Global monetary system: from past to future

Alexei Y. Arkhipov[1], Aleksandr V. Ishkhanov[2], Elena F. Linkevich[2]

[1]Southern Federal University, Higher School of Business, Sobornay per., 26, Rostov-on-Don, 344002, Russia
[2]Kuban State University, Stavropolskaya Street, 149, Krasnodar, 350040, Russia

Abstract. Instability of the global financial sphere is the consequence of non-correspondence between current world currency order and changed conditions. Nowadays USD remains a dominant world currency without any worthy alternative even though the trust in this currency has decreased. Thus, we can see the prerequisites of the rebuilding of the existing currency system. In this article, we analyze the main problems of the valid Jamaican currency system. We observe the opportunity of attaching the world currencies to the material equivalent. We also explore the ways of overcoming Triffin's paradox. We evaluate the possibility of changing the existing currency order. The authors have come to the conclusion that stabilizing of the global currency-financial sphere is possible only in case of accepting new currency instruments by the world community not depending on the geopolitical interests of certain states.

[Arkhipov A.Y., Ishkhanov A.V., Linkevich E.F. **Global monetary system: from past to future.** *Life Sci J* 2014;11(11):548-553] (ISSN:1097-8135). http://www.lifesciencesite.com. 96

Keywords: world currency system, reserve currency, currency regulation, polyinstrument standard

Introduction

As we know, since 2008 the world lives in a permanent crisis. They think that during the last 7 years there have been several crises, others think that these are only different stages of the same crisis. One way or another, but it is obvious that world's economy is really unstable and no one knows when this storm will stop. Each crisis or stage of crisis is accompanied by financial imbalances, deficiency of liquidity, and additional emissions. Without any doubts, the emission is justified by elimination of imbalances and diminishing of the liquidity deficiency, but this instrument brings only temporal results which have negative influence in long-term prospects [1]. That's why in a modern financial world, there are some thoughts about the necessity of attaching the world currencies to material equivalent. E.g., there are some assumptions concerning returning to golden standard [2]. There are also suggestions on using a precious metals package, energy quantum or energetic package, food supplies package, goods-inputs package as a new equivalent [3].

But using different equivalents is implicating of their price attachment to some currency which is impossible in current global market situation [4]. Furthermore, the necessary growth of the world money amount will sooner or later result in the deficiency of the equivalent. The similar gold deficiency accompanied by the growth of USD amount led to failure of Bretton-Woods currency system [5]. And the renewable equivalents, like food supplies inputs, have issues with storage terms and disposal terms. That's why, we should seek new variants of a new world currency system on an alternative financial field.

We observe the variant of transforming the SDR into world currency [6]. But SDR consists of 4 currencies (USD, Euro, Pound and Yen), which have no basis. Such currency symbiosis will certainly lower the risks but there will be no full-fledged reserve currency. The implementation of the permanent fixed rates of the stated 4 currencies to SDR along with uncontrollable emission is impossible now[7].

The implementation of the common currency "amero" is discussed for 3 countries: the USA, Canada and Mexico. The idea isn't new; there are several similar currencies in the world. Such project has one important feature, it implicates the refusal from USD which will lead to its depreciation along with debts. Along with the issuers, besides the Mexico, the other countries make become part of it: Great Britain, Australia, and New Zealand. Such currency like all the other common currencies cannot reliably perform the reserve function because the emission issues will be under the control of the US.

General

The main problem of the current Jamaican currency system is the unreliability of its reserve part. All leading world currencies are national but for common Euro. In the conditions of the absence of basis (the absence of material equivalent), the issuers gain privileges in the form of uncontrollable emission of their national currencies having demand abroad. The unstoppable emission leads to currency depreciation and growing of the sovereign debts, and the main disadvantage leads to the impossibility of

usage these currencies as reserve ones. No national currency without material assets can be viewed as a world currency due to the impossibility of the emission control. Unsecured national currencies cannot be reserved ones due to unbounded emission. That's why common currencies cannot also perform this function [8]. But in conditions of the modern globalized world economy, the security of the currency with material equivalents is impossible. Each potential equivalent is wares and cannot perform the function of the world currency. That's why the goods package also cannot be a currency equivalent.

