

**Economic Theory**

Viktor KOZIUK

**POST-CRISIS GLOBAL  
MONETARY INSTABILITY**

**Abstract**

Getting over the financial crisis could originate the intensification of global monetary instability. Unlike the previous cases of global monetary stresses the current period is described by crisis processes within the system of reserve assets and inflation effects of financial imbalances and global liquidity. Skewed recovery of asset markets in terms of countries increases fluctuations of capital flows and exchange rates, thus increasing demands for foreign exchange reserves and preserving pre-crisis monetary relations alongside with search for alternative denominations of foreign assets of the country. As far as the monetary assets do not grow into global demand which revives real issue, the global economy finds itself in a stagflation trap. The bail out should be facilitated with the increase of international coordination of monetary policy in order to intensify control over the behavior of global liquidity.

**Key words:**

Global monetary instability, foreign exchange reserves, exchange rates, global liquidity, assets market, central banks.

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## Introduction

Essential feature of post-crisis periods in economy is the intensive increase of debate about established theoretical and applied positions in economic policy. And the global financial crisis has not proved an exception. Alongside with fairly strong vectors of macro-policy reformation on national level which has been rapidly implementing under macro-financial approach, the global monetary problems are still beyond active debates. Moreover, a number of proposals concerning global monetary reforms (for example, report of so called Stiglitz Commission [1]) have more questions than answers. The complexities of the global monetary relations system reformation as well as absence of institutional frames for the forced reformation and corporative participation in it rather urge the traditional orientation at the reforms being made at a national-centric level. One more reason of that phenomenon is the absence at the moment of theoretic consensus on the issue of how much the global financial crisis is conditioned and connected with global monetary processes. Naturally, that under these conditions there has been created favorable intellectual prerequisites for relatively detached analysis of the variants of economic and institutional reforms, likewise the analysis of the risks and threats of post-crisis development from the point of functioning of national and global monetary and financial regimes.

Aggressive measures of monetary and fiscal policy for crisis surmounting in the developed countries have soon demonstrated the availability of powerful external negative effects. Their origin is quite natural, since the anti-crisis decisions have been implemented in the same structural environment of global monetary relations created (formed) in late 1990-s and which we acknowledge as «the vague contours of Jamaican currency system» [2, p. 488–535]. The post-crisis conservation of status-quo in the area of global monetary processes as has been already seen from the events around the exchange rate fluctuation of US dollar, as well as around fiscal crises throughout Europe, and the behavior of global liquidity and prices for primary resources, reveals the preserved trends towards reproduction of global monetary instability in the forms that will be even more distorted than before the crisis. This is obvious in light of radical differences between expectations respectively the financial sector efficiency, balance of power in global finance and evaluation of economic capacity perspectives in a state of progressive imbalances. Naturally, the designated problems require the system-wise analysis, which makes this given article relevant

## **Range of Global Monetary Problems in Theoretical Discussions of Pre-and Post-crisis Period**

The most characteristic features of global monetary pre-crisis processes have been fairly well described in economic literature, and they provide the following: hypertrophy of foreign exchange reserves which is conditioned by wide range of motives (e.g. exchange and financial shocks self-insurance, monetary and financial mercantilism, and competitive accumulation of reserves), asymmetric behavior of exchange rates in emerging markets (devaluation tolerance, and revaluation escape concerning US dollar), clear distinction between the countries with deficit and these with current-account surplus, resulting in the formation of global liquidity which is based on the nature of global monetary relations, either on the relations between the deficit and surplus countries which take the form of capital flows and increased demand for assets, and globally low interest rates, etc. [2, 3, 4]. However, the crises that are conditioned specifically by global monetary patterns are often called into question in terms of view of liquidity, not as the product of international reserves expansion within the global scale, but as the interaction between monetary variables of the developed countries and structural changes in the global financial system. Though the role of the latter is great, it is worth stating that ignoring the problem of skewed macro-economic status of the countries issuing reserved assets and the countries demanding for the issued assets, as well as ignoring the absence of system-wise control over global monetary expansion resulted by skewed reaction of exchange rates leads to overly optimistic reliance on the fact that implementation of macro-financial approach into practice will allow to escape major financial shocks without reformation of the global monetary relations [5, 6].

The necessity for revision of monetary coordinates of global economic functioning is accentuated in many papers, where they clearly state that the absence of symmetric reactions of currency exchange rates demonstrates the global financial imbalances, and in light of aggressive anti-crisis measures it still remains the unsettled problem of low interest rates, excess leverage and volatility on the financial markets [7, 8, 9, 10].

Though we agree that the reforms should be made, it is worth expressing reservations about the most skeptical of known proposals for ensuring the global monetary stability. For example, the «reference rate system» proposed by John Williamson points out that not only excessive fluctuations of rate ratios originate global monetary instability, but also their shortage creates deep problems [11, 12]. However, this approach has disadvantages from the view of implementability in terms of adequacy and legal methods for determination exchange rates which the central banks should follow in order either to make interventions or avoid

them. A certain alternative to the system of centralized requirements with respect to correction of exchange rates is the approach providing for the expansion of SDR use in the process of management of global liquidity on the base of transit accounts enabling to maintain the volumes of external assets with no pressure on the internal money supply [13, 14, 15]. However, the proposals to strengthen the SDR role also cause skepticism. Any transit IMF accounts in SDR, functioning as buffers of excessive liquidity, limit discreet decisions of national central banks, as well as they do not create market preconditions for control over liquidity and imbalances from the view of fundamental macro-processes.

