THE EVOLUTION OF CURRENCY RELATIONS IN THE LIGHT OF MAJOR EXCHANGE RATE ADJUSTMENT THEORIES

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Abstract
This paper examines the impact of major exchange rate adjustment theories on the global monetary system. The reasons of the previous organization forms of monetary relations collapse at the global level are defined. The main achievements and failures of major exchange rate theories are described.

Key words: *exchange rate, monetary system, exchange rate theories, currency parity.*

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I. INTRODUCTION

Today, there are countless theories of exchange rate adjustment, each of which has its supporters as well as opponents. The reason is that the majority of testing theories in practice has shown their inability to ensure the absence of distortions in the monetary sphere, which, sooner or later, lead to the appearance of currency crises. Therefore, a detailed analysis of the main postulates of each of the theories is important and fundamental in the investigation of the monetary sector in general and the exchange rate regulation sphere in particular. It also will help to develop a better practical recommendations and to increase the effectiveness of the research results.

Since the inception of economic thought, the exchange rate was and remains one of the main researching objects of many well-known economists. Among them, special attention should be paid to the works of G. Cassel, I. Fisher, J.M. Keynes, M. Friedman, R. Mundell, J. Frankel, P. Masson, A. Hansen, J.M. Fleming and others.

The purpose of this article is the investigation of the relationship between the evolution of the world monetary system and the basic exchange rate adjustment theories .

II. THE INVESTIGATION RESULTS

The development of the global monetary system during the whole period of its functioning has been driven by several factors. Among them, the key ones can be considered, such as: a dynamic rise in commodity production and services activity in the world; transformation of industrial relations as a result of scientific and technological revolution; integration and globalization processes that apply to all areas of modern society, including economic.

The works of leading academic economists made a significant impact on the currency relations evolution as well. Their findings formed the basis for improving the mechanism of monetary policy realization at both, the state and the world level. However, despite numerous scientific achievements in this field, statements as to which exchange rate regime is most effective and what should be the role of state in regulating the currency relations are still significantly different (see tab.1).

Table 1. The main theories of exchange rate adjustment

Exchange rate adjustment theories	Basic postulates	Representatives
The purchasing power parity theory (Cassel, 1918)	The exchange rate should be set on the basis of purchasing power parity, depending on the level of domestic and international prices.	M. Navarro, D. Hume, D. Ricardo, G. Cassel I. Fisher
The theory of a "managed" currency,	Currency regulation was first seen as a tool of counter-cyclical policy. According to the moving parity theory, exchange rate is regulated by changing the gold parity of the national currency. J.M.	J.M. Keynes, I. Fisher,