During the creating of any currency including the world one, there is a need of overcoming of so-called Triffin's paradox. The essence of it is that on the one hand, the emission shall be made in scopes enough for world economy; on the other hand, it shall correlate with the growth of golden coverage which is not corresponding to the world economy growth [9]. It is stated that the dilemma of Triffin's lost its topicality upon the refusal of securing the USD with gold and accepting the Jamaican currency system. But in modern circumstances, the Triffin dilemma gains new image. Instead of limits connected with the gold coverage, there is a requirement to a world currency of inadmissibility of its depreciation, as to the currency that shall perform the reserve function. And providing of the world economy with the needed money amount depreciates this currency.

The aforementioned dilemma can be overcome only via one method, that is division of the projected currency into 2 independent instruments: reserve and turnover. The reserve instrument is attached to the package of the standard (market) goods. Its emission/sterilization shall be performed in such a way that the price of the stated package, expressed in reserve instrument, shall not undergo dynamic changes. The emission of the turnover instrument shall be performed in full correspondence to the needs of the world economy. It's clear that the turnover instrument will undergo inflation, but during short period of time needed for performance of the trade operation, the inflation won't be substantial and won't negatively influence the parties of the trade agreement.

While the reserve instrument is fully attached to the package and serves only for the purposes of reserving and accumulating, each of the goods in the package cannot be evaluated separately. For evaluation of separate goods, in order to count the price of the package and for unification of the market quotes, there should be a quote instrument. In some cases the turnover instrument can be used, but its undergoing the inflation process will provide some difficulties. The quote instrument will fix the constant prices without the sales opportunities of the market and transactional costs been taken into account. We can also mention the goal of the contract, while the payment of the contract shall be performed in the turnover instrument according to the market exchange rate.

The implementation of a new world currency shall in no event cancel the national ones. Furthermore, the national currencies which don't undergo the substantial inflation will be used as a credit instrument. Credit currencies can be exchanged in the world (supranational) reserve system into the reserve instrument according to market rate, but not every currency will be a credit one. It shall meet some demands. The rule of such requirements forming is stated below.

There are 4 main functions of money: the measure of price, the means of accumulation, the means of payment and the means of turnover.

The implemented instruments of the new world currency: quote, reserve, turnover and credit ones.

Comparing the functions of money and independent instruments of a new world currency, it is easy to notice that these instruments can perform all the functions of money. New world currency standard is based on dividing these functions among different instruments. That's why, a new world currency standard is called a polyinstrument one.

The general scheme of the polyinstrument standard is shown on fig.1.

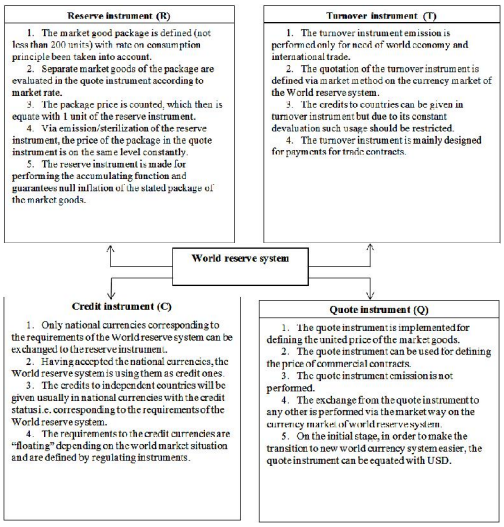

Fig. 1. Functional scheme of the polytool currency standard

Let's have a closer look at the represented instruments.

The Reserve instrument is a basic instrument of a new currency standard. The reserve function is the one which many of the currencies are incapable to perform in conditions of the Jamaican currency system. But at the same time, no economy can successfully develop without reliable method of capital accumulation.

The basis of the reserve instrument, as it was stated before, is the package of the fund services (the reserve package). In the ultimate form, there should be services, the quality of which can be describes in several positions. The quantity of each service/good should correspond to its general consumption in the world per time unit. For example, package K consists of N goods/services T_i, i.e.:

$$K = \{t_1, \dots t_i, \dots t_n\}$$

And during a certain time period A_i units of certain goods are consumed on average in the world. Thus, the package K in quantitative aspect will be represented by the following sum total:

$$K = \{a_1(t_1), \dots a_i(t_i), \dots a_n(t_n)\}$$

The price of this package we'll equal to the unit of the implemented unit of the reserve instrument R. Thus, the exchange price of each goods with its volume in the package taken into account in the quote instrument is the following:

$$g_i \times a_i(t_i)$$

where g_i – the price of the goods t_i in the quote instrument Q;

$a_i(t_i)$ – quantity of the given **i**-goods in the package K.

