. The "democratic wars" includes: political, economic, trade, currency and other types of wars. Democratic wars – a new type of confrontation between states that arose in the replacement of classical warfare (without the use of weapons) in the 20-21st century, and is aimed at achieving a clear set of benefits.

Currency wars are purposeful actions of one or several countries to reduce the rate of a national currency in relation to other world currencies. Currency wars are also called competitive devaluation. A competitive devaluation is being conducted in order to strengthen the position of domestic producers, to increase the country's export performance, or to occupy a better place in the global economy. The main goals of world currency wars are:

1. Provide the country with its advantages in international trade at the expense of cheapening domestic goods and rising prices for imported goods.
2. Creation of favorable conditions for the development of domestic production and protection of domestic producers.
3. Reducing the debt burden of the government by redemption of its debt obligations at a lower price.

World currency wars arose, even before our era, and with the development of international trade and the process of globalization, the scale of their use has been steadily increasing. The history of world currency wars can be divided into two main stages of the «old» before 1921 and the «new» one from 1921 till now. Since 1921

there have been three major world currency wars, in which many countries took part. The first world currency war took place from 1921 to 1936, the second - from 1967 to 1987, the third (modern) - from 2010 to 2015 (many scientists believe that it still continues to this day).

To devalue national currencies, countries use different methodological tools. The classification of the tools is divided into two main groups: traditional and new ones. The traditional methods include: using of currency interventions, lowering the discount rate, reducing the number of currency restrictions and rhetoric (an indirect method). The new methods (which began to be launched during the current currency war 2010-2015) include: a policy of quantitative easing and an increase in the level of tax on investments in the country.

Among the developed countries (USA, Japan and the EU), the most popular method of devaluation was the quantitative easing policy and the reduction of the discount rate. Among the developing countries (China) an increase in the volume of currency interventions. The management of these data by the devaluation of the national currency carries only the central bank.

The analysis of the GDP growth rate and the trade balance of the countries, the main participants of the world currency for 2007-2017, showed the following results. Through the policy of quantitative easing, the USA was able to reduce the negative trade balance in 2009 to a level (-400) billions USD and recorded for subsequent years at the level of (-550) billion USD. USA participation in the world currency war helped the USA accelerate GDP growth to a level of 3-4%, which is a high growth indicator for developed countries.

The EU's participation in the world currency war helped accelerate the growth of the surplus trade balance from 181.6 billion EUR in 2010 to 434.5 billion EUR in 2017. The policy of competitive devaluation accelerated GDP growth with (-3.57%) to 3.49%. China received one of the greatest preferences in the world currency wars, accelerating GDP growth in 2008 was 28.92% and slowly dropped to 7%. The trade

balance for 2007-2017 was positive and ranged from 103.9 billion USD in 2008 to 523.7 billion USD. The rate of GDP growth in Japan was positive in the active phase of participation in the world currency wars, after which it began to fall after the completion of the participation (-5.95% and -9.67% in 2014 and 2015, respectively). The balance of trade stood between positive and negative.

The main trading partners of Ukraine are the EU, the Russian Federation and China, two of them are active participants in world currency wars. This means that, at a faster temp of devaluation of their national currencies, it will be more difficult for Ukrainian producers to sell their products on their markets, while it is possible to increase imported goods in the national market, as a result of cheapening their prices in UAH equivalent. The coefficient of elasticity of exports from the cost of hryvnia ($E_{ER}^{E} = 1{,}0469$) showed that with a decrease in the cost of UAH by 1%, exports grew by 4.69% (in the 2016-2017 period).

The coefficient of elasticity of import of goods into Ukraine comes with the EU - $E_{ER,EU}^{I}$= -19,22%, the Russian Federation - $E_{ER,Russian\,Federation}^{I}$= -3,069%, and from China - $E_{ER,China}^{I}$= 11,388%.

The coefficient of import elasticity for the EU and the Russian Federation is negative, which means that with the revaluation of national currencies by 1%, imports from these countries to Ukraine increased by 19.22% and 3,069% respectively (for 2017). The main reasons explaining the mutual interconnectedness are three: 1) Ukraine imports high-tech goods from the EU and natural resources (gas, oil), which prices have considerably increased in 2017; 2) impossibility to replace import of goods from other countries; 3) impossibility to switch to import substitution (goods of national production).

Instead, the coefficient of the elasticity of imports from China to Ukraine shows that with a devaluation of 1%, it helped to increase the volume of imports of Ukraine from China by 11,388%. The trade balance of Ukraine, at the same temp of

growth of imports from these countries (EU, Russian Federation and China), will increase the negative value of trade balance, especially when the national currencies devaluate the main import partners of Ukraine, which will negatively affect the state of the economy.

The main mechanisms for protection and avoidance of world currency wars at the international (institutional) level can be:

• Delegation of powers to control the formation of the fair value national currencies and the application of sanctions to international financial and economic organizations, such as: IMF and WTO. In the IMF, definition of the value of the national currency will be based on the short and medium term macroeconomic indicators. In the WTO, regulation of the possibility of other countries applying sanctions against a participant in the policy of competitive devaluation of the developed currency anti-dumping code.

• Conduct regular meetings of heads of finance ministries and Central banks of the G-20 countries, for a live discussion of contentious issues, concerning the artificial subordination of the value of national currencies and solving problems at this moment.

• Creation of a single world currency on basis of SDR and delegation of powers to regulate its issuance IMF, which should become Central bank at the world level.

To protect the Ukrainian economy from the negative impact of world currency wars, cooperation between such structures as the NBU, the Ministry of Finance and the Ministry of Economic Development and Trade is needed to create a document «Detailed Roadmap» that will determine the risk of devaluing the currencies of major trading partners of Ukraine and a system of actions that will reduce or neutralize the negative impact on Ukraine's economy. The following steps (at the national level) can be made for the main mechanisms of protecting the national economy from the negative effects of world currency wars:1) devalue UAH for the same amount as the main trading partners of Ukraine, 2) reorient to the production of high-tech products

to compete on the world market with qualitative parameters, and not just for pricing 3) flexible monetary policy 4) diversify the geographical structure of foreign trade 5) increase the level of duties and tariffs 6) give preferences to Ukrainian exporters, etc.

The calculation of the projected trade balance scenarios (pessimistic, realistic and optimistic) for the medium-term (2018-2020) showed that possible initiators of the new world currency war may become Japan or the USA, as their trade balances in the medium-term (2018-2020) will be negative. Instead, China and the EU will have a positive trade balance.

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