developed in two directions: - the moving parities theory; - the neutral rates theory (Keynes, 1923)	Keynes argued in this case that the states should devalue its currency in order to increase the competitiveness of their products in foreign markets. The basic tenet of the neutral rates theory is a need to set the exchange rate at a level which will provide a balance of payments equilibrium.	R.G. Hawtrey, J. Plenge
The fixed parities and rates theory (Graham, 1941)	Denies the impact of exchange rate changes on the foreign trade dynamics. Therefore the government activity, directed to the exchange rate changes in order to regulate the balance of payments, becomes meaningless. Instead, there should be created all conditions to ensure the stability of the exchange rate.	J. Robinson J. Bickerdike, F. Graham, A. Brown
The key currency theory (Keynes, 1923; Keynes, 1943; Williams, 1944; Hansen, 1945)	Justified by the need to categorize all currencies into the key ones, hard and soft. Thus, the cross rates of other currencies should be set in relation to the key currency.	J. Williams, A. Hansen, R.G. Hawtrey, F. Graham, J. M. Keynes
Mundell-Fleming Model (Fleming, 1962; Mundell, 1963)	The exchange rate is determined by the balance of payments dynamic. The effectiveness of fiscal and monetary policy depends on the exchange rate regime.	R. Mundell, J.M. Fleming
The floating exchange rates theory (Friedman, 1953; Frankel , 1979)	This theory, based on the monetarist views, provides market self-regulation of the exchange rate. Automatic exchange rate formation contributes to the development of foreign trade and balance of payments equilibration.	M. Friedman, F. Machlup, J. Frankel, J. Wilson, R. Dornbusch, A. Lindbeck
The normative theory of exchange rate (Meade, 1952)	Exchange rate policy of one country may cause deviation of economic equilibrium to another. Therefore, representatives of normative theory put forward the idea of exchange rates adjustment based on international parities and agreements established by international organizations.	J.E. Meade, R. Mundell, A. Lanhi, E. Birnbaum
The theory of capital assets that has two areas: covered and uncovered interest rate parity (Meese and Rogoff, 1983)	The exchange rate is determined by the level of interest rates in different countries. If, under conditions of full transparency of financial markets, there is a differentiation of interest rates, it will be offset by relevant changes in the exchange rate (uncovered parity). The forward exchange rate that corresponds to the expected value of the spot rate in the future depends on the level of nominal interest rates. Conclusion of forward contracts covers the risk of possible changes in the exchange rate (covered parity).	K. Rogoff, J. Wilson, J. Longworth, R. Meese
The portfolio balance theory (Martin and Masson, 1979)	The exchange rate primarily affect decisions of economic agents regarding the distribution of domestic and foreign assets. At the same time, both the yield and the risk are taking into account.	B. Brunson, P. Masson, J. Martin, J. Frankel
The elasticity theory (Marshall, 1923; Lerner 1944)	The effect of exchange rate changes on the foreign trade balance of the country depends on the exchange rate elasticity of exports and imports.	A. Marshall, A. Lerner, A. Harberger
The optimum currency areas theory (Mundell, 1969)	Creating a currency area allows to overcome barriers in foreign trade associated with currency fluctuations. The main criteria for the formation of an optimum currency area is the mobility of factors of production, flexibility of prices and wages, and the integration of financial markets.	R. Mundell, R. McKinnon, P. Kenen, J. Ingram

The currency regulation theories evolution is closely linked to the development of economic thought in general. Therefore, the fundamental economic theories regarding to the exchange rate regulation process and its importance in the conducting of government economic policy can be formally grouped in the following areas: classical, Keynesian and neoclassical. As part of these schools the world monetary system was taking on the new organization principles and features of functioning. However, the role of monetary authorities in regulating the exchange rate processes was changing at the same time.

In the era of the gold standard functioning the classic approach was dominated in economics. In particular, its representatives have argued about the ability of markets to self-regulate and denied appropriateness of state intervention in economic processes. In addition, they believed that the exchange rate should be determined on the basis of the gold parity. Balance of payments, thus, should be automatically aligned due to the transfusion of gold between countries, thereby depriving the meaning of any interference from the state.

As a part of the gold standard only gold coins have been used in the international monetary circulation and functioned as world money. However, the use of paper money was of predominantly intrastate in nature, and their quantity was directly dependent on the amount of gold in the country. Paper money in that time could be determined as a certificate that identifies the ownership of a certain amount of gold. The issuer of the certificate owned real gold reserves and pledged to carry out its return for gold without any restrictions. Thus, each paper currency issued into circulation was backed by a certain amount of precious metal, which was a gold at that time.

Despite the fact that the state left unattended the scope of exchange rate regulation (in the practical as well as in the theoretical sense), it was hardly defining the volume of paper money issue. It can be explained by the fact that the state was obliged to control the value of paper money in the country up to the amount of gold reserves at the declared level. As a result, exchange rates were set by comparing the gold content of currencies of different countries. Any extra issue of paper money led to disruption of the gold parity and currency devaluation. Therefore, monetary and exchange rate policy of the state held inseparable from each other and was reduced to regulation of the volume of paper money in circulation.

The ideas of classical economics contributed to the emergence of one of the first currency regulation theories, such as the theory of purchasing power parity. The founder of this theory, G. Cassel, argued that in the absence of transaction costs and any trade barriers, the prices for identical goods in different countries should be the same. The exchange rate, in this case, should reflect the purchasing power of their national currencies (Cassel, 1918). As a result, according to this theory, the exchange rate depends on the level of prices in the country, and the last on the amount of money in circulation. At the same time free trade between countries, accompanied by transfusion of gold, facilitates the equilibrium of exchange rate and a balance of payments. Automatic self leveling of the mentioned above eliminates the need for the state to intervene in the exchange rate formation process.