Thus, the price of a certain package K in the quote instrument Q is counted according to the formula:

$$K(Q) = \sum_{i=1}^{n} q_i \times a_i(t_i)$$

Knowing the market price $R(Q)$ of the reserve instrument in a quote instrument or having defined it via the cross-price, it is possible to count the price of the package K in the reserve instrument R, as follows:

$$K(R) = R(Q) \sum_{i=1}^{n} q_i \times a_i(t_i)$$

The definition of the package price should be performed on everyday basis. Firstly, the price of the package K in reserve instrument R should equate with one. In case of deviation of the package price from the one, there should be emission (sterilization) of the reserve instrument performed. In addition, it is needed to take part in currency-instrument market bidding. The goal of these measures is making the price of the package K in the reserve instrument R be equal to one. With the help of the described measures, it is possible to provide null inflation for the reserve instrument.

The turnover instrument is the main instrument of a new currency standard. All international contracts will be performed in it along with all the inter-state commercial payments for contracts. The turnover instrument should be issued in the quantity, necessary for world trade. Consequently, the weight of this instrument should increase correspondingly to the world economy growth. It is clear the increase of the volume of the turnover instrument on the initial stage will overgrow the growth of the reserve instrument. Correspondingly, the price of the turnover instrument related to the reserve instrument will decrease permanently. But in mid-term and long-term prospects, the growth of global accumulations will outrun the growth of the world trade. In this case the dynamics of the course of the viewed instrument pair can reverse its direction. In this case, there can be deflation tendencies which should be hindered by additional stimulation of the reserve instrument buying.

The main problem of the turnover instrument is its allocation and re-allocation. It is clear that the profit will be gained by countries-issuers. But there are several questions then:

In which proportion will the profit from the reserve instrument emission be allocated among the countries-issuers?

Will the number of the issuers increase and will they use the emission profit?

How to stimulate the other countries to use this instrument?

How to give the reserve instrument to third countries during initial stage in order to draw them in a new currency system?

The first and the second questions can be solved during negotiations, but the third and the fourth ones require the cardinal decision on the stage of development of the currency system. We see 3 possible variants of solving these problems:

Variant 1. The issued turnover instrument is allocated among the founders, and they use it then for payments among them and the other countries. This variant is good for founders and gives them a huge handicap, but the allocation of the turnover instrument, the amount of which shall cover all the world trade, among several countries, can't be called a fair one. In addition, not all countries can cover it with their goods and services and become solvent ones.

Variant 2. In order to draw into the bigger number of countries in a new currency system, it is possible to give each new country certain credit resources in the turnover instrument. There is a

certain risk of the credits being not given back, but the USA used this option in 1948 during Marshall Plan implementation. In this case, the risk can be reasonable.

Variant 3. The turnover instrument can be exchanged to USD during some time. During the transition to a new currency system, the USD will become cheaper and many countries will decide that it's more reasonable to change it to a more reliable currency instrument. The countries-founders of a new currency system will seize using USD on their territories and the companies-residents will make payments according to their contracts and accept payments in a new turnover instrument only.

We think that the 3rd variant is easier to realize and more realistic. It will also stimulate the countries and corporations to get rid of USD, which will accelerate the transition to a new currency system.

The credit instrument is a very important instrument of the international currency relations. Due to the turnover instrument undergoing substantial changes, its usage in a long-term crediting is problematic. That's why, we propose to implement a special instrument for such operations.

The majority of credits in the world are performed on the inter-state, bank and corporative stage, without supranational structures being taken into account. The exception is the credits of the IMF and World Bank, granted to the governments of the developing countries and for anti-crisis programs. For international business credits, the leading national currencies are usually used. In a new World Currency system, such currencies will be used as the credit instrument. With the view of it, a following mechanism can be used.

In a new World currency system, we envisage a substantial increase of the credit activities of the World reserve system in comparison to IMF and World Bank. There is an objective necessity of it. The leading national currencies can be exchanged into the reserve instrument. They should be used then. And they can be used for credit purposes only. That's why, a new World reserve system is aimed to be a leading world creditor.