The problem of global monetary instability also does not show a unique approach in economic literature. We can determine a series of key moments in different authors' papers, but they accentuate these issues in different ways. First, the risks of global instability generate pro-cyclical behavior in foreign exchange reserves and capital flows. Second, low rates that are the result of liquidity expansion, encourage excess crediting and excess drawings because of which any country becomes vulnerable to capital flows reverse. Third, though the actual 2007–2009 crisis was not the crisis of rapid correction of payment imbalances on the base of incredulity to US dollar, the risks of such a scenario are not removed, but on the contrary, they are urgent, threatening to increase rates and weaken the global financial system. Fourth, the global monetary stability is vulnerable to specific monetary relations between the USA and China; yuan revaluation avoid can ignite world trade wars or other forms of non-market behavior of leading countries [9, 10, 16, 17, 18, 19].

Traditional Keynesian macro-economic arguments respectively potential global economic risks caused by global monetary relations are the issues of debates in a number of authority studies. The global imbalances originate situation with the trap of liquidity, thus weakening the capacities of central banks to mitigate recession. That regularity is conditioned by the fact that under aiming at high rates of savings for maintaining payment surplus in one group of countries, in others the interest rates could not automatically change. In case of the trap, liquidity high rate of global savings makes lowering of interest rates impossible through monetary methods to the level meeting the expected reanimation of aggregate demand [20]. The current system of global imbalances is immanently deflation: while approaching the limit of foreign borrowings, deficit countries have to reduce import, and the surplus countries must not increase the demand for import; central banks could easily prevent revaluation through the reserve volumes increasing, but prevention of devaluation is limited by the availability of reserves; IMB policy tolerates the macro-instruments targeting at the surmounting of current account deficit, but it is deprived the means for influencing the surplus country [21]. Though the deflation outcomes of global imbalances are also explained from other theoretical angles (from the point of view of the theory of lack of (quality) assets and equality imbalances), the empirical picture of the global economy is denied in light of the behavior of prices for primary resources that today can be

considered the modern norm of global monetary instability. That is, the system of imbalances as the basis of global monetary relations is not a deflationary but inflationary one (with certain lag).

Despite adequate and comprehensive study of this topic, we must admit the lack of a comprehensive approach towards understanding that after the crisis the clear separation of global economy was preserved on the principle of separation of the countries with flexible exchange rates and the countries which continue accumulating reserves, have system-wise imperfections that are not able to be surmounted with the enhanced international leverages for regulating global monetary processes. Also, most of the analyzed researches do not study the post-crisis problems in the area of diversification of global foreign exchange reserves, and the expected effects it could produce on the currency fluctuations and liquidity, and respectively its effect on the global financial stability. Respectively, this paper is devoted to some problems in the area of global monetary instability of post-crisis period.

### **Change in the pattern of global monetary instability**

The key characteristic feature of post-crisis functioning of global economy is that practically most of global monetary processes of pre-crisis period completely regenerate themselves. Nevertheless, at the background of global recession the velocity of renovation in the developed countries differ of the renovation velocity in the countries with emerging markets. That trend brings about the conservation of clear division of the countries supporting the floating currency rate and those which are oriented at maintaining the surplus payment

The named model of global monetary relations essentially changes the pattern of global instability rooting in the practice of the 1990-s when the countries which rapidly integrated into globalized financial markets made its epicenter. Devaluations and crises as a «sudden stop» certified how the increasing flows of capital are able to launch a wave of instability in the global monetary processes through a chain reaction of the currency collapse, capital outflow, losses in financial sector, increase of volatility on financial markets, as well as how the relevant monetary preventive actions of central banks in terms of liquidity caused instability. And the currency exchange rates, like interest rates responded according to the velocity of renovation of financial markets. Search for the variants to prevent the global monetary processes from devaluations on the emerging markets after the Asian crisis became the core of understanding how the world financial architecture should function to be stable [22]. However, reorientation of the countries with emerging markets at the currency reserves accumulation to self-insure themselves, likewise pursuing of monetary mercantile policy and competitive ac-

cumulating of foreign assets [23, 24, 25] radically changed the factor descriptions of global monetary processes instability.

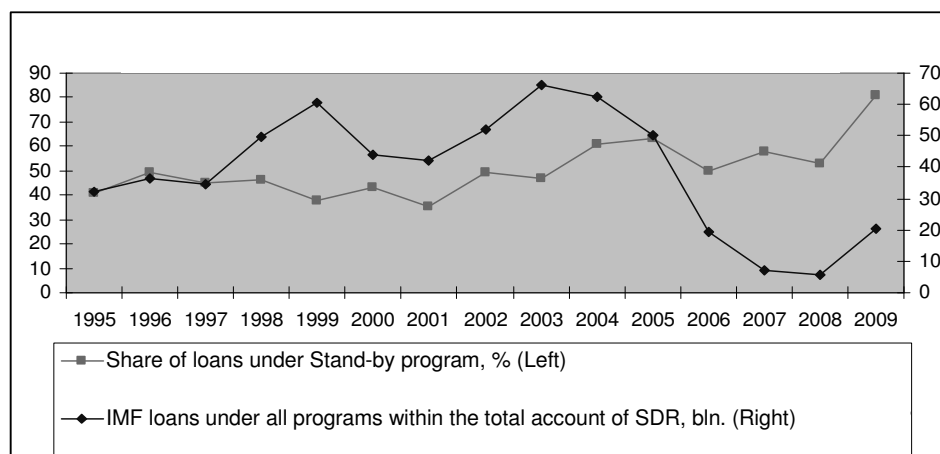
One of those manifestations is sharp decline in the role of international financial organizations within the hierarchy of stabilizing mechanisms, which in the post-crisis perspective is conserved with low probability of stochastic changes in demand for reserves. Though the global increase in demand for the reserve assets [26] was not collectively effective, the individual benefits are rather significant which was proved by 2008 events, when the extent of reserves in certain crisis-ridden countries, inversely corresponded with the depth of the exchange rate fall [27].