However, the existence of transaction costs, numerous trade barriers, asymmetric information, government regulation of currency relations and the impact of other factors on the exchange rate setting did not allow the theory of purchasing power parity to be embodied in practice. Although it should be noted that the research results of the relationship of inflation and exchange rate, causes of price differentiation across countries, within this theory, became an important scientific achievement at that time.

The rapid development of the world economy at the turn of the nineteenth and twentieth centuries, accompanied by industrialization in most developed countries, needed to be provided an appropriate money supply. As the amount of gold was limited, and the issue of paper money violated gold parity, all monetary systems based on gold were doomed to breakup.

The collapse of the gold standard and the Great Depression marked the start of a new era associated with government regulation of the economy. It is on the pillars of active state intervention in economic processes the Keynesian school of economics was based. Within this school the theory of managed currency, that provided state exchange rate regulation, was put forward. By devaluating its currency, the country contributes to the competitiveness rise of their products in foreign markets, which ultimately stimulates the growth of net exports and national income.

Under this theory, there was a certain differentiation of the approaches to implementing the currency policy. Specifically, I. Fisher has been building his assumption based on the functioning of the gold standard (Fisher, 1920). In order to devalue the currency, according to him, it was enough just to break the gold parity. It was quite simply to do through an additional issue of paper money. Unlike I. Fisher, J.M. Keynes considered the gold standard of the past and focused on the regulation of “fiat” money.

It is reasonable to note that the theory of managed exchange rate rather quickly gained support among economists and since the 30’s of the XX century had been developed in practice, particularly in the UK. However, with the proclamation of the gold standard within Bretton Woods system countries switched to the use of hard exchange rates within fixed parities. That’s why the devaluation and revaluation of the exchange rate as instruments of influence on the country’s competitiveness had been forgotten for some time. Only after the introduction of floating exchange rates, when countries acquired the right to determine the monetary and exchange rate regimes singly and to lead an independent monetary policy, exchange rate again became the object of state regulation. In recent decades, the currency devaluation, in order to obtain competitive advantage in foreign markets, has become commonplace. Moreover, it is used so regularly that we can talk about real countries’ currency wars at the global level.

Another theory that had the practical implementation was the key currencies theory. American economists such as J. Williams, A. Hansen, R. Hawtrey, F. Graham during World War II argued for the need to separate all existing currencies, depending on the role they play in the global monetary system, into the key, hard and soft. In relation to key currencies the cross-rates of other currencies have to be set. A similar opinion was J.M. Keynes, who in the 20's of the twentieth century emphasized the feasibility of building such kind of a monetary system that will function on the basis of two dominant currencies: the U.S. dollar and the British pound sterling (Keynes, 1923). In turn, A. Hansen advocated the complete demonetization of gold and monocentric organization of the monetary system, where the key currency is the U.S. dollar by itself.

Along the Keynesian concept, the nominal theory, which formed the basis of the fixed parities and exchange rates theory, has developed and acquired popularity. According to one of the founders of this theory, G. Knapp, exchange rate has no intrinsic value, and is only a product of the state activity. It is the state, changing the money supply, sets the required exchange rate. His followers, including J. Robinson, J. Bikerdayk, F. Graham et al. denied a high elasticity of the balance of payments in relation to exchange rate fluctuations (Panilov, 2009, p.2). The hardness of prices and the impact of other factors is not always conducive to automatic balancing of foreign trade structure. Therefore, representatives of this theory put forward the idea of contract parity. It was the fact that if the exchange rate has no substantial value and depends solely on the will of the government, the countries must agree among themselves about currencies convertation at a fixed rate. Since exchange rate fluctuations do not always contribute to the equalization of the balance of payment and over against strengthen the speculative expectations, the state policy priority was determined to ensure exchange rate stability. In order to fix the last state must actively participate in the regulation of the monetary sphere, including implementing strict control over the change in the money supply and active using of foreign exchange interventions. According to the theory of fixed parities changes of official exchange rate were permitted only if the balance of payments had structural proportionless, when foreign exchange intervention had been inefficient.