The demand for credits of World reserve system, as for any other credits, is inversely proportional to the amount of the lending rate. And the rate for the credit instruments (the leading national currencies) cannot be lower than the point of depreciation (in our case, the price of the package K). Consequently, there should the credit instrument depreciate lower than P %, then the lending rate will be more than P %. The weaker currencies will be exchanged by the World reserve system for the reserve instrument, the higher the lending rate will be and consequently the lower will be the demand for credits. In this case a certain part of the credit instrument will be unclaimed. For elimination of this imbalance, we suggest the use of the floating cutoff limit P_0, which will equal the ultimate amount of the national currencies depreciation. In other words, the exchange for the reserve instrument will be possible only with such national currencies, the depreciation of which during a certain period doesn't exceed P_0 %.

Thus, the sum demand for World reserve system credits S_d is a function of the stated lending rate (in our case it is a certain exceeding Δ over the cutoff limit P_0), which is expressed in the formula:

$$S_d = f_d (P_0 + \Delta)$$

On the other hand, the sum proposition of the credit instrument potentially gained by the World reserve system S_s can be represented as follows:

$$S_s = f_s (P_0)$$

If the cutoff limit P_0 is low, then $S_s < S_d$. In this case, the demand for the reserve instrument is low and not all countries can obtain the credit with the lending rate $P_0 + \Delta$. If the cutoff limit P_0 is high, then $S_s < S_d$. In this case there is an unclaimed credit instrument. The balance can be reached only in case $S_s = S_d$. The following acquisition should be solved then:

$$f_d (P_0 + \Delta) = f_s (P_0)$$

relating to the variable P_0 with the view of defining the optimal cutoff limit.

Such regulation gives the opportunity to solve the other important goal, that is to eliminate the currency wars between the countries-issuers of the leading world currencies. In Jamaican currency system, with the view of increasing the competitiveness of the national economies, the central banks are constantly weakening their currencies. It results in inflation and negatively influences the economy in general. In the conditions of the new World currency system, organized on the basis of the polyinstrument standard, the devaluation of the national currencies isn't profitable, because in this case, the currencies cannot pass the floating cutoff limit P_0 , which can make the following negative consequences then:

1) The impossibility to buy the reserve instrument using national currency. It will lead to additional expenses and dependence on the other stronger currencies.

2) The national currency will be devoid the rights of the credit currency and consequently the demand for the national economy production will decrease. The corporations, obtaining the credit in the national currency of non-native country are usually trying to buy the inputs, goods

and technologies in this very country. There is always an opportunity of direct crediting. But then the lending rate will be higher than in the World reserve system, that's why such currency loses its competitiveness.

If the national currency, having gained the status of the credit one, has been exchanged to the reserve instrument and then depreciated to more than P_0 %, then its amount in the reserve instrument will be re-counted to the downshift side. The mechanism of the re-count of the reserve amount will be developed later. So, during management of the reserve instrument accounts, we should take into account not only the general amount but also its parts in the credit currencies converted to the reserve instrument.

We should admit that along with the cutoff limit P_0, the World reserve system has another regulation system, the cutoff according to the amount of the national GDP. It's clear that the currency of a small country, despite the fact of depreciation absence, cannot become a credit one. It is stipulated by the fact that the issuers of the credit currencies should perform the additional external emission, and the violation of the ratio of internal and external currency amount is inadmissible. Without violation of the stated ratio, the credit amount of such currency will be midget at scales of the world economy, which is also unacceptable.

The cutoff on the basis of the GDP amount is performing another stimulating function. It will encourage the merging of the countries, and creation of the common currencies and monetary unions. Thus, the small countries upon entering the monetary union will obtain all the rights of the credit currency. On the other hand, if the country with the credit currency divides into two countries, then both countries will lose the rights of the credit currency with all the economic consequences.

The Quote instrument is the only instrument of the polyinstrument currency standard, the emission of which is not performed. This instrument is implemented with the view of unification of the prices on all market goods of the world markets. The quote instrument is a relative one i.e. it gives the opportunity to see the changes of the prices relating to the other goods and markets. It is quite convenient to track the world sales opportunities without converting the prices from one currency into another. And the absence of emission is excluding the inflation factor, leaving only sales opportunities changes and transactional influences.

The agreements for market goods shipments can be concluded within the quote instrument, but the payments currencies shall be only the turnover and the credit instruments of the world currency system. As the exception, the payments can be performed in the other national currencies, which haven't obtained the credit status. The rate of exchange of the quote instrument into turnover one should be stated by the World reserve system, from time to time, without exceeding the 1-week frequency. The defining of the stated rate is another way of regulating the currency-financial relations in world's economy. The politics of stating the quote instrument rate relating to turnover should be performed in such a way, that the market prices changes shall remain minimal and maximally attaching the quote instrument to reserve one, if possible.