Distrust in the system of international lending of ultimate authority is clearly mirrored in the motive of self-insurance at reserves accumulation. The amount of these reserves significantly changed the correlation between the scales of crisis phenomena in global economy, change of IMF credit position and the rates of external assets gains of central banks. Under adequate devaluation levels of 1996-1999 and 2007-2009 the volumes of IMF lending greatly differ, and the importance of stand-by programs increased only in the conditions of global financial crisis. Despite the IMF crediting volumes somehow increased due to macro-stabilization programs, since 2008 physical volumes of crediting so far have been rather low as against the period of 1998-2004 (fig. 1). Primarily, it demonstrates the reduction of vulnerability of many countries towards change of exchange rate, likewise the capacity to oppose the destructive processes on global markets with exchange currency reserves, and also the attempts to use the competitive devaluations, which provide a remote case for the large-scale global and centric capital inflow to the markets of the countries with medium or low incomes. The reduction of IMF importance in offering urgent global liquidity clearly manifests that the basics for the formation of the latter are not the international regulators, but national-centric versions of external assets accumulation. Naturally, those changes occurred as a result of changing the pattern and source of global monetary instability. The latter is not connected with the emerging markets, and that is mirrored in the volumes and structure of IMF credit activity.

Specified by a sharp contraction of liquidity in financial markets, the global financial crisis and combating it demonstrated the limited effectiveness of last resort lending. On the one hand, the large scale swap transactions between FRS and leading central banks demonstrated that direct agreements between central banks could be more flexible. In case when the agreements directly touch upon the interests of some particular banks, the volumes of transactions could exceed the accessed IMF resources. The mechanism of Chiang Mai initiatives also was not completely used in Asia, since the volumes of accessed swaps did not correspond to the FRS capacities and to the scales of capital outflows. The extreme proposal of dollar liquidity in 2008-2009 enabled to escape sharp significant increase of dollar exchange rate against the deficit of payment balance in the USA.

Figure 1

Share of Stand-by program under IMF credit activity



Source: constructed by the author based on IMF Annual Report for respective years (See [www.imf.org](http://www.imf.org)).

Respectively the countries with emerging markets, there the choice of devaluation is also dictated by the fact, that the accessibility to Fund's resources does not correspond to the amount of capital outflow, the previous inflow of which was caused by the bubble growth on the markets of assets against the equalizing of interest rates on the markets of instruments with fixed income (as it was in 1990-s). Also, the capital outflow is a natural phenomenon while assuming that global financial institutions extracted capitals not so much of searching for «safe harbors», but to support mother's companies in the developed countries which suffered from the collapse of mortgage markets. It is natural, that the competitive preservation of reserves against the contraction of internal demand influenced the improvement of current accounts in many countries with emerging markets. Though the growth of global currency reserves slowed down, but still was preserved, it enlarged the lag between global crisis and crisis of reserve currencies. On the other hand, absence of mechanisms for monitoring and control over implementation of stabilization programs peculiar to cooperation with IMF, brings about that the succeeding discretionary actions for liquidity maintenance is followed by the process of significant expansion of global dollar supply, which would rather be expected if the system of urgent liquidity were centralized. Similarly this refers to dollar exchange rate. Preventing its sharp revaluation in 2008 against lowering the current account deficit of the U.S. strengthened intentions of

national centric monetary expansion, especially in the United States, where it is known as a few round programs of «quantitative mitigation».

Paradoxically, the global collapse of dollar liquidity in 2008 completely changed the process of deploying reserve currency crisis with which the actual outlines of the crisis were associated before. Shrinkage of liquidity because of the gap in the structure of dollar-denominated claims and liabilities on a global scale acted as a kind of inhibitor of the process of non-confidence against the U.S. dollar, resulting in further action to support financial institutions and budgets went beyond neutrality with respect to global monetary stability.

### **The Global Liquidity and Crisis of Reserve Assets System: the Epicenter of Global Monetary Instability**

When in 1990-s the global monetary instability was associated with currency crashes on the emerging markets, and in early 2000-s it was associated with global finance imbalances, in post-crisis perspective it grew into combination of global inflation accelerating and financial instability, the epicenter of which is ambivalence of currency reserve crisis and status quo preservation within the system of global monetary relations. In light of this, that instability could be grouped into the following interlinks :»skewness in scales and success of anti-crisis programs, in particular, those of monetary actions- skewness in the velocity of assets markets renovation – fluctuating exchange rates of leading currencies – fluctuating adaptation of currency reserves global structure – absence of correcting elements for money supply in one of geo-economic centers - surge of global inflation, speculation in asset markets. skewness in «slippage» of anti-crisis demand. promotion. Within the named cause-effect links the key forms of instability are the following:

- behavioral character of the formation of leading currencies exchange rates;
- fluctuations increase within the types of assets;
- global inflation bias.

Significant turnover of reserve currencies on global markets (beyond the country of issue) makes the problems of global monetary instability extremely pressing, since they can emerge both, as a result of non-confidence in macro-economic policy of the countries of issue, and as a result of different structural changes in factors determining the demand and supply of the currencies on foreign markets. Due to that, the coherence in the area of anti-crisis actions and



search for the ways for surmounting the anti-crisis promotion of demand is not the only key moment in currencies exchange rates behavior which does not exclude the hypertrophied response to signals on the dynamics of fundamental variables in the issuing countries.

One of the examples of the behavioral character of the formation of currencies exchange rates is how the increase of uncertainty respectively certain class of assets could bring about the increase of exchange rate volatility. Thus, financial stability as for today provides for stability of institutions and sovereign lenders from the point of view of their assets quality. Since those assets are denominated in certain currency, absence of the assets liquidity, either violent revaluation of their risk rates is mirrored in rate volatility growth or in the formation of short-term trend of exchange rate, which is relatively coherent with fundamental variables. A significant reason that change of attitude to asset quality is reflected in exchange rate volatility consists in the fact, that the market displays a high level of segmentation (it is natural from the view of formation of sophisticated investment strategies and availability of the players on the market who differ in the criterion attitude to risk and return search). Cases of search for «safe harbors» (exit from markets of high rate risk assets and increasing of demand for risk-free assets) are temporary and are occurring when the attitude towards risk is violently biased as a result of a great financial shock. Subsequently, the markets become less sensitive and doubts about the quality of a particular asset class or issuer do not find a more reliable option, but .re-orientation at other assets of similar class, which as a rule implies the change of the currency denomination. (For example, in 2009–2011 the worsening of Greek bonds quality did not mean that the investors were re-orienting at German ones, but they searched for the alternatives with similar earning rate beyond Euro-zone. It resulted that euro/dollar exchange rate fluctuated due to capital reallocation).