The basic postulates of the key currency theory and the fixed parities and rates theory have become crucial during the Bretton Woods monetary system organization. The hardness of exchange rates, the orientation of monetary policy on key world currencies , controlling the money supply had a certain element of rationality. However, this monetary system within which worked the gold standard, has two significant drawbacks. First, the Bretton Woods system as the previous world monetary systems, was based on gold. In fact, for the U.S. the bullion standard acted, as its currency could easily be converted into gold (indeed, such a conversion was carried out at a fixed price that was not dependent on the issue of the dollar). For other countries, the gold-dollar standard transformed into gold exchange in practice, as well as buying gold for their own currency became possible only with the mediation of the U.S. dollar. The dependence of the world economy from gold mining was a limiting factor in economic growth, and as mentioned could not last long. Secondly, the biggest challenge of functioning of the Bretton Woods monetary system was the fact that the key currency in relation to which cross-rates of other currencies were set, has become the currency of a particular country, namely the United States. Thus, the decision to issue the currency was taken by not a group of countries, as in the case of collective currency, but the state institutions of particular country. As a result, conflicts of national and international interests has led to a phenomenon well-known in economic circles as Triffin's dilemma. The gist of it was that the growing demand for the U.S. dollar, caused by the expansion of the world economy could be achieved only through the growth of the U.S. balance of payments deficit. This, in turn, undermined the credibility of both the key currency and the monetary system as a whole.

As mentioned, the Bretton Woods monetary system has absorbed most of the key currency theory and the fixed parities and rates theory statements. However, some thesis were not taken into account, which finally could cause an acceleration of the monetary system collapse. In particular, the American economist A. Hansen emphasized the necessity of complete demonetization of gold, without which there is no further development of international trade. However, as a true patriot of his country, he argued that the role of key currencies should perform only the U.S. dollar (Hansen, 1945). This dominance of the latter was trying to avoid J.M. Keynes, who primarily advocated the theory of two key currencies (U.S. dollar and the British pound sterling), and later with E. Schumacher proposed a radical idea at that time about the use of a new international unit of account, which would be called the "bancor" (Keynes, 1943; Schumacher, 1943). Later this idea was the basis of the report of J. M. Keynes at the Bretton Woods conference, but as we know, it has not been duly received by the international economic community. According to Keynes, bankor had to be fully backed by gold. Thus the exchange of gold for bankor presumed, while as an opportunity to exchange bankor for gold, however, was excluded. Perhaps if this principle was taken into account when forming the gold exchange standard, and rather reverse conversion of the dollar into gold was prohibited, the collapse of the Bretton Woods monetary system would be slightly delayed. It is important to note that Keynes did not see a bankor as a single world currency that would be used in international trade. He has only bestowed its by functions of reserve and unit of account and assigned it the role of key currency based on which the rates of other currencies would be set. Thus, putting forward the idea of introducing a new international unit of account, Keynes, in the same time, was trying to get rid of belonging of the key currency to some specific country.

The discontent of many countries by the U.S. dollar dominance over other currencies, that led to complete dependence of the economies of these countries on the U.S., as well as mentioned Triffin's dilemma, prompted the world community to look for dollar alternatives. That is, going back to Keynes' idea, in 1969, the special drawing rights (SDRs) have been set up. One of the few differences between the new accounting means and the bankor was that the value of the SDR was determined not on the basis of gold, as Keynes suggested, but based on the cost of a weighted basket of world major currencies. However, as known because of the limited use and specific purpose, the SDR has not been able to become a major reserve unit.

The collapse of the gold exchange standard has strengthened the scientific debate between the Keynesian and neoclassical schools. For neoclassicists it was a great opportunity to underline once again the state's inability to prevent the economic and currency crises. However, they proposed to weaken state intervention in economic processes and to confine by the methods of market regulation. So, based on the neoclassical doctrine, two main theories of exchange rate have developed: theory of floating exchange rates and normative theory.