The development of world currency systems and periodical change from one to another is a logical process. The transformation of an old system will happen only in case where the mechanism of the currency regulation will correspond to the changed conditions of industry, world trade and ratio of powers in the world. The change of one world system to another usually happens in conditions of crisis. On the current level the state of the global financial sphere is evaluated as a crisis one. The basis for reforming the world currency system should be the new conceptual ideas of stabilizing the international currency-financial relations [10].

Forming of a new currency system is a complicated, controversial and long process. The controversies in interests of certain countries and in views of scientists hinder the development of the unified strategy of reforming the world financial architecture. But the transformation of the international currency-financial relations is one of the necessary conditions of the eliminating the prolonged economic crisis of a world-scale [11]. Stabilizing the global currency-financial sphere is possible only in case of accepting of a new currency instruments by the world community, which then won't depend on geopolitical interests of separate countries, instruments, able to substitute USD in international settlings and provide the preservation of the state reserves and accumulations of the private companies and population.

Conclusion

With the view of eliminating world global finance imbalance and providing the stable development of the world's community, it is necessary to pay attention to forming a new currency order. Nowadays there are conditions for changing the Jamaican currency system into alternative one. And one of the variants of world currency system transformation is passing to a polyinstrument standard. We should also take into account that in long-term prospects, there can be a tendency of substantial growth of world's reserve instrument

weight. Its size can multiply excel the world's GDP, which will make certain conditions for global financial crisis. With the view of exclusion of such situation, it is possible to create another instrument for limiting the reserve weight. But it is quite hard to predict such development of the situation, but its tendency will be clear, which will give the opportunity to take certain measures.

Nowadays, for implementation of polyinstrument currency standard it is necessary to create a supranational organization, World Reserve System, the founders of which will be the most influential countries of the modern world (in the economic sense). The creation of a new World currency system, based on polyinstrument standard, will give the opportunity to create a new world currency, the emission of which won't depend on someone's interests or interest of some countries. Besides the main functions' performance, the polyinstrument standard can also make complementary influences: to stimulate issuers of the leading world currencies to reject the destructive politics of competitive devaluation, to stimulate the merging of the countries and creation of the common currencies (monetary areas and associations), which will substantially increase a financial stability of the world's economy.

It's doubtful that the USA, Great Britain and countries using Euro in mid-term prospects will get rid of their own currencies for a new world currency system. But most of the countries are really interested in a new reliable alternative currency system. The possible creators are the BRICS countries, which will be accompanied by their trade partners: Russia – by several post-Soviet countries, Brazil – by Latin America, the South African Republic – by the southern part of Africa, China and India – by South-Eastern Asia.

Corresponding Author:
Dr.Arkhipov Alexei Y.

7/10/2014

Southern Federal University, Higher School of Business
Sobornay per., 26, Rostov-on-Don, 344002, Russia

References

1. Kadlec, Ch., 2010. Time to Reform the International Monetary System. Date Views 28.06.2014 www.forbes.com/2010/11/10/currency-monetary-policy-china-opinions-contributors-charles-kadlec.html.
2. Lehrman, L., 2013. The True Gold Standard: A Monetary ReformPlan without Official Reserve Currencies. The Lerhman Institute, pp: 222.
3. Lietar, B., 2007. Money's future: new way to wealth, full-fledged work and wiser world. KRPA Olimp: AST: Astrel, pp: 493.
4. Burlachkov, V., 2012. The reform of world currency system and application of the economic invariant. Economy questions, 1: 151-154.
5. Timberlake, R., 1995. How Gold Was Money How Gold Could Be Money Again. The Freeman, April: 204-209.
6. Stiglits, J., 2002. Globalization and its discontents. W.W.Worton & Company, pp: 282.
7. Soros, G., 2001. Draft Report on Globalization. Public Affairs, pp: 1200.
8. Butorina, O., 2003. International currencies: integration and competition. Publishing house "Business literature", pp: 368.
9. Triffin, R., 1968. Our International Monetary System: Yesterday, today and tomorrow. Random House, pp: 187.
10. Eichengreen B., 2012. Implications of the Euro's crisis for international monetary reform. Journal of Policy Modeling, 34: 541-548.
11. Yurtsevera, S., 2011. Investigating the Recovery Strategies of European Union from the Global Financial Crisis. Procedia Social and Behavioral Sciences, 24: 687-695.