One more example of behavioral formation of currency exchange rates is changes in currency structure of the institutions' foreign assets of globally significant volumes. Within the frameworks of this given generalizing case it is worth analyzing certain moments.

A) Currency diversification of central banks' external assets (to some extent, it also refers to funds of sovereign wealth can not help effecting the equilibrium of global currency market. Moreover, that problem becomes specifically urgent in post-crisis period, since the crisis has not changed the nature of global currency reserves concentration, but vice versa, it intensified the trends which had been formed in pre-crisis period (see table 1). Naturally, any portfolio decisions taken in this area respectively certain volume of reserves start reflecting not so much of traditional choice of currency structure of external assets, but as a behavioral one. That is dictated by traditional motives of diversification, and by search for variants of fiscal losses prevention resulted by re-evaluation of their value under exchange rate volatility, likewise by attempts to transform a part of

external into alternative assets (for example, raw material ones, which is very vital in light of Chinese practice), having their own currency denominations.

Table 1.

**Concentration of global currency reserves**

	1999			2009		
	Bln. US dollars	In GDP %	Share in global scale	Bln.US dollars	In GDP%	Share in global scale
China	155	14	8.7	2399	49	29.7
Japan	278	6	15.6	997	20	12.3
Russia	8	4	0.4	406	33	5.0
Saudi Arabia	15	10	0.8	397	107	4.9
Taiwan	106	36	5.9	348	92	4.3
Korea	74	16	4.2	265	32	3.3
India	32	7	1.8	259	21	3.2
Hong Kong	95	58	5.3	245	116	3.0
Brazil	35	6	2.0	232	15	2.8
Euro-zone	228	3	12.8	195	2	2.4
Singapore	77	93	4.3	186	105	2.0
ROW	1783	6	100	8086	14	100

Note: Constructed by the author based on data: [28, 2].

B) The change of structure of global currency reserves is rather inertial. It means that the currency structure of external assets is maintained on the basis of certain stabilizing decisions of central banks which in such a way support the reserve currency, preventing correction of its exchange rate through violent actions, and thus prolonging the lag between emerging of fundamental factors, that would effect reallocation of external assets, till the moment of actual occurrence of those changes. Though it allows the country of reserve currency issue to undergo crisis periods more easily, it could threaten with a range of inflation risks. Nevertheless, the greatest challenge is that the lag prolongation could imply an intensive collective choice of the alternative currency (asset), that threatens worsening of fundamental variables and global economy, and the economy of the country of issue. In other words, any inertia in the correction of currency structure of reserves in global scales brings about that its stabilizing peculiarities since certain moment turn into increased pro-cycliness.

Alongside with the increasing of behavioral factors of the currency exchange rates formation, there is tightly intervened the problem of correspondence between the structural factors of exchange rate dynamics and the determinants of currency structure formation of global currency reserves. Consequently, there should be a clear dependence between the trend of the currency rate of reserve currency and its value in global portfolio of assets (here could be observed certain deviations, like change of monetary policy in the country of reserve currency issue, either in other centers of reserve currency issue). That dependence reflects interrelation between changes of global demands for that currency and changes in its rates. In case when in global portfolio of assets the currency reserves of central banks dominate, it is just the transactions with the latter that determine external factors providing the effect on currency exchange rate. But when their share decreases, there increases the meaning of structural and cyclic factors of global currency market, which is determined by open currency positions of global financial institutions. Proceeding from that, it is obvious that the trend of behavior of reserve currency rates can significantly deviate from the one which is fixed by global currency structure of central banks' external assets. In this case the key problem lies in that for example, the reduction of the leading currency share in the structure of global currency reserves stops to be a criterion for expected behavior of currency rate in future. Destabilization risks of mass exit from dollar assets intensely slow down the weakening of the role of American money as a reserve currency. Also it is explained by that the decline of USA dollar value in the structure of global currency reserves is not accompanied by the origin of clear alternative. The global players view the prospects for euro under the corner of fiscal crisis in the EU, and the market of assets in yuan to be closed for non-residents.

In spite of that, as table 2 shows, the value of euro in global currency reserves grow, while the USA dollar falls. Primarily, it occurs due to the countries with emerging markets which are accounted for major share of growth of external assets of world monetary organs. It means that the maximum value of physical reserve growth will increase pressure towards diversification. If to take into account worsening of the USA debt instruments rating and their loss of free-risk asset image as it occurred in July–August 2011, then against the limited possibilities for euro and yuan to compete the USA dollar, the crisis of reserve currency would take the form of inflation of value of limited set of assets. Among the latter the share of raw material assets value will grow, specifically that of gold, thus making the processes of setting the relative earnings of financial assets instable, likewise making the trends of global inflation instable too. Inflation value of certain assets can produce not less threatening financial effects, since the reappraisal of ever growing trends and application of leverage investments could quickly end up just in another bubble.

Table 2.