In contrast to the Keynesians, representatives of the neoclassical school of political economy, particularly monetarists, advocated a free floating exchange rates, which were determined on the basis of interaction of supply and demand of different currencies in the foreign exchange market. In their view, the exchange rate affects the price level in the country and free floating provides the self regulation of the balance of payments. It is the theory of floating exchange rates, that formed the basis at the moment of multicurrency standard proclamation for Jamaican conference.

M. Friedman, F. Machlup, L. Erhard, G. Hirsch argued that the floating exchange rate is able to balance the payments on foreign trade operations automatically; ensure the independence of national economic policy from the policy of the country that issues the key currency; hold back currency speculations, as in the use of floating rates they transform to zero-sum game. Finally, in their opinion, the market is much more efficient in setting the equilibrium exchange rate than is the state.

Importantly, the system of floating exchange rates was not assumed active state intervention in the foreign exchange market functioning that is one of the basic principles of neoliberalism. Exactly the representatives of this school were the founders of monetarism theory and floating exchange rates theory. In addition, floating exchange rate perfectly fit into the well-known trilemma of R. Mandel. It says that it is not possible to simultaneously pursue an independent monetary policy and to use a fixed exchange rate under the conditions of a high level of global economy openness. This statement can be explained by the fact that changes in the money supply as a result of monetary policy conduction will necessarily cause changes in the exchange rate. Thus, a country constantly have to choose between exchange rate stability and the ability to influence economic processes through the channels of monetary transmission. Therefore, it is obvious that the theory of monetarism could not be fully implemented in practice, until the Bretton Woods monetary system functioned.

Another trend of the neoclassical school was the normative exchange rate theory. The representatives of this theory, in particular A. Lanhi, E. Birnbaum, J.E. Meade argued for a flexible form of currency exchange rate. At the same time, they look to the exchange rate as an important instrument of state policy. Despite the fact that the exchange rate should be set under the influence of market forces, the state thus had constantly to control it and in certain cases to regulate it (Meade, 1952).

At the same time, the former IMF employee and future Nobel laureate R. Mundell focused on the fact that under a floating exchange rate currency policy of one country may negatively affect the economy of another country. In this case, A. Lanhi suggested the use of collective regulation of floating exchange rates in order to take into account the interests of all countries. Other followers of normative theory at the same time put forward the idea of application of flexible exchange rate parities that should've been established on the basis of international agreements.

It is on this ground another theory of the exchange rate released, which is called optimum currency areas theory. According to this theory, fluctuations in exchange rates are seen as destabilizing and deterrent factor in international economic relations. Therefore, in order to neutralize the negative impact, countries should cooperate in implementing monetary policy. The founder of this theory R. Mundell proves feasibility of forming single currency area by the group of countries, which can function in two ways: using a single currency, or the preservating of the national currencies and setting of foreign exchange rates on the basis of fixed parities. However, in order to function effectively, currency area must meet certain criteria. The most important among them, according to R. Mundell is the high mobility of factors of production, especially labor resources (Mundell, 1961). Proponents of this theory, such as P. Kenen , R. McKinnon , J. Ingram , J.M. Fleming and others have greatly expanded list of criteria for the optimality of currency areas (Moiseev, 2003). These include the integration of financial markets, the high level of the economy openness, inflation convergence, fiscal federalism and others.

It is also worth noting that the theory of optimum currency areas in recent decades have actively been implemented in practice. In particular, it has become the theoretical basis for the euro area formation. Thus, losing monetary independence, most of the leading European countries have chosen the priority of price stability and the intensification of foreign trade.

III. CONCLUSIONS

Throughout the history of economic thought in the world, almost all major theories have been developed on the basis of empirical research or put forward as an opposition to existing theoretical paradigms. Meanwhile, the concepts dealing with the regulation of the exchange rate over against served as the theoretical basis for future practical changes. This is because the reorganization of the global monetary system was constantly engaged by a groups of countries and international organizations, which, in turn, were guided by the scientific achievements of the various economic theories. Therefore, further research of the causes and effects of exchange rate fluctuations as well as special features of currency scope regulation within the current economic conditions are extremely important in the context of building a qualitatively new monetary system.

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