**Currency structure of global currency reserves %**

	1999	2001	2003	2005	2007	2009
All countries						
USA dollar	71.0	71.5	65.9	66.9	64.1	62.2
Japan yen	6.4	5.0	3.9	3.6	2.9	3.0
Pound sterling	2.9	2.7	2.8	3.6	4.7	4.3
Swiss franc	0.2	0.3	0.2	0.1	0.2	0.1
Euro	17.9	19.2	25.2	24.0	26.3	27.3
Countries with emerging markets and developing countries						
USA dollar	74.2	73.8	63.1	62.7	62.0	58.5
Japan yen	3.9	2.4	1.1	1.5	1.8	1.8
Pound sterling	2.6	2.8	3.8	5.1	5.9	5.9
Swiss franc	0.5	0.2	0.1	0.1	0.1	0.0
Euro	17.5	19.7	30.2	29.2	28.6	30.1

Source: [29].

The mentioned process has already expanded and is reflected in the increasing value of the share of unclassified instruments in the structure of global currency reserves. For example, in the countries with emerging markets and in the developing countries the share of reserves with which currency structure is not proved in the IMF in 1999 made 44.1 %, in 2001 – 44.4%, in 2003 – 47.0%, in 2005 – 54.4%, in 2007 – 54.0%, in 2009 – 60.3% [29]. This means that central banks also increased tendency to form alternative portfolios of foreign assets, and that naturally cause additional distortions in asset markets in general.

Increase in structurally conditioned sensitivity of assets market to monetary impulses significantly alters the texture of stability in the world. Relationship between monetary agents and financial fluctuations in post-crisis period becomes the key element of global macro-financial processes. On the part of financial system it is ensured by emergency and dissemination of sophisticated financial instruments and portfolio strategies as a result of which natural restrictors of coherency in price behavior on different assets markets either are weakening or destroying. From the view of global economy, it is reflected in increased correlation of certain countries' markets. The equity markets, real estate markets and loan volumes are becoming more synchronous. Table 3 demonstrates high correlation level among the groups of countries under kinds of financial operations. That trend that originated in the developed countries is rapidly globalizing due to growing openness and evolution of financial systems in the countries with emerging markets, for which, to a lesser extent, the increased correlation of certain markets becomes obvious.

Table 3

**Synchronization of financial markets in terms of country groups**

	Industrial countries		Countries with emerging markets		Industrial countries and these with emerging markets	
	1960–2007	2003–2007	1960–2007	2003–2007	1960–2007	2003–2007
Real estate	0.59	0.74	0.49	0.49	0.50	0.60
Equity market	0.71	0.90	0.62	0.80	0.61	0.81
Credit	0.74	0.92	0.48	0.83	0.65	0.87

Note: The level of synchronization is defined by parameter of «concordance index» which shows the proportion of time during which the variable is in a cyclical phase in two or more countries.

Source: [30, p. 45].

Tight correlation in terms of asset markets, as is seen from Table 3, demonstrates that the links between segments of the financial system essentially reduce the role of stabilizing mechanisms of uncorrelated markets in terms of countries or their markets, which differentially respond to cyclical processes.

Synchronization of asset markets makes the whole financial system more pro-cyclical, but the most risky is that in a large share of stimulating demand in the economies plunged in the recession and under the asset price sensitivity to changes in liquidity, «monetary hanging» in one of the key currencies runs into effect deviation of all the markets with few lags. High correlation respectively countries brings about that fluctuations in asset markets are instantaneously transmitted to capital flows and, accordingly, to the exchange rate. Due to this any asymmetric monetary actions of the world leading central banks, as well as skewed market responds to signals about prospective growth of assets value with further correction of price trends will rather make the markets instable. On the one hand, incentive measures will lose their effectiveness because the decisions respectively demand; loans and credits will be substantially distorted by the effect of uncertainty simultaneously with that, how uncertainty or negative expectations of the future substantially reduce the marginal propensity to consummation. On the other hand, in response to the increasing volatility of capital flows and the uncertainty on the markets, the countries with average or low income groups will respond with further increase of the demand for reserve assets. Motives of self-insurance (like competitive monetary mercantilism, smoothing of fluc-

tuations in capital flows in order to isolate their impact on distortion of currency exchange rates, etc.) strengthen the global financial imbalances, exacerbating diametrically opposite trends around the reserve currencies.

The other side of combination of pre-crisis trends in reserves accumulation and stimulating actions of leading central banks is that, instead of theoretically expected deflationary effects of global financial imbalances there actualize inflationary effects. We have already described the mechanism of transformation of financial imbalances into global inflation [2], but in post-crisis perspective, it is of a specific nature. Anti-crisis expansion of the leading central banks did not mean that all amounts of additional money supply produce a direct effect on aggregate demand (reanimation) resuscitation. Rapid recovery of assets and market value of primary resources signified that monetary incentive shares have no direct impact on the real sector, and through improvement of the situation in market liquidity increase speculative mood. This is logical from the point of view that the market assets and the market of primary resources (which behave as an assets market) in current prices begin to reflect expectations of future economic recovery. Asymmetric expectations of such a revival in terms of the countries bring about that the formation of exchange rates returns to conditionality by expected yield assets, which is the result of the expected against actual situation in the real sector, which brings more volatility to the markets.

Another dimension of the limited effectiveness of anti-crisis monetary expansion is that the downward trend in the ratio between assets of central banks in the developed countries and foreign reserves of the ROW that has been budding since the early 2000s, intensified during the crisis later. For example, in 2003, the share of foreign currency reserves of the countries with emerging markets amounted to 25% cumulative value of foreign exchange reserves and assets of the US central banks, euro area, Japan, Canada, Sweden, Switzerland and Great Britain. In 2006 that share increased to 35%, and from 2007 to present, varies at 45–50% [31].

This shows that the stimulating steps of some are compensated by the policy of avoiding the revaluation and support of surplus payments of the others. In addition, that it redistributes global liquidity for the sake of the countries with emerging markets, it makes the demand for reserve currencies caused by a more trying to maintain economic growth and improve competitiveness, which in the end, turns into a monetarist Phillips curve in which foreign exchange reserves could be put in place of inflation. The high dependence of accumulation of the latter upon the expansive steps of leading central banks in the post-crisis period makes global monetary processes rather vulnerable to reverses in the policies of the countries of both groups.

If we take into account the autonomous nature of sovereign demand for assets, the stochastic changes in the supply of liquidity in the developed countries will immediately transmit to fluctuations of global liquidity in general of

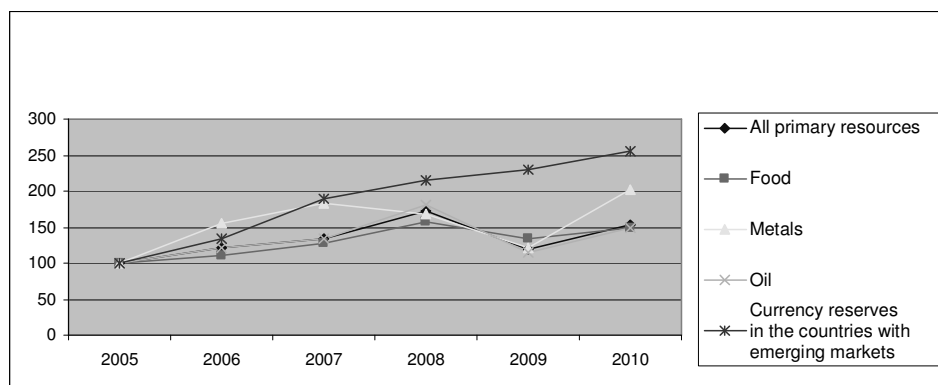
course, we can assume that the recovery of the global economy quickly revives capital flows, the inflow of which to the countries with emerging markets are absorbed by reserves, and that will create certain buffers in case of liquidity contraction.

However, the problem is that capital inflows produce asymmetrically expansive impact on global liquidity because their outflows largely are offset by the devaluation. Competition avoidance of reserves loss, in general, has an expansionary impact for global liquidity. That is the paradox following from that situation. Due to the maintenance of global financial imbalances the global economy would have to fall into a state of deflationary bias as Keynesian –oriented economists provide for.

However, in reality it falls into a state of inflation bias, which is powered by increased costs of primary resources. Fig. 2 clearly shows that the rapid recovery of prices of primary resources and their subsequent growth corresponds with the progressive «sagging» of global currency reserves.

Figure 2

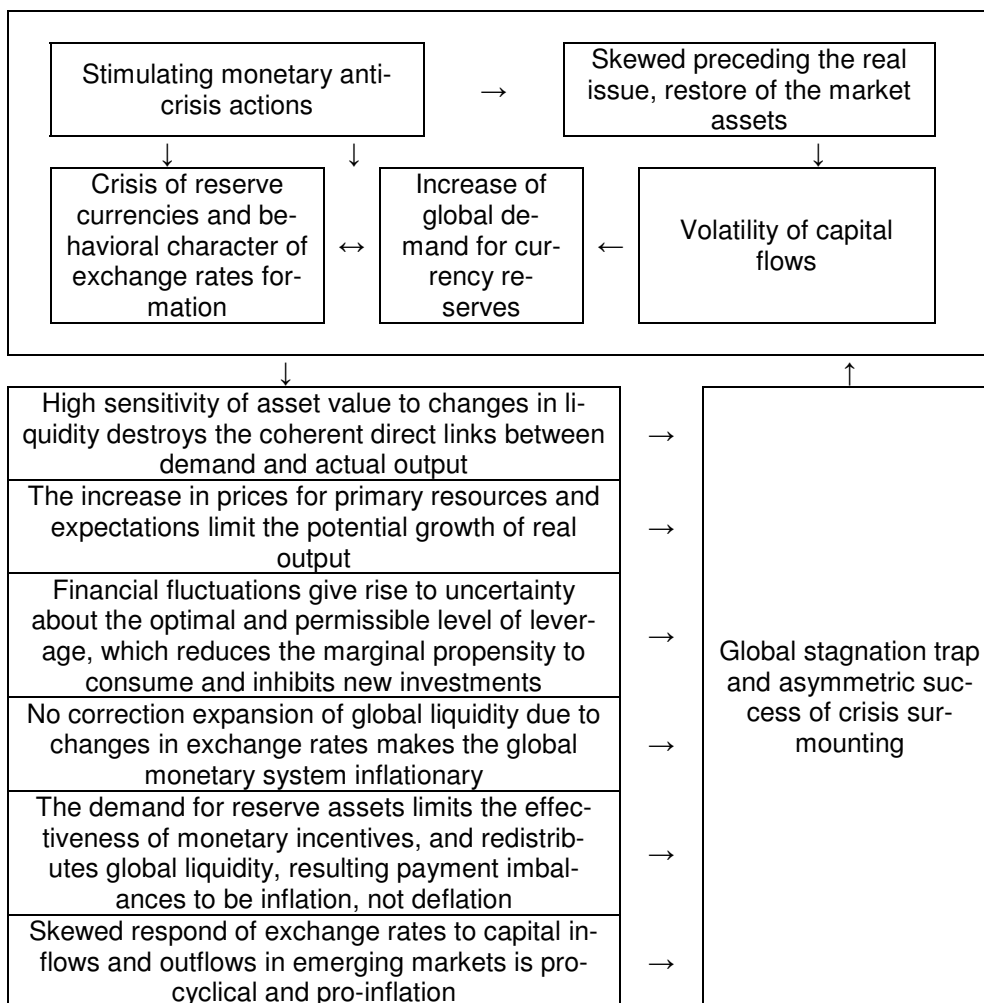
**Indices of prices for primary resources and foreign exchange reserves of the countries with emerging markets, 2005 = 100**



Note: Constructed by the author on the basis of the IMF Primary Commodities Statistics and Annual Report for respective years.

Figure 3.

**Structural and logic links of the mechanism of global monetary instability processes**





Inflation acceleration in the world since the mid 2010 shows that Keynesian oriented programs for combating global crisis end so that the global economy increasingly fall into the trap of stagnation almost identical, as was the case in the early 1970s. In a globally integrated economy the limit of non-inflation stimulating demand programs is extremely mini, though quite vague in terms of individual countries. Therefore, the competitive incentives for the crisis surmounting, is greatly dictated by the desire to quickly restore asset markets and the real issue, and it is completed with global increasing of monetary instability. Uncertain prospects and high risks of reserve currencies are accompanied by increased volatility in asset markets and capital flows together with the formation of inflationary expectations and stagflation trap. Fig. 3 demonstrates structural and logical links in the mechanism of unwinding the spiral of the post crisis global monetary instability.

### **Policy landmarks for bailing out the global stagflation traps**

A significant obstacle to bail out the global economy stagflation trap is that the policy of maintaining the financial sector and curbing global inflation is contradictory in the short term. The economic growth stability will be delayed because of the unsettled issues how to restore the creditworthiness of leading financial institutions and to resolve problems of uncertainty and risk re-rating in credit markets. In its turn, the increasing prices for primary resources and food will hinder economic growth, and will originate inflation expectations.

Rapid recovery of market assets without increasing the sustainability of the real output rates shows that further expectation of positive consequences of proceeding the policy of active monetary incentives is overvalued. As long as the inflation expectations have not been formed in the global economy, monetary actions produced a certain result, as it was demonstrated by high rates of economic growth in the U.S., Germany and some other countries in 2010. However, already in 2011 the rates of economic growth dramatically slowed down. This is the first signal that anti-crisis stimulation of the demand exhausted itself. Resolving of the issue for global economy to bail out the stagflation trap through limiting the alternative of further supporting the financial sector and curbing global inflation, needs strengthening of international coordination of macroeconomic policies, as well as strengthening of coordination within the policy-mix in each separate country.

With regards to the coordination on international level, it should consist of several blocks, in particular: increase of exchange rate flexibility in the countries with globally significant balance of payments surpluses, specifically it refers to

China; encourage the alternatives to such reserve currencies as euro and dollar, which may provide for both: strengthening of the yuan value (under appropriate structural reforms of the Chinese financial sector) and increasing interest in the formation of regional monetary unions based on common fixed rates which would be flexible to the ROW;

strengthening of the control over global liquidity (interest rate policy of the leading central banks should take into account the factors of influence on inflation expectations, which are formed outside the operational horizon of monetary policy, such as prices of primary resources and welfare effects), which should be interpreted very broadly, and the indicators of which should include not only the cumulative changes in broad monetary aggregates of the leading central banks and global foreign exchange reserves, but also changes in the dynamics of global assets of banks and their external obligations;

introduction of global money multiplier into the model of monetary policy and its international coordination, which should enhance the understanding of relationships between interest rate policy of central banks and credit expansion in the global economy, taking into account financial innovations, structural changes in the global banking system (the transition to a model of liabilities formation based on market borrowings) and the flow of capital that will enable to significantly influence the global money supply through taking a coordinated but decentralized decisions, etc.

At the level of policy-mix the main limiting factor for choosing the optimal model to coordinate the application of monetary and fiscal instruments is the debt crisis of the developed countries together with the preservation of protracted uncertainty on the credit markets. This means that higher interest rates could produce negative effects not only on the household sector solvency, but also it can enhance non-confidence of market agents in fiscal policy aimed at fiscal consolidation. However, certain increase in rates, alongside with the preservation of a wide range of collateral assets for refinancing operations is the best alternative to increase inflationary expectations, the prevention of which in future will need to take more radical steps. Fiscal policy should be re-oriented at stimulating proposals so as the reduce of the average tax burden has a positive impact on supporting demand, while reducing the need for fiscal revenues should be ensured not only by reducing social security, but also by improving the effectiveness of institutions of public sector, and expenditure programs.

The case of Ukraine also falls under this general scheme with some clarification. After 50% currency devaluation in 2008, there have not occurred the balance of payments reverse, which contradicts to the established empirical manifestations of the relations between a large-scale decline in the exchange rate and the change in status of the current account. By mid 2011 the deficit approached the pre-crisis value of US \$ 8 billion. Against the background of a relatively small growth in money supply it means that the expansion of demand is based on pub-

lic spending. Hence, the expansionary fiscal policy, overburdened with controversial benchmarks respectively positive outcomes for economic growth through the large-scale investment costs is a factor of increasing the vulnerability of Ukraine to the problems of global monetary instability.

Unreformed rate policy also restores the inflationary pressure in the domestic economy in light of the rising cost for traditional export goods in Ukraine. In the condition of the intensification of payment balance deficit it is too late to imply about strengthening of hryvnia. If the NBU pursues a reasonable policy respectively money supply and does not accelerate credit recovery at pre-crisis level, further increase of macroeconomic stability should be linked with structural reforms and reduction of public expenditures burden.

### Conclusions

Implementation of large-scale anti-crisis measures aimed at surmounting the financial instability in the world, leads to a substantial increase in risks of monetary instability. A key element of contemporary forms of global monetary instability is the crisis of reserve currencies, when the anti-crisis scales of supply of the latter are inconsistent with the globally low inflation, and the debt crises and the preservation of pre-crisis model of payment imbalances significantly undermine the exchange rate mechanism of correction of global liquidity growth.

Skewed expectations of assets value recovery in response to stimulus steps of central banks increase the fluctuations of capital flows and exchange rate instability, which results in increased interest in the accumulation of foreign exchange reserves to self-insurance in the countries with the emerging markets. Against the theoretically expected deflationary bias created by the global financial imbalances, the world economy faces an inflationary bias. The main reason: is soaring prices for raw materials and food, which become the main factor in inflation expectations against skeptical perception of positive effects of stimulation the demand for the resuscitation of economic growth. The uncertainty in financial markets, rapid growth in global foreign exchange reserves, rising prices for primary resources and so, lead to the fact that due to protracted monetary expansion, the global economy finds itself in a state of stagnation trap. The bail-out requires global coordination of monetary policy on exchange rates of the countries with globally significant current-account surpluses; also it needs increasing control over the behavior of global liquidity, and stabilizing inflation expectations. At the national level it should be accompanied by transformation of mixed policy respectively stimulating proposals to counteract the negative expectations of future inflation escalation.

### Bibliography

1. Report of the Commission of Experts of the President of the United Nations General Assembly on Reforms of the International Monetary and Financial System. – UN. – 2009. // [www.un.org](http://www.un.org).
2. Козюк В. В. Монетарні засади глобальної фінансової стабільності. – Тернопіль: THEU, Економічна думка, 2009. – 728 с.
3. Aizenman J. Large Hoarding of International Reserves and the Emerging Global Economic Architecture // NBER Working paper. – 2007. – № 13277. – P. 3–19.; Caballero R. On the Macroeconomics of Assets Shortages // NBER Working Paper. – 2006. – № 11996. – P. 1–24.
4. Schnabl G., Freitag S. Reverse Causality in Global Current Accounts // ECB Working Paper. – 2010. – № 1208. – P. 1–34.
5. Borio C. Ten Propositions about Liquidity Crises // BIS Working Paper. – 2009. – № 293. – P. 1-21.
6. Macroprudential Policy Tools and Frameworks. Update to G20 Finance Ministers and Central Bank Governors. – BIS, 2011. – P. 1-13.
7. Gagnon J. Current Account Imbalances Coming Back // Institute for International Economics Working Paper. – 2011. – WP 11–1. – P. 1–35.
8. Rebalancing the Global Economy: A Primer for Policymaking / Edited by S. Claessens, S. Evenett, B. Hoekman. – CEPR: A VoxEU.org publication, 2010. – 215 p.
9. Goldstein M., Weatherstone D. Confronting Asset Bubbles, Too Big to Fail, and Beggar-thy-Neighbor Exchange Rate Policies // Institute for International Economics Policy Brief. – 2010. – PB 10-3. – P. 1–8.
10. Goldstein M. Integrating Reforms of Financial Regulation with Reform of the International Monetary System // Institute for International Economics Policy Working Paper. – 2011. – WP 11–5. – P. 1–28.
11. Williamson J. Reference Rates and the International Monetary System. – Wash. (D.C.): Institute for International Economy, 2007. – 104 p.
12. Williamson J. The Future of the International Monetary System // Global Imbalances and Developing Countries: Remedies for a Failing International Financial System / Ed. By J. J. Teunissen and A. Akkerman. – Amsterdam: Forum on Debt and Development, 2007. – P. 120–130.

13. Bergsten F., Truman E. Why Deficits Matter: The International Dimension // IIE Speeches, Testimony, Paper. – 2007. Testimony Before the Budget Committee of the House of Representatives, Jan. 23, 2007. – P. 1–18.
14. Bergsten F. The IMF and Exchange Rates // IIE Speeches, Testimony, Paper. – 2008. Testimony before the Committee on Banking, Housing and Urban Affairs United States Senate. — Institute for International Economics. – Wash. (D.C.). – P. 1–10.
15. Reform of the International Monetary and Financial System. Chapter IV. // Trade and Development Report. – UNCTAD: Geneva, 2009.
16. Ocampo J.-A. The Instability and Inequities of the Global Reserve System // UN Department of Economic and Social Affairs Working Paper. – 2007. – № 59. – P. 1–17.
17. Bracke Th., Fidora M. Global Liquidity Glut or Global Saving Glut? A Structural VAR Approach // ECB Working Paper. – 2008. – № 911. – P. 5–25.
18. The US-Sino Currency Dispute: New Insights from Economics, Politics and Law / Edited by S. Evenett . – CEPR: A VoxEU.org publication, 2010. – 231 p.
19. Cline W., Williamson J. Currency Wars? // Institute for International Economics Policy Brief. – 2010. – PB 10-26. – P. 1–12.
20. Blanchard O., Milesi-Ferretti G.-M. (Why) Should Current Account Balances Be Reduced // IMF Staff Discussion Note. – 2011. – SDN/11/03. – P. 1–15.
21. Reform of the International Monetary and Financial System. Chapter IV. // Trade and Development Report. – UNCTAD: Geneva, 2009. – P. 121–126.
22. Eichengreen B. Toward A New International Financial Architecture: A Practical Post-Asia Agend. – Wash. D. C.: Institute for International Economy, 1999. – 216 p.
23. Aizenman J., Lee J. International Reserves: Precautionary vs. Mercantilist Views, Theory and Evidence // IMF Working Paper. – 2005. – wp/05/198. – P. 1–17.
24. Aizenman J. Large Hoarding of International Reserves and the Emerging Global Economic Architecture // NBER Working paper. – 2007. – № 13277. – P. 3–19.
25. Aizenman J., Lee J. Financial Versus Monetary Mercantilism: Long-Run View of Large International Reserves Hoarding // IMF Working Paper. – 2006. – WP/06/280. – P. 1–22.
26. Козюк В. В. Суверенний попит на активи: індивідуальна раціональність та колективна неефективність // Економіка України. – 2010. – № 2. – С. 48–58.

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27. Fratzscher M. What Explains Global Exchange Rate Movements During The Financial Crisis // ECB Working Paper. – 2009. - №1060. – P. 1-42.
  28. Cecchetti C. Alternatives to Self-Insurance // BIS Speeches. – 2010. – P. 1–12.
  29. IMF Annual Report. 2010. – IMF. – Wash. (D.C.); 2010. – App. Tabl. 1.2.
  30. Global Prospects and Policies // IMF World Economic Outlook. Chapter 1. – 2011. – April 2011. – P. 1-65.
  31. Hannoun H. The Expanding Role of Central Banks Since the Crisis: What Are the Limits? // BIS Speeches. – 2010. – P. 1–10